University of Windsor

# Undergraduate Calendar
# Spring 2022

# FOREWORD

The Undergraduate Calendar is a comprehensive guide to all undergraduate programs and courses available at the University of Windsor. It outlines academic regulations and standards, program degree requirements, and general University policies for all undergraduate programs (with the exception of Law)

The online calendars are the official calendars. The University of Windsor publishes undergraduate web calendars on a semester basis (Fall, Winter, and Spring).

**Note: Students may follow the academic rules and program regulations set out in the calendar of the term in which they were first admitted to the program or any subsequent calendar.**

## FEDERATED AND AFFILIATED INSTITUTIONS

Assumption University
Canterbury College
Iona College

**The University of Windsor is a full member of the Association of Universities and Colleges of Canada, and the International Association of Universities.**

University of Windsor

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# RESPONSIBILITY/DISCLOSURE NOTIFICATIONS

## STATEMENT OF RESPONSIBILITY OF THE UNIVERSITY

1. The content of this Calendar is provided for the general guidance of the student and is not intended to make any contractual commitments therefor. The Calendar is accurate at the time of its publication, but programs, courses, staffing, etc. are subject to change from time to time as deemed appropriate by the University of Windsor in order to fulfill its role and mission, or to accommodate circumstances beyond its control. Any such changes may be implemented without prior notice and, unless specified otherwise, are effective when made. The official University of Windsor academic calendars are: the Undergraduate Web Calendar, the Graduate Web Calendar, and the Faculty of Law Calendar.

2. This Calendar represents the University of Windsor's best judgment and projection of the course of conduct of the University of Windsor during the periods addressed herein. It is subject to change due to forces beyond the University of Windsor's control or as deemed necessary by the University of Windsor in order to fulfill its educational objectives.

3. Advisors are provided to assist students in planning their academic programs. Advisors are not authorized to change established policy of the University of Windsor. Students are solely responsible for assuring that their academic programs comply with the policies of the University of Windsor. Any advice which is at variance with established policy must be confirmed by the appropriate Dean's Office.

4. Any tuition fees and/or other charges described herein are good faith projections for the academic year. They are, however, subject to change from one academic term to the next as deemed necessary by the University of Windsor in order to meet its financial commitments and to fulfill its role and mission.

5. There are other fees and charges which are attendant upon a student's matriculation at the University of Windsor. These fees or charges may be determined by contacting the University offices which administer the programs or activities in which the student intends to enroll or engage.

6. The University of Windsor reserves the right to terminate or modify program requirements, content, and the sequence of program offerings from term to term for educational reasons which it deems sufficient to warrant such actions.

Further, the University of Windsor reserves the right to terminate programs from term to term for financial or other reasons which it determines warrant such action. The content, schedule, requirements and means of presentation of courses may be changed at any time by the University of Windsor for educational reasons which it determines are sufficient to warrant such action. Programs, services, or other activities of the University of Windsor may be terminated at any time due to reasons beyond the control of the University of Windsor.

7. The course descriptions herein are based upon reasonable projections of faculty and faculty availability and appropriate curriculum considerations. The matters described are subject to change based upon changes in circumstances upon which these projections were based and as deemed necessary by the University of Windsor to fulfill its role and mission.

## NOTIFICATION OF DISCLOSURE OF PERSONAL INFORMATION TO STATISTICS CANADA

Statistics Canada is the national statistical agency. As such, Statistics Canada carries out hundreds of surveys each year on a wide range of matters, including education.

It is essential to be able to follow students across time and institutions to understand, for example, the factors affecting enrollment demand at post-secondary institutions. The increased emphasis on accountability for public investment means that it is also important to understand ‘outcomes'. In order to carry out such studies, Statistics Canada asks all colleges and universities to provide data on students and graduates. Institutions collect and provide to Statistics Canada student identification information (student's name, student ID number, Social Insurance Number), student contact information (address and telephone number), student demographic characteristics, enrollment information, previous education, and labour force activity.

The Federal Statistics Act provides the legal authority for Statistics Canada to obtain access to personal information held by educational institutions. The information may be used only for statistical purposes, and the confidentiality provisions of the Statistics Act prevent the information from being released in any way that would identify a student.

Students who do not wish to have their information used are able to ask Statistics Canada to remove their identification and contact information from the national database.

Further information on the use of this information can be obtained from Statistics' Canada of visiting their website at https://www.statcan.gc.ca

## NOTIFICATION OF DISCLOSURE, CONFIDENTIALITY AND USE OF PERSONAL INFORMATION

The authorization for the collection of this information is the University of Windsor Act, 1962, and Senate Bylaw 33 of the University of Windsor. This collection is compliant with the Freedom of Information and Protection of Privacy Act of the Province of Ontario.

The University of Windsor is committed to the protection of privacy and confidentiality of all its constituency.

The purpose of this data collection is related directly to and needed by the University of Windsor to administer the university / student relationship including the proper recording of student academic progress and to adhere to governmental reporting requirements.

Data collected will be disclosed and used as follows:

- Registrarial, administrative and academic offices for record-keeping, institutional analysis, provision of services to students, academic integrity enforcement;

- Academic counselling and advising offices for advising services;
- Where the operational necessity of the University requires the disclosure;
- Federal and provincial government offices and Ministries for funding, statistical analysis and planning purposes;
- Student associations and societies for services to students and student elections;
- Student Services offices for the administration of activities including Career Services, Cooperative Education programs, Special Needs programs, Psychological Counselling services, Residence administration;
- Campus Community Police and Parking Services for campus security and parking services;
- Registrar's Office for production of graduation lists and Convocation programme; Alumni Association for services to alumni;
- Financial aid, scholarship and award determination;
- For academic purposes to support learning, including, but not limited to identification within the University's learning management system
- Student Health Services for health services; Greenshield Canada for insurance purposes; Windsor-Essex County Health Unit for health services;
- External collection agencies in the event of fee payment default;
- Athletics and Recreational Services for sports and athletic services;
- Citizenship and Immigration Canada, Canadian Consular Offices, and the Canada Border Services Agency for student / study visa administration.
- The university is required to report student-level enrolment-related data to the Ministry of Training, Colleges and Universities as a condition of it's receipt of operating grant funding. The Ministry collects this enrolment data, which includes limited personal information such as Ontario Education Numbers, student characteristics and educational outcomes, in order to administer governments postsecondary funding, policies and programs including planning evaluation and monitoring activities.
- The University of Windsor is required to disclose personal information such as Ontario Education Numbers, student characteristics and educational outcomes to the Ministry of Training, Colleges and Universities under s. 15 of the Ministry of Training Colleges and Universities Act, R.S.O., 1990, Chapter M. 19, as amended. The ministry collects this data for purposes such as planning, allocating and administering public funding to colleges, universities and other post-secondary educational and training institutions and to conduct research and analysis, including longitudinal studies, and statistical activities conducted by or on behalf of the ministry for purposes that relate to post-secondary education and training. Further information on how the Minister of Training, Colleges and Universities uses this personal information is available on the ministry's website.
- As required by statute or law

If you have any questions about the collection, use, and disclosure of this information please contact: the Registrar OR the FIPPA Coordinator, University of Windsor, 401 Sunset Avenue, Windsor, Ontario, Canada N9B 3P4 (519)-253-3000 ext. 4059. richardt@uwindsor.ca

# VERIFICATION OF OFFICIAL DEGREE PARCHMENTS AND TRANSCRIPTS AND PREVENTION OF FRAUDULENT DOCUMENTATION

**Degree Verification**
The University of Windsor has joined with AuraData, Canada's online education verification system for the purposes of verifying degree completion status of University of Windsor graduates.

AuraData is now providing risk prevention in the number one area of résumé fraud, post-secondary/professional designation education claims. Subscribers to AuraData can now efficiently confirm the post-secondary education achievement of prospective employees, online 24/7. AuraData does this while conforming to Federal and Provincial Privacy laws.

Employers can now minimize the hiring risk associated with education fraud so prevalent in the hiring process. Universities, Colleges and Professional Designations now have a reliable method of assuring the credibility of their product. Also, graduates are now protected from the illicit use of their designations by unscrupulous job hunters.

For fast, economical and convenient education verifications for the University of Windsor go to www.auradata.com or call 416-406-0444 or 1-877-580-2872.

Requests for verification of University of Windsor transcripts or enrolment status, when authorized by the student, can be directed to the Office of the Registrar by fax at 519-971-3653. Copies of the document(s) and the student's signed authorization are required.

**Fraudulent University Documentation**
Ontario universities are committed to ensuring the integrity of their degrees for their many graduates and adamantly oppose any activities that result in the creation of fraudulent documents or false representation of university studies.

Any accusation or indication of document fraud is subject to internal investigation at home institutions in accordance with legislative frameworks such as internally approved academic honesty policies. While the universities cannot speak to individual investigations or to any specific individual student file due to privacy legislation, any such accusations are accorded serious review and attention. Examples of possible punitive actions might include expulsion, refusal to allow admission and possible legal action.

- Publicly funded Ontario universities are members of the Association of Registrars of Universities and Colleges of Canada (ARUCC). Members of ARUCC routinely inform other institutions of suspicious activity related to fraudulent documentation to uphold the integrity of the Canadian educational system. The Council of Ontario Universities is on public record for taking a strong position against such inappropriate behaviour.
- Many universities in Canada and around the world, including those in Ontario, incorporate security features and security protocols when issuing transcripts and diplomas.
- The universities urge potential employers, verification agencies and other organizations to support the postsecondary sector by requesting that transcripts be sent directly from the university rather than accepting student copies, and by verifying all transcripts and diplomas with the issuing university.

The verification of University of Windsor degrees is done by the AURADATA degree verification agency. Contact them at: www.auradata.com

Requests for verification of University of Windsor transcripts or enrolment status, when authorized by the student, can be directed to the Office of the Registrar by fax at 519-971-3653. Copies of the document(s) and the student's signed authorization are required.

# PROGRAM AND COURSE LEARNING OUTCOMES

Program and Course Learning Outcomes can be found online in the Curriculum Mapping and Design (CuMa) database, which is an online tool that contains an archive of the official program and course learning outcomes at the University of Windsor

Programs https://ctl2.uwindsor.ca/cuma/public/programs/
Courses: https://ctl2.uwindsor.ca/cuma/public/courses/

# APPLICATION/ADMISSION INFORMATION

## Application Procedures

Applicants for full-time, undergraduate studies must apply through the Ontario Universities' Application Centre (O.U.A.C.). Current Ontario secondary school students should contact their guidance office for application instructions. All others use the O.U.A.C. 105 application form, which is available at all Ontario universities or via the web at <www.ouac.on.ca>

Applicants for part-time studies must use the University of Windsor application form, which is available via the web at <www.uwindsor.ca/ptapp>

## Application Deadlines

Candidates from outside continental North America should apply and submit all supporting documents to the Registrar's Office by:
• May 1 for September admissions (Fall)
• September 1 for January admissions (Winter)
• January 1 for May admissions (Spring)

The above application deadlines are recommended to best ensure your program choice is available and enough time is available for student VISA processing. UWindsor does, however, admit qualified students after the deadlines listed above, if the program has available space.

All other candidates must apply and submit all supporting documents as follows: August 1 for the Fall term; December 1 for the Winter term; and April 1 for the Summer term (Intersession and Summer Session).

Year III, Honours Bachelor of Social Work programs - February 1
Year III Social Work and Diaspora Studies - February 1
Year III Social Work and Women's Studies - February 1
Year III Forensic Science - May 1
Bachelor of Science in Nursing - March 1

## Admissions Policies

The following policies can be found online on the Central Policies website at: www.uwindsor.ca/policies

- **Admission Requirements** (For Students Coming from Ontario Secondary Schools; Students Coming from Other Canadian Provinces; Students Coming from Another Canadian University; Students Coming from a College of Applied Arts and Technology; Students Coming from Lambton College's International Foundation Year; Students Coming from the United States; Students Coming from

Outside Canada and the United States; Students who have completed the International Baccalaureate (IB) Diploma Program); For Social Work Year III Second-Entry Programs; Returning Students)

- **Admissions for Mature Students (Undergraduate)**
- **Admissions for Special Student Status**
- **Advanced Standing and Credit Transfer (For Students Transferring from Other Institutions)**
- **English Language Proficiency Requirement**

# REGISTRATION/FEE REGULATIONS

## TIME AND PLACE OF REGISTRATION

Students register at the beginning of each term/session in the manner designated by the Office of the Registrar. Although the courses selected may be offered in different Faculties of the University, all students register through UWinsite Student. For programs where block enrolment is offered, registration will be coordinated by the Department and the Office of the Registrar.

## PROVISIONAL REGISTRATION

A student whose application is not complete by the regular registration period may be allowed to register provisionally. All required forms and documents must be submitted before the last day of late registration.

## WITHDRAWAL FROM PROGRAMS OR COURSES

1) The status of a student who withdraws from full-time studies is left to the decision of the Faculty in which the student is registered and will be reported to the student through the Office of the Registrar.

   Students who find it necessary to withdraw from a course or from the University may drop their courses over the web or notify the Registrar in person or by registered mail.

2) Students wishing to withdraw from a course will do so through UWinsite Student. Students must withdraw from a course or courses within the withdrawal periods as indicated below. Specific dates vary from term to term and are indicated in the Academic Dates. Withdrawal periods for courses in other sessions are normally set at approximately two-thirds of the course length. The withdrawal will be entered on the student's transcript as VW, (Voluntary Withdrawal), which is defined as "Withdrawal in good standing. No academic credit."

   Students may not withdraw from a course or courses after the appropriate designated withdrawal period. After the voluntary withdrawal period for a course, students remain registered and will be assigned grades as appropriate.

   A student who wishes to drop a course or courses after the appropriate withdrawal period based on medical or compassionate grounds should refer to "Appeals" or to Senate Bylaw 54.

3) The dates for withdrawal from courses which may result in partial tuition refunds vary from term to term. See the Academic Dates (through the Office of the Registrar) for appropriate dates and Withdrawal and Refund Policy. The Cashier's Office will make the appropriate adjustment of fees where applicable.

**Withdrawal Period**

One-term course offered during Fall or Winter Term - within nine weeks of beginning of term. (Not including Study Week)

Two-term course - within four weeks of beginning of the second term.

Summer Term (Intersession/Summer Session)
Three week course - within two weeks of beginning of session.
Six week course - within four weeks of beginning of session.
Eight week course - within five weeks of beginning of session.
Twelve week course - within nine weeks of beginning of session.

## FEE REGULATIONS AND SCHEDULE

The University reserves the right to make changes without prior notice in the various fee schedules, as well as changes in rules and regulations and the revision or cancellation of particular courses and programs. The acceptance of fees does not necessarily imply approval of registration.
The following regulations apply to all students.

## PAYMENT OF FEES

Fees are due and payable before the commencement of regular term classes. As a convenience, students may pay their tuition fees at any time prior to the appropriate due date. It is the responsibility of the student to ensure that deadlines are met. It is the student's responsibility to be familiar with and understand all the University regulations contained in the Calendar; to understand how adding and dropping a course or courses, withdrawal, etc., affects a tuition fee account; and to ensure that tuition fees are paid in full without any notice from the University. Further, failure to receive a statement of account through the mail does not constitute a valid reason for non-payment of fees. It is the responsibility of the student to check their fee account balance details in UWinsite Student at www.uwindsor.ca/uwinsitestudent. Available methods of payments are available on the Cashiers Office website at www.uwindsor.ca/finance/student-accounts. You will need your student number and PIN to access this information.

Cheques or other remittances must be made payable to The University of Windsor and must be received by the Cashier's Office prior to the due date. The student's name, identification number, address and telephone number should be recorded in the upper portion of the form of the remittance to ensure that the records are properly credited.

Students may pay their fees at any chartered bank in Canada by using a bank payment form available at the Cashier's Office. If a student has a grant and/or loan (e.g., OSAP), the loan must be assigned to the University to pay the fees. Any known difference between the amount of the award and the fees must be paid on or before the due date.

Students who are unable to complete payment of fees by the prescribed due date must arrange a fee deferment. Daily interest charges and academic sanctions (see "Interest Charges on Outstanding Accounts") may apply. Deferments are permitted under the following circumstances:
(a) a student has evidence of having been awarded a Canada Student Loan or an Ontario Student Loan.

(b) a student has evidence of having been awarded a scholarship, bursary or similar award, which may be used to pay the fees.

Students who are sponsored and require invoices to be sent for collection of fees must bring the appropriate documentation to the Cashiers' Office.

Notes:

1) It is the responsibility of the student to accurately report his or her academic status and correctly calculate the amount owing to the University for fees and other charges. Where calculations are incorrect or full payment is not made, daily interest will be charged on balances outstanding after the payment due date. Students should check all calculations thoroughly.

   Any errors in a student's academic program, level, and status in Canada must be reported to the Office of the Registrar. Any errors which result in the incorrect calculation of fees owing do not relieve the student of the responsibility for payment of these fees. Students will be responsible for any additional charges incurred as a result of changes in their academic profile for all terms that are applicable.

2) It is the responsibility of the student paying his or her fees by cheque to ensure that sufficient funds are available to cover any cheques made payable to the University of Windsor. Cheques returned by the student's bank for any reason will incur return cheque penalties plus other penalties.

3) Every effort is made to process payments in a timely manner; however, cheques are valid for a period of six months and may be cashed at any time during that period.

## INTEREST CHARGES ON OUTSTANDING ACCOUNTS

A daily interest charge will be calculated on all outstanding accounts. The interest will be compounded monthly.

A student who has failed to comply with the above regulations may have his or her registration cancelled as of the date on which the unpaid fees were due.

## NON-PAYMENT OF FEES AND CHARGES

Information concerning academic results of any student who has an overdue debt owing to the University shall be withheld until the debt is settled. This includes transcripts, tuition tax receipts and diplomas. Overdue accounts which are not settled in a timely manner may be referred to an external collection agency as deemed necessary by the Cashiers Office.

Students who are graduating and who have an outstanding debt will be permitted to attend Convocation, but they will not receive their diplomas until all their debts are settled.

Any student who has an overdue debt owing to the University may not be permitted to re-register until the debt is settled in full by cash, certified cheque, debit card, a money order, bank draft, electronic back transfer. Students who are settling an overdue account who pay with a personal cheque will have the hold remain on their account for 30 days (45 days for foreign cheques and drafts) to ensure the cheque clears the bank. The hold may be lifted upon presentation of a copy of the front and back of the cancelled cheque.

A student who has not made a satisfactory fee arrangement by the appropriate fee payment due date (see "Payment of Fees") may be subject to cancellation of his/her registration. Students will be notified by mail of any cancellations due to non-payment using the most recent address available. Appropriate charges will be assessed effective the date of cancellation.

Note: Non-payment of fees does not automatically result in the cancellation of registration in a course or courses.

Any student whose registration has been cancelled for default of payment is required to apply for reinstatement of registration at the Office of the Registrar. If the application is approved, a $50.00 reinstatement fee is added to any other assessable charges.

Overdue accounts must be paid by cash, certified cheque, or money order.

Any student who has an unresolved grievance concerning fees or other charges may present an explanatory letter with appropriate official documentation (e.g. doctor's notes, etc.) to the Credit Manager, Cashier's Office.

## TUITION AND EDUCATION CREDIT CERTIFICATE (T2202A)

A tuition and education tax certificate (T2202A) in a form acceptable to the Canadian Customs and Revenue Agency (CCRA) is available in UWinsite Student at www.uwindsor.ca/uwinsitestudent. This certificate is made available to all students whose accounts were paid in full by December 31 of the previous year. Student accounts that are not paid in full will show zero dollars for any semester which remains unpaid. If a student subsequently pays the semester, revised figures will be made available to them.

## SCHOLARSHIPS

Undergraduate scholarships and other awards paid to students through the Finance Office are usually credited to the student's account on the basis of one half payable in each term. A refund cheque for any credit balance up to the value of all scholarships applied to the account for that term will be available to the student at the Cashiers' Office and Awards Office. This date will be posted on the Cashiers' website (www.uwindsor.ca/awards). In order to pick up these cheques in the Cashiers' Office, photo ID will be required, with no exceptions.

## WITHDRAWAL AND REFUND POLICY

Graduate students who, for any reason, wish to withdraw from the University must notify, in writing, the Office of Graduate Studies, as otherwise resumption of graduate study at this University may be difficult or impossible.

Full-time undergraduate students who intend to withdraw completely from the University are required to undergo an interview and complete the appropriate forms at the Office of Student Development and Support.

Notice by telephone is not acceptable. Failure to attend classes does not constitute a withdrawal. Full refund will be given to part-time students enrolled in a course that has been cancelled by the University.

Full and part-time students withdrawing from regular courses during the periods indicated below will be assessed fees as indicated.

| WITHDRAWAL FOR 12-WEEK TERM | FEE PAYABLE |
|---|---|
| Week(s) One through Four | Full Refund |
| After Week Four | Full fees for the appropriate program payable |

Refunds resulting from withdrawals will be available on request.

## FREE TUITION FOR STUDENTS 65 YEARS OF AGE AND OVER

The University of Windsor offers an incentive of free tuition and incidental fees for students sixty-five years of age and over, except in the case of professional programs. It is felt that people in this group might wish to avail themselves of the University facilities, not only for degree purposes, but perhaps for personal enrichment and the fuller utilization of their leisure time. If you feel that your needs can be served according to this program, we encourage and invite you to contact the Advising Centre. This applies to Canadian citizens or Permanent Residents of Canada only.

## SCHEDULE OF FEES

The Board of Governors reserves the right to make changes without notice in the published schedule of fees and charges if, in its opinion, circumstances so require. Any such changes will be reflected in the Self-Assessment form issued through the Cashier's Office before registration. It is the responsibility of the student to obtain this information. The schedule of fees changes annually. Contact the Cashier's Office for information on the current schedule of fees, which outlines tuition, incidental, and other fees. The current Registrarial Service Fees be found on the Registrar Office website at https://www.uwindsor.ca/registrar/.

# UNIVERSITY/COLLEGE AGREEMENTS

## FOR STUDENTS FROM CANADIAN COLLEGES AND RECOGNIZED UNIVERSITIES

### Bachelor of Engineering Technology (BEngTech)

*See Faculty of Engineering for admission and program requirements*.

## FOR STUDENTS FROM ALL COLLEGES OF APPLIED ARTS AND TECHNOLOGY

### From a College of Applied Arts and Technology

Applicants who have completed a minimum of one year of a CAAT diploma program that is academic in nature with a minimum cumulative average of B (3.0) at the CAAT will be considered for admission to First Year of an appropriate program. Applicants who have graduated from a three-year CAAT program that is academic in nature with a minimum cumulative average of B (3.0) at the CAAT will be considered for admission to Second Year of an appropriate program.

**General Liberal Arts and Professional Studies for Career Professionals Degree Completion Pathway (for Graduates of Qualifying CAAT (or equivalent) Diploma Programs)**
*See Faculty of Arts, Humanities and Social Sciences for admission and program requirements*.

**General Liberal Arts and Professional Studies for Career Professionals Degree Completion Pathway (for Graduates of Qualifying CAAT (or equivalent) Advanced Diploma Programs)**
*See Faculty of Arts, Humanities and Social Sciences for admission and program requirements*.

**Combined Bachelor of Arts in Forensics (Applied Forensics Science Stream)**
*For graduates of a qualifying Ontario CAAT or other Canadian College deemed equivalent by the Dean of Science or their designate. See Faculty of Science for admission and program requirements.*

**Honours Bachelor of Arts in Economics (Applied Economics and Policy Stream)**
*For graduates of a qualifying Ontario CAAT or other Canadian College deemed equivalent by the Dean of Science or their designate. See Department of Economics for admission and program requirements.*

**Honours Chemistry (Applied Chemistry Stream)**
*For graduates of a qualifying Ontario CAAT or other Canadian College deemed equivalent by the Dean of Science or their designate. See Department of Chemistry and Biochemistry for admission and program requirements.*

**Bachelor of Commerce Program for 3-year CAAT (or equivalent) Diploma Holders in any are other than Business**
*See the Odette School of Business for admission and program requirements*.

**Bachelor of Commerce Program for 3-year CAAT (or equivalent) Diploma Holders in any area in Business**
*See the Odette School of Business for admission and program requirements*.

**Bachelor of Commerce Program for 2-year CAAT (or equivalent) Diploma Holders in any area in Business**
*See the Odette School of Business for admission and program requirements*.

**Bachelor of Commerce (Honours Business Administration) (with or without thesis) and (with or without co-op) and Three-Year Diploma in Business**
*See the Odette School of Business for admission and program requirements*.

**General Arts and Science Diploma and Liberal Arts and Science Diploma programs (Two Year Diploma)**
Graduates of General Arts and Science diploma programs, Liberal Arts and Science diploma programs, and equivalent diploma programs may receive transfer credit for up to ten courses. Transfer credit is awarded for approved courses with a minimum grade of B (3.0). Refer to the Faculty of Arts, Humanities and Social Sciences for current approved course lists.

**Bachelor of Computer Science (General) or Bachelor of Computer Science (Honours Applied Computing) Degree Completion Pathways**
*See the School of Computer Science for admission and program requirements*.

**Bachelor of Computer Science (General) and (Honours Applied Computing) (Co-op) for Qualifying Ontario CAAT (or equivalent) Students with 2 Years of Study at CAAT (or equivalent) diploma program**
*See the School of Computer Science for admission and program requirements*.

**BA or BSW Degree for Graduates of Diploma in Protection, Security and Investigation (formerly Law and Security) (Two Year Diploma)**
Graduates of the two-year Diploma in Protection, Security and Investigation program with a cumulative average grade of B or better may receive credit equivalent to five courses (15.00 credits) toward a BA or BSW degree. Transfer credit is awarded for approved courses with a minimum grade of B- or better.

**Disabilities Studies Degree for Graduates of Child and Youth Care (formerly Child and Youth Worker), Developmental Services Worker, Early Childhood Education, Educational Support, Social Services Worker**
Graduates of these College of Applied Arts and Technology diploma programs with an overall B average or better may be admitted into second year of the Disability Studies program. Graduates of related Education, Community and Social Services programs may be admitted with Disability Studies Program Coordinator (or their designate) approval. (Please refer to the BA Honours in Disability Studies for College of Applied Arts and Technology Graduates for more details)

**BA or BSW Degree for Graduates of Early Childhood Education Diploma**

Students who have completed the Diploma in Early Childhood Education with an overall average of at least B (3.0) will normally receive a minimum of ten course equivalents toward a BA or BSW degree in the Faculty of Arts, Humanities and Social Sciences. Students will receive credit on the basis of a General Approved Course List or for courses on a Specific Approved Course List that they passed with a minimum grade of C. Refer to the Faculty of Arts, Humanities and Social Sciences for approved course lists. Students must meet all regular requirements for the program they choose; the number of course credits applied toward program requirements will vary depending on program choice. Students whose Early Childhood Education diploma program includes transfer credits for previously completed university courses will normally receive a minimum of 10 university credits in accordance with the above provisions.

NB: Should changes in the courses offered or required at either institution necessitate changes to the specific courses mentioned in the agreement, with the agreement of the respective Deans' offices the list of course included in the agreement can be modified by the appropriate University of Windsor Department in consultation with the Registrar's office. The changes have to be submitted to the appropriate Faculty.

**BA or BSW Degree for Graduates of Developmental Services Worker Diploma**
Graduates of the Developmental Services Worker program who have a cumulative grade point average equivalent to B (3.0) or better will normally receive credit equivalent to a minimum of ten courses toward a BA or BSW degree in the Faculty of Arts, Humanities and Social Sciences. Students will receive credit on the basis of a General Approved Course List or for courses on a Specific Approved Course List that they passed with a minimum grade of C. Refer to the Faculty of Arts, Humanities and Social Sciences for approved course lists. Students must meet all regular requirements for the program they choose; the number of course credits applied toward program requirements will vary depending on program choice. Students whose Developmental Services Worker diploma program includes transfer credits for previously completed university courses will normally receive a minimum of 10 university credits in accordance with the above provisions.

NB: Should changes in the courses offered or required at either institution necessitate changes to the specific courses mentioned in the agreement, with the agreement of the respective Deans' offices the list of course included in the agreement can be modified by the appropriate University of Windsor Department in consultation with the Registrar's office. The changes have to be submitted to the appropriate Faculty.

**BA or BSW Degree for Child and Youth Care (formerly Child and Youth Worker Diploma)**
Students who have completed the Child and Youth Care Diploma program with a cumulative average grade of B (3.0) or better will normally receive a minimum of 15 university credits toward a BA or BSW degree in the Faculty of Arts, Humanities and Social Sciences. Students will receive credit on the basis of a General Approved Course List or for courses on a Specific Approved Course List that they passed with a minimum grade of C. Refer to the Faculty of Arts, Humanities and Social Sciences for approved course lists. Students must meet all regular requirements for the program they choose; the number of course credits applied toward program requirements will vary depending on program choice. Students whose Child and Youth Care diploma program includes transfer credits for previously completed university courses will normally receive a minimum of 15 university credits in accordance with the above provisions.

NB: Should changes in the courses offered or required at either institution necessitate changes to the specific courses mentioned in the agreement, with the agreement of the respective Deans' offices the list of course included in the agreement can be modified by the appropriate University of Windsor

Department in consultation with the Registrar's office. The changes have to be submitted to the appropriate Faculty.

**Disability Studies, Psychology Degree, and Social Work Completion Programs for Graduates of Child and Youth Care Diploma (formerly Child and Youth Worker Diploma)**
Graduates of all Ontario College Child and Youth Care diploma programs completed in 1996 or later with a cumulative average equivalent to a B (73%) or better will be eligible for entry into Disability Studies and Psychology Degree Completion Programs for CYC Graduates and are eligible to apply for entry into the Honours Bachelor of Social Work for CYC Graduates. Completion of these programs will normally require three semesters of full-time study (for General BA degree completion programs) or four semesters of full-time study (for Honours BA and BSW degree completion programs). Students may enroll in these programs in Summer, Fall or Winter semesters. Students are strongly advised to consult with a Disability Studies, Psychology or Social Work academic advisor before registering for courses in these programs. *See the Department of Psychology and School of Social Work for program requirements*.

**BA or BSW Degree for Graduates of Social Service Worker Diploma**
Students who have completed a Social Service Worker Diploma program recognized by and making them eligible for registration with the Ontario College of Social Workers and Social Service Workers with a cumulative average grade of B (3.0 or 70%) or better will normally receive a minimum of 10 university credits toward a BA degree or BSW degree in the Faculty of Arts, Humanities and Social Sciences. Students will receive credit on the basis of a General Approved Course List or for courses on a Specific Approved Course List that they passed with a minimum grade of C (or 63%). Refer to the Faculty of Arts, Humanities and Social Sciences for approved course lists. Students must meet all regular requirements for the program they choose; the number of course credits applied toward program requirements will vary depending on program choice. Students whose Social Service Worker diploma program includes transfer credits for previously completed university courses will normally receive a minimum of 10 university credits in accordance with the above provisions.

NB: Should changes in the courses offered or required at either institution necessitate changes to the specific courses mentioned in the agreement, with the agreement of the respective Deans' offices the list of course included in the agreement can be modified by the appropriate University of Windsor Department in consultation with the Registrar's office. The changes have to be submitted to the appropriate Faculty.

**Bachelor of Science (General Science) for Graduates of a College Diploma Program in Medical Laboratory Technology**
*See the Faculty of Science for details*.

## Durham College

**Bachelor of Human Kinetics (Honours Kinesiology) with Sport Management Major for Graduates of Durham College's Sport Management Program**
*See the Faculty of Human Kinetics for admission and program requirements*.

## Fanshawe College of Applied Arts and Technology

**Honours Bachelor of Fine Arts (Visual Arts) for Graduates of Fanshawe College's three-year Fine Art Program**
Graduates of Fanshawe College who have completed a three-year Fine Art program may apply for transfer into an appropriate level of the Honours Bachelor of Fine Arts (Visual Arts) program. Transfer students must satisfy University regulations for transfer from CAATs and meet the academic requirements and standards of the B.F.A. program. Completion of the B.F.A. program in Visual Arts will normally require four terms of academic work or the equivalent at the University of Windsor. For further information, contact Visual Arts.

**Bachelor of Human Kinetics for Graduates of Fanshawe College's Recreation and Leisure Services Program**
*See the Faculty of Human Kinetics for admission and program requirements*.

**Admission to First-Year for Graduates of Fanshawe College's General Arts and Science Certificate**
Applicants who have completed the one-year General Arts and Science Program at Fanshawe College with a minimum cumulative average of B (3.0) will be considered for admission to First Year of an appropriate program. Should changes in course content warrant updates to the course equivalencies, the Office of the Registrar in collaboration with the applicable department will have these reassessments completed and updates applied where applicable.

**Bachelor of Arts in Psychology (Honours) with Autism and Behavioural Sciences (ABS) Post-Graduate Certificate program**
*See the Department of Psychology for admission and program requirements*.

**Bachelor of Arts in Developmental Psychology (Honours) with Autism and Behavioural Sciences (ABS) Post-Graduate Certificate program**
*See the Department of Psychology for admission and program requirements*.

## Georgian College of Applied Arts and Technology

**Honours Bachelor of Fine Arts (Visual Arts) for Graduates of Georgian College's three-year Fine Arts Diploma**
Graduates of the three-year Diploma program in Fine Arts with a cumulative average of 2.7 (B) may gain admission to the third year of the BFA Visual Arts program. Two letters of recommendation, a letter of intent and a successful portfolio are also required.

## Lambton College of Applied Arts and Technology

**Transfer Credit for ENG 1113 and ENG 2113**
Note: Lambton College students who have completed Lambton College Communications I (ENG 1113) will receive transfer credit for University of Windsor Effective Writing I (GART-1500); and, Lambton College students who have completed Lambton College Communications II (ENG 2113) will receive transfer credit for University of Windsor Effective Writing II (GART-1510), on the understanding that transfer credits given for one or both of these courses will not increase the number of transfer credits to which they are entitled according to the articulation or degree completion agreement nor decrease the number of courses they must complete in order to earn a University of Windsor degree.

**BSc in Chemistry for Graduates of Chemical Engineering Technology Program**

A student may enter a Bachelor of Science program after completing the three-year Diploma in Chemical Engineering Technology. Depending upon the selected level and area of study, the student may receive the equivalent of seventeen courses from Chemistry and Biochemistry.

**BSc in Chemistry for Graduates of Environmental Technology Program**
A student may enter a Bachelor of Science program after completing the three-year Diploma in Environmental Technology. Depending upon the selected level and area of study, the student may receive the equivalent of nineteen courses from Chemistry and Biochemistry.

**BSc in Biological Sciences, Biochemistry, or General Science for Graduates of Medical Laboratory Science Program**
Graduates of the three-year Diploma in Medical Laboratory Science with a 3.0 G.P.A. (75 percent or equivalent) may receive the equivalent of seventeen semester course credits towards the Bachelor of Science degree in Biological Sciences, Biochemistry, or General Science.

**BSc in Biological Sciences or Biochemistry for Graduates of Industrial Hygiene Technology Program**
A student may enter a Bachelor of Science program after completing the three-year Diploma in Industrial Hygiene Technology. Depending upon the selected level and area of study, the student may receive the equivalent of up to sixteen courses towards a Biological Sciences Degree, or up to twenty courses towards a Biochemistry degree.

**Bachelor of Human Kinetics for Graduates of Massage Therapy Program**
*See the Faculty of Human Kinetics for admission and program requirements*.

**BA or BSW Degree for Graduates of Police Foundations Program**
A graduate of the two-year Diploma in Police Foundations program with a cumulative average grade of B or better and at least a grade of B- in specified College courses may receive up to one year (ten courses) of credit towards a BA or BSW degree program in the Faculty of Arts, Humanities and Social Sciences.

**Bachelor of Human Kinetics (Honours Kinesiology) with Sport Management Major for Graduates of Lambton College's Sport and Recreation Administration Program**
*See the Faculty of Human Kinetics for admission and program requirements*.

**Bachelor of Science in Nursing for Graduates of the One-Year Pre-Health Science-Nursing Program**
A student with a minimum grade point average of 2.7 (B) and a minimum average of 2.7 (B) in BIO 120, BIO 105, CHM 125 and CHM 225, will be considered for admission to the BScN program.

**BA or BSW for Graduates of the General Arts and Science Psychology Program**
Students who have completed a two year high affinity General Arts and Science Psychology Stream diploma at Lambton College with a minimum cumulative average of 3.0 (Lambton College B) may enrol in any Bachelor of Arts or Bachelor of Social Work program offered at the University of Windsor. Students will receive the equivalent of up to 14 semester courses for all courses included in the Agreement on which they received a minimum average grade of 3.0 ) (Lambton College B).

**General Liberal Arts and Professional Studies Degree Completion Pathway for Graduates of Lambton College's Liberal Studies Program (formerly General Arts and Science University (GASU))**
*See the Faculty of Arts, Humanities, and Social Sciences for admission and program requirements*.

**Honours Liberal Arts and Professional Studies Degree Completion Pathway for Graduates of Lambton College Liberal Students Transfer Program (formerly General Arts and Science University (GASU))**
*See the Faculty of Arts, Humanities, and Social Sciences for admission and program requirements*.

**Bachelor of Arts in Psychology (Honours) with Autism and Behavioural Sciences (ABS) Post-Graduate Certificate program**
*See the Department of Psychology for admission and program requirements*.

**Bachelor of Arts in Developmental Psychology (Honours) with Autism and Behavioural Sciences (ABS) Post-Graduate Certificate program**
*See the Department of Psychology for admission and program requirements*.

## Mohawk College of Applied Arts and Technology

**BSc in Biological Sciences, Biochemistry, or General Science for Graduates of Medical Laboratory Science Program**
Graduates of the three-year Diploma in Medical Laboratory Technology with a 3.0 GPA (75% or equivalent) may receive the equivalent of seventeen semester course credits towards the Bachelor of Science degree in Biological Sciences, Biochemistry, or General Science.

## St. Clair College of Applied Arts and Technology

**Transfer Credit for FAW 100 and FAW 105**
Applicants who have graduated from a St. Clair College of Applied Arts and Technology program for which a transfer agreement exists with the University of Windsor who have completed St. Clair College Foundations of Academic Writing I (FAW 100) and/or St. Clair College Foundations of Academic Writing II (FAW 105) will receive transfer credit for University of Windsor Effective Writing I (GART-1500) and/or University of Windsor Effective Writing II (GART-1510). These transfer credits will be included in the maximum number of transfer credits specified in the existing transfer agreement.

**BA (General or Honours) in Communication, Media, and Film for Graduates of the Diploma in Journalism**
St. Clair College graduates of the Diploma in Journalism with a minimum B-(2.7) average who have successfully completed the St. Clair courses may receive up to 10 course credits toward the requirements of a BA (General or Honours) in Communication, Media, and Film, from the University of Windsor. Credit will be awarded only if the St. Clair course was completed with a grade of B- (2.7) or better. Transfer students have to fulfill the regular degree requirement for the General or Honours BA (single or combined) in Communication, Media, and Film, including the residency and senior course requirement.

**BSc in Chemistry for Graduates of the Chemical Engineering Technology Program**
A student may enter a Bachelor of Science program after completing the three-year Diploma in Chemical Engineering Technology. Depending upon the selected level and area of study, the student may receive the equivalent of seventeen semester course credits from Chemistry and Biochemistry.

**BSc in Biological Sciences, Biochemistry, or General Science for Graduates of the Medical Laboratory Science Program**

Graduates of the three-year Diploma in Medical Laboratory Science from any Ontario College of Applied Arts and Technology (or Canadian equivalent) with a 3.0 G.P.A. (75% or equivalent) may receive up to the equivalent of eleven semester course credits towards the Bachelor of Science degree.

**General Bachelor of Computer Science for Graduates of the Business Administration Information Systems Program**
Graduates of this program with a 3.0 GPA or better, who have completed specific courses will be considered for admission to the General Bachelor of Computer Science on an individual basis, subject to the approval of the Dean of Science, and may receive up to fifteen semester course equivalents.

**Bachelor of Applied Science in Mechanical Engineering (Automotive Engineering Option) degree for Graduates of the Mechanical Engineering Technology - Automotive Product Design Program**
Graduates of the Mechanical Engineering Technology - Automotive Product Design program in the year 2001 or later, with a cumulative GPA of B or better, will be granted advanced standing in up to 14 semester courses towards the Bachelor of Applied Science in Mechanical Engineering (Automotive Engineering Option) degree. The transfer credit awarded for courses will be based on the approved course equivalencies, with some individual courses or groups of courses requiring a minimum B grade to earn the equivalent credit, and no grade lower than a C for the remainder of the courses on the approved course equivalencies list. See department for list of courses.

**Bachelor of Science in Nursing for Graduates of the One-Year Pre-Health Science - Nursing Program**
Students at St. Clair College who successfully complete the one-year Pre-Health Science-Nursing certificate with a minimum overall grade point average of 2.7 (B) and a minimum science subject average of 2.7 (B) in GAS 11, GAS 21, GAS 11A and GAS 21A, will be considered for admission to the BScN program.

**BA or BSW Degree for Graduates of the Dental Hygiene Diploma**
Students who have completed the two-year Diploma in Dental Hygiene with a cumulative average grade of B may receive up to five university credits for the following courses (or their equivalents), to apply toward any degree program in the Faculty of Arts, Humanities and Social Sciences, provided they passed the respective college courses with a grade of B- or better: Communication Across Cultures, Anatomy and Physiology II, Ethics and Professionalism, Basic Psychology, Three additional Dental Hygiene courses with a B average.

**BA or BSW Degree for Graduates of the Police Foundations Program**
A graduate of the two-year Diploma in Police Foundations program with a cumulative average grade of B or better and at least a grade of B- in specified College courses may receive up to one year (ten courses) of credit towards a BA or BSW degree program in the Faculty of Arts, Humanities and Social Sciences.

**Bachelor of Applied Science in Civil Engineering for Graduates of the Civil Engineering Technology Program**
Students who have completed the three-year Diploma Program at St. Clair College in Civil Engineering Technology with a cumulative average grade of B (70%) or better may receive credit for up to 13 specified semester courses provided they have passed the respective college courses with a grade of B (70%) or better.

**BSc in Chemistry for Graduates of the Chemical Laboratory Technology Program**
Students who graduate from the Chemical Laboratory Technology Program with a cumulative GPA of (3.0) or better will be awarded seventeen (17) semester transfer credits towards the Bachelor of Science (Honours Chemistry and Honours Chemistry with Thesis), or awarded sixteen (16) credits towards the Bachelor of Science (Honours Biochemistry and Honours Biochemistry with Thesis).

**Bachelor of Arts in Psychology (Honours) with Autism and Behavioural Sciences (ABS) Post-Graduate Certificate program**
*See the Department of Psychology for admission and program requirements*.

**Bachelor of Arts in Developmental Psychology (Honours) with Autism and Behavioural Sciences (ABS) Post-Graduate Certificate program**
*See the Department of Psychology for admission and program requirements*.

## SENECA COLLEGE

**Transfer Credit for Graduates of the Liberal Arts Diploma (Two Year Diploma)**
Graduates of the two-year Liberal Arts diploma program from Seneca College may receive transfer credit for up to ten courses. Transfer credit is awarded for approved courses with a minimum grade of B.

## SIR SANDFORD FLEMING COLLEGE OF APPLIED ARTS AND TECHNOLOGY

**BA or BSW Degree for Graduates of the One-Year General Arts and Science Program**
Students who have completed the one-year certificate in General Arts and Science from Sir Sandford Fleming with a cumulative average grade of B may receive up to five university course credits, provided they passed the respective college courses with a grade of B- or better. The course credits received will be applicable to any BA/BSW program in the Faculty of Arts, Humanities and Social Sciences, and students would have to meet all regular requirements for the respective major of their choice.

# UNIVERSITY TO COLLEGE AGREEMENTS WITH ST. CLAIR COLLEGE OF APPLIED ARTS AND TECHNOLOGY

University of Windsor graduates may obtain advanced standing into certain diploma programs offered by St. Clair College.

# FORMAL UNIVERSITY/COLLEGE AGREEMENTS WITH OTHER INSTITUTIONS

## ONTARIO

**Academy of Learning**
Graduates of selected Academy of Learning diploma programs with a cumulative average of seventy-five percent or better may receive advanced standing (transfer credit) for specified courses in Computer

Science and/or Business Administration provided that they qualify for admission under any of the policies listed under "Admission Requirements".

**McMaster University**
Students who have successfully completed the Labour Studies Certificate program will receive five 1000-level unspecified course credits in the Faculty of Arts, Humanities and Social Science programs at the University of Windsor. Students will still have to qualify for admission to the University based on the normal admission standards and students will be able to register in any program within the Faculty of Arts, Humanities and Social Science.

**National Theatre School**
Graduates of the National Theatre School three-year Certificate program in Acting may gain admission to the third year of the BFA in Acting program. A letter of recommendation from the Head of the National Theatre School and a successful placement audition are required. Completion of the BFA will normally require four semesters of full-time study. Students may be required to take certain academic courses, as well as performance courses at the first or second year level if their audition indicates a need for such courses. Students who graduated from the National Theatre School two or more years prior to application to the University of Windsor are subject to a placement audition before they can be covered by this agreement.

## BRUNEI

**University Brunei Darussalam (UBD)**
Honours Biology and Biotechnology program: Students will be admitted into this program at UBD with three A-levels or equivalent in Chemistry, Biology, and Mathematics with grades of C, or higher. Students completing specified UBD courses with a cumulative average of C+ (65%) or higher and who have completed the University of Windsor course BIOC-2015 (Distance Education version of Organic Chemistry of Biomolecules) with a grade of B- or higher, will be eligible for transfer directly into the third year of the Honours Biology and Biotechnology program at the University of Windsor. Students must meet the University of Windsor's English language competency requirements and admission requirements before enrolling in BIOC-2015. Successful transfer students will be considered to have all the prerequisites necessary for continuation in the program, and will receive credit for nineteen specified University of Windsor courses.

## CHINA

**Anshan University of Science and Technology**
Anshan will accept students into a program leading to a degree granted by that institution. This program will be designed so as to provide the Anshan students with the option of transferring to the University of Windsor, to complete 10 or more University of Windsor credits and to be granted a University of Windsor Bachelor of Arts (Economics) or Bachelor of Arts (Honours Economics).

Students who complete at least one year of an undergraduate program at Anshan University of Science and Technology, with a GPA of 7.0 (C+) or its equivalent at Anshan University, can apply for admission to an undergraduate program in Economics at the University of Windsor. Transferring students whose native language is not English must complete an English Proficiency Test administered by either the English Language Institute of the University of Michigan or, Test of English as a Foreign Language (T.O.E.F.L.)

**Bachelor of Commerce (Honours Business Administration) for Students from Southwestern University Finance and Economics**
*See the Odette School of Business for admission and program requirements*.

**Bachelor of Commerce (Honours Business Administration) (with/without thesis; with/without co-op; and with any specialization) for students from the Global Institute of Management and Economics (GIME) of Dongbei University of Finance and Economics**
*See the Odette School of Business for admission and program requirements*.

**General Political Science for Hebei Law and Politics College Graduates**
*See the Department of Political Science for admission and program requirements*.

**Honours Political Science for Hebei Law and Politics College Graduates**
*See the Department of Political Science for admission and program requirements*.

## HONG KONG

**Hong Kong Baptist University (HKBU)**
Students who have completed the two-year Associate Degree program of the College of International Education at HKBU with a cumulative average grade of B and who are otherwise admissible to the University of Windsor, including meeting the University of Windsor's English competency requirements, will receive University of Windsor credits, up to a total of twenty (20) semester courses, provided they passed the respective college courses with a grade of C- or better. Students will not be restricted to enrolling in a specific program but must present the necessary prerequisites for entry into the program of their choice.

## INDIA

**Ansal Institute of Technology**
Students who complete two years of study at Ansal Institute of Technology following a prescribed list of courses as defined by this agreement (contact Office of the Registrar for details) may be eligible to enter the third year of the Bachelor of Computer Science (Honours) degree. Students will be required to have obtained a grade of at least 2.4 (C-) or greater in every course taken at AIT, a cumulative grade point average of at least 2.8 (B-) or greater over all computer science courses taken at AIT and, satisfied the University of Windsor’s English competency requirements to be eligible for consideration under this agreement.

## MALAYSIA

**Kolej Damansara Utama (KDU) College**
Students who have completed a minimum of 60 approved credit hours in either the Arts or Science stream of the School of American University Studies program at any campus of KDU (Malaysia) with a cumulative average grade of B and who are otherwise admissible to the University of Windsor, including meeting the University of Windsor's English competency requirements, will receive University of Windsor credits, up to a total of twenty semester courses, provided they passed the respective college courses with a grade of C- or better. Students will not be restricted to enrolling in a specific program but must present the necessary prerequisites for entry into the program of their choice.

**Taylor’s College**

A student who completes the American Degree Program at Taylor's College with a GPA of 2.7 (B-) or higher will be accepted by the University of Windsor with advanced standing in up to 20 semester courses in an appropriate Bachelor's degree program. Excluded from this agreement is any provision for transfer from the Engineering Stream in the American Degree Program to the Bachelor of Applied Science degree at the University of Windsor.

## SINGAPORE

**Overseas Family College**
Students who have completed the two-year Diploma program at Overseas Family College with a cumulative average grade of B and who are otherwise admissible to the University of Windsor, including meeting English competency requirements, will receive University of Windsor credits, up to a total of twenty, provided they passed the respective college courses with a grade of C- or better. Students will not be restricted to enrolling in a specific program. The course credits received will be applicable to any Bachelor's program providing the degree requirements of that program allow it. Students will have to meet all regular requirements for the major of their choice.

## UNITED STATES

**Broward Community College**
Students who have completed a minimum of 60 credit hours in either the Arts or Science streams of the Centre for American Education (CAE) program with a cumulative average grade of B and who are otherwise admissible to the University of Windsor, including meeting the University of Windsor's English competency requirements, will receive University of Windsor credits, up to a total of twenty semester courses, provided they passed the respective college courses with a grade of C- or better. Students will not be restricted to enrolling in a specific program but must present the necessary prerequisites for entry into the program of their choice.

**Owens College**
A student who completes an Associate degree at Owens Community College with a grade point average of 2.7 or higher will be accepted by the University of Windsor with advanced standing in up to 20 semester courses in a Bachelor's degree program.

# STUDENT EXCHANGE PROGRAMS

The University of Windsor is a party to a number of multilateral and bilateral agreements with universities in other countries, which permit University of Windsor students to attend other institutions for periods up to one academic year as part of their degree program at Windsor. Courses taken while participating under one of these agreements are treated as if they were taken at the University of Windsor, and do not require a Letter of Permission.

Many agreements are open as to field of study, while others are intended for students in specific disciplines. In some (but not all) cases proficiency in a second language is required for participation. Other conditions of eligibility also vary from program to program.

For information on current exchange partner school and application process, contact the Student Exchange Office or visit their webpage at http://www.uwindsor.ca/studentexchange.

# ACADEMIC REGULATIONS

Students are responsible for becoming familiar and complying with the general regulations of the University as contained in this section. Additionally, students must be familiar and comply with the regulations of the Faculty in which they are enrolled. These particular requirements may be found in the program sections of this calendar.

Students also are directed to read the Statement of Responsibility, and the calendar of important dates and deadlines under posted on the Office of the Registrar under “Important Dates”.

The following policies can be found online on the Central Policies website at: www.uwindsor.ca/policies

- **Advanced Standing and Credit Transfer** (advanced standing and transfer credits reduce the total number of courses a student must complete for a degree)
- **Certificate Programs**
- **Course Equivalency Policy** (permission to substitute one course for another)
- **Course Numbering Policy**
- **Course Overload Policy** (course taken in addition to the prescribed semester or term load)
- **Introductory Statistics Courses**
- **Letters of Permission** (permission to take courses at another university for credit towards their UWindsor degree)
- **Policy on Minors** (provides a general knowledge of an area of study)
- **Residency Requirements** (the number of courses that must be completed at the University of Windsor)
- **Repetition of Courses**
- **Senior-level Course Requirements** (minimum number of courses to be completed at the 200-level or above)
- **Standing Required for Continuation in Programs and for Graduation** (minimum major and cumulative averages required to continue in a program of study and to graduate)

## ACADEMIC ADVISING

The responsibility for becoming familiar and complying with the requirements for degrees and with academic regulations rests primarily with the student. Every student can access a "Degree Audit Report" on the Student Self Service page at http://www.uwindsor.ca/current-students which reports a student's progress towards fulfilling degree requirements. In addition, academic advising is strongly recommended for all students. Academic units provide individual assistance to students both in the selection of their programs of studies and in the choice of courses in keeping with program requirements. General questions normally should be addressed to the Associate Dean of the Faculty.

Students are strongly urged to seek course and program advising to ensure that they understand degree requirements. It is recognized that many students may not have decided on their major areas or on their final career goals prior to entering University. Consequently, it is not unusual for students to

change their programs of study after taking several courses. Every effort is made to assist such students, within the limits of the requirements of the various programs.

Students who are considering program changes may request assistance from advisors within their proposed area of study. Application forms for a change of program are available on the web on the Student Self Service page.

Students are required to have declared a major by the time they have successfully completed ten semester courses.

## CLASSIFICATION OF STUDENTS

A full-time student is one who is registered in four or more undergraduate courses in a term.

A part-time student is one who is registered in fewer than four undergraduate courses in a term.

A regular student is one who has met the average requirements for admission or the minimum average requirements for continuation in his or her program of studies.

A conditioned student is one who, at the time of admission, does not have standing in a required subject or subjects.

A visiting student is one who registers and takes courses for credit for the purpose of transferring the credit to the university at which he or she was previously registered. Normally, visiting students are advised to have written permission from the home university in order to register for courses.

A special or non-degree student is one who is taking courses for credit but not proceeding to a degree at this University.

An audit student is one who attends (a) course(s) but does not receive any grade(s) or credit for the course(s) towards a degree. Such a student will not be allowed to write examinations and may not be graded in any way, but will be required to pay the regular fees for the course(s).

A student on academic probation is one who has not met the full admission requirements to a program or a student who, once admitted, has shown unsatisfactory progress at the conclusion of the previous term. (See the regulations pertaining to each Faculty.)

Academic probation is removed if a student demonstrates satisfactory progress by the end of the probationary period. Normally, a student will be required to withdraw from a faculty if performance is not satisfactory at the conclusion of the academic probationary period.

For regulations pertaining to the possible readmission of students who have been required to withdraw, see the regulations pertaining to each Faculty.

## COMBINED MAJOR

Students wishing to combine two areas of study from the Arts, Languages, Social Sciences, or Science within a single four-year Honours B.A. or B.Sc. program may do so if the areas of study concerned have provided for this possibility in their respective sections of the Calendar. Such programs require a total of

forty courses including the successful completion of degree requirements as defined by each area of study in the appropriate section of the calendar. The area of study selected as the first major will determine the degree awarded. (e.g., BA in English and Chemistry, or BSc in Chemistry and English).

## COURSE CONTENT

Information regarding the content and the hours of instruction per week for all courses is to be found in the individual subject area listings. The time schedule for classes can be obtained online at the Office of the Registrar at www.uwindsor.ca/registrar. The University does not attempt to impose uniformity in methods of course presentation. Therefore, methods of course presentation vary and may involve lectures, lectures combined with class discussion, small group or tutorial instruction, seminars, or other combinations of the above. In all cases, the method(s) to be used will be explained early in the course.

## COURSE NUMBERING FRAMEWORK

Each course is identified by a subject code and a number code. The subject code consists of 4 alpha characters that identify the discipline. The number code consists of 4 numeric characters with the first digit designating the year/level of study. The series 1000, 2000, 3000, and 4000 numbers are intended to indicate progressively more demanding content and correspondingly increasing background and competence on the part of the students enrolled in the course. Numbers in the range 1000-1999 are ordinarily used for the introductory courses in most disciplines. Within the range, however, a lower number does not necessarily signify more elementary content. It is important that students planning their courses have clearly in mind the significance of these numbers so that they may guard against undertaking course work at levels for which they are insufficiently prepared. A number of courses have stated prerequisites which are prior requirements for entry to a course. Students who do not satisfy the prerequisite for a course, or who in the opinion of the instructor do not possess an equivalent background to that of the stated prerequisite, may not register for the course, and may be removed if they register inappropriately.

## DEFINITION OF COURSES AND SESSIONS

The word "course" generally refers to a 3.00 credit hour offering which is given over one term. Each term includes approximately twelve weeks of classes. During each regular academic year (September to April), the Fall term runs from early September to early December and the Winter term runs from early January to mid-April. Each term concludes with final examinations. Additionally, the University schedules courses in a Summer term which includes Intersession (May - June) and Summer Session (July - August), each of which are approximately six weeks in duration. Courses given in these sessions carry the same credit as those in the Fall and Winter terms. Some courses offered in the Summer Term run from May - August (12 weeks).

In some areas, courses also may be offered for 1.50 credit hours, or for 6.00 credit hours. Courses of any credit hour value may be offered over multiple terms or over a part of a term.

In a few cases a course may be "linked" with another course in the sense that credit is granted only when both courses have been completed successfully. Course descriptions indicate "linked" courses. Unless otherwise indicated, such courses must be taken in successive terms.

The time required to complete programs can vary according to the student's choice. If courses are taken exclusively in the Fall and Winter terms, a general degree normally is completed in three years and a

four-year Honours, Major or professional degree in four years of full-time study. Students may choose to accelerate their programs by attending Summer term, Intersession and/or Summer Session, or may spread their programs over a longer period by attending as part-time students. Some programs place a time limit on degree completion. Refer to individual Faculty and program regulations for such limits.

## CATEGORIES OF COURSES

For the purpose of meeting degree requirements the University categorizes its courses as follows:

**ARTS/HUMANITIES**
(All Language courses can count for credit as Arts/Humanities courses)

Anthrozoology (ANZO)
Art History (MACS)
Greek and Roman Studies (GRST, GRHS, GREK)
Dramatic Art (DRAM)
English and Creative Writing (ENGL)
Film Studies (FILM)
General Courses, Faculty of Arts, Humanities and Social Sciences (GART)
Intercultural Studies (INCS)
Music-Academic Studies (MUSC)
Music-Performance Studies (MUSP)
Philosophy (PHIL)
Visual Arts (VSAR, CNMA)
Women's and Gender Studies* (WGST)

*The following Women's and Gender Studies courses may be taken for Arts credit: WGST-1200, WGST-1300, WGST-2190, WGST-2360, WGST-2700, WGST-3590, and WGST-3850.

**LANGUAGES (HUMANITIES)**
Arabic (ARAB)
French (FREN)
German (GRMN)
Ancient Greek (GREK)
Italian (ITLN)
Latin (LATN)
Spanish (SPAN)
Hebrew (JWST)

Note: Courses in all languages listed above that may be used to satisfy language requirements include: XXXX-1000, XXXX-1010, XXXX-1020, XXXX-2000, XXXX-2010, XXXX-2020, XXXX-3000, XXXX-3010. All French Studies courses count as language requirements. ARAB-1100 and ARAB-1110 also count as language requirements. All other courses in any language listed above count only as Arts courses.

**SOCIAL SCIENCES/HUMANITIES**
Anthropology (SACR)
Anthrozoology (ANZO)
Communication, Media and Film (CMAF, CNMA)
Diaspora Studies (DIAS)
Disability Studies (DISB)

Economics (ECON)*
General Courses, Faculty of Arts, Humanities and Social Sciences (SOSC)**
Human Geography (HUGR)
History (HIST)
Interdisciplinary Arts and Science courses (ARSC)
Labour Studies (WORK)
Political Science (POLS)
Psychology (PSYC)
Social Justice (SJST)
Social Work (SWRK)
Sociology (SACR)
Women's and Gender Studies (WGST)***
Work and Employment Issues (WORK)

*All Economics courses will be permitted to satisfy either Science or Social Science requirements.

**The following courses may be taken for Social Science credit: ESTU-1000, and ESTU-2100.

***WGST-1200, WGST-1300, WGST-2190, WGST-2360, WGST-2700, WGST-3590, and WGST-3850 can satisfy either a Social Science or an Arts requirement.

**SCIENCE**
Biology (BIOL)
Biochemistry (BIOC)
Chemistry (CHEM)
Computer Science (COMP)
Economics (ECON)*
School of the Environment (ESCI, ESTU)
Forensic Sciences (FRSC)
General Courses, Faculty of Science (SCIE)
Mathematics (MATH)
Physics (PHYS)
Statistics (STAT)
Women's and Gender Studies (WGST)**

*All Economics courses will be permitted to satisfy either Science or Social Science requirements.

**Women's and Gender Studies WGST-2500 will satisfy either a Social Science or a Science requirement.

Note: For students in the Faculty of Arts, Humanities and Social Sciences the following Nursing courses will satisfy a Science requirement: NURS-3510, and NURS-3910.

**PROFESSIONAL**
Business Administration (BUSR, ACCT, MGMT, FINA, MSCI, MKTG, STEN)
Education (EDUC)
Engineering (GENG, MECH, INDE, MATL, CIVL, ENVE, ELEC)
Kinesiology (KINE)
Law (LAWG, LAWS, LAWD)
Nursing (NURS)

# TRANSFERRING TO ANOTHER PROGRAM

A student who wishes to transfer to a new program may apply on the UWinsite Student at http://www.uwindsor.ca/registrar/uwinsite-student. All program transfers and conditions for transfer are subject to the approval of the Dean in accordance with regulations established by the Faculty into which the student wishes to transfer.

1) Normally a student who has a cumulative average of 60% or greater in the previous program, and who meets the admission requirements of the intended program will be permitted to transfer. Transfer credit will be assessed and awarded in accordance with the Senate Policy on Advanced Standing and Credit Transfer.

2) If a student has been required to withdraw from a program, the student normally will be considered for admission to the new intended program on the same basis as students who have been required to withdraw from the program.

3) All courses that are transferable, whether passed or failed, will be considered in calculating both the cumulative and major averages (where appropriate) in the new program.

4) Applications for transfer to Business are subject to the following deadlines:
June 15th for Fall semesters
October 15th for Winter semesters
February 15th for Inter/Summer semesters

Transfer is based on academic achievement and the availability of space, and a minimum 67% cumulative average is required in order to be considered for a transfer to Business.

# EXAMINATIONS, GRADING, AND GRADUATION

## EXAMINATION PROCEDURES

Students should become familiar with the following bylaws and policies governing examinations and evaluations, which can be found online on the Central Policies website at: www.uwindsor.ca/policies:

- **Senate Bylaw 54: Undergraduate Academic Evaluation Procedures**
- **Senate Policy on Conduct of Exams and Tests**

Students with three invigilated final examinations scheduled on the same calendar day or in 24 hours may petition to have one of the examinations rescheduled by completing the appropriate request form available at the Office of the Registrar at http://www.uwindsor.ca/registrar/. The application must be submitted to the Office of the Registrar by the end of the fourth week of classes (or by the end of the second week of classes for six week courses). See also Senate Bylaw 54.

## GRADING AND CALCULATION OF AVERAGES

See **Senate Policy on Grading and Calculation of Averages**, which can be found online on the Central Policies website at: www.uwindsor.ca/policies.

## OFF-CAMPUS EXAMINATIONS

A student with a cogent reason may be granted permission to write an examination at an off-campus centre. Application forms are available in the Registrar's Office. To allow sufficient time for arrangements and mailing, approved applications must be submitted, along with the appropriate fee, to the Registrar's Office at least one month prior to the date on which the examination is to be written.

## GRADE APPEALS

Before exercising their right of appeal against a grade, students should consult **Senate Bylaw 54, Undergraduate Academic Evaluation Procedures,** which can be found online on the Central Policies website at: www.uwindsor.ca/policies. Students registered in the JD program should also consult the Academic Status regulations of the Faculty of Law.

All formal undergraduate grade appeals for incorrect evaluation or procedural irregularity must be made through UWinsite Student no later than three weeks after the final mark has been released by the Registrar. The official release dates are posted on the web. The appeal must be accompanied by a $20 appeal fee which will be refunded to the student if the appeal is successful. Students must include the rationale for the appeal, including relevant supporting documents. Students who wish to receive consideration based on medical/compassionate reasons (health, bereavement or extenuating circumstances) also must file their requests through UWinsite Student and must include a rationale and

relevant supporting documentation. (If approved, accommodation may consist of aegrotat standing or other accommodation or alternate evaluation, etc.) See **Senate Bylaw 54, Undergraduate Academic Evaluation Procedures** at www.uwindsor.ca/policies.

# HONOUR ROLLS

The new regulations related to 100% averaging and the new grading scale, for the President's and the Dean's Honour Rolls, are not retroactive to terms prior to Fall 2013.

**President's Honour Roll Criteria**
Eligibility: students in first-entry undergraduate programs

1. a minimum of ten courses must be completed;
2. designation is granted, as applicable, upon completion of the initial 10 courses and at the end of each semester of full-time or part-time studies thereafter;
3. cumulative average of 90% or higher;
4. notation is recorded on the transcript at the end of each semester.

**Dean's Honour Roll**
The following list the criteria for Dean's Honour Roll in each Faculty. Students who have met the criteria for Dean’s Honour Roll in their Faculty will have a notation included on their transcript to this effect.

**Faculty of Arts, Humanities and Social Science**

1. Must have completed at least 10 or more courses with a major from the Faculty of Arts, Humanities and Social Sciences at the University of Windsor.
2. Must have obtained a cumulative average of at least 80% by the end of the academic year and reviewed at the end of the winter semester annually.
3. Must have enrolled in courses with a major from the Faculty of Arts, Humanities and Social Sciences at the University of Windsor in at least one semester during the academic year (i.e., Summer, Fall, Winter).

**Faculty of Business Administration**

1. Students must have been enrolled in a Business program on a full-time basis (i.e., four courses or greater) during at least two of the three semesters during the academic year. (i.e. Summer/Fall, Summer/Winter, or Fall/Winter). One exception applies: Co-op students may have two "working" semesters during an academic year. In this case, full-time enrolled status is required during the "study" semester.
2. Students must obtain an annual cumulative average and program major annual average of 80% or greater at the end of the academic year (i.e., the end of the Winter semester).

**Faculty of Education**
No Dean’s Honour Roll.

**Faculty of Engineering**
For a student to be considered for the Engineering Dean’s Honour Roll, she/he must be enroled in an Engineering program, and must normally have:

1. Student has successfully completed at least five courses in the current semester
2. Student has attained an 80% average in the current semester

3. Student is in overall good standing

**Faculty of Human Kinetics**
To be eligible:
1. A student must be enrolled in 5 courses in a semester.
2. A student must have an semester average of 80% or above on 5 or more courses.

The Human Kinetics Dean's Honour Roll designation is awarded on a semester basis.

**Faculty of Law**
No Dean's Honour Roll.

**Faculty of Nursing**
1. Students will be eligible for the Dean's Honour Roll once they have completed 10 courses while enrolled in the Nursing program and are in good standing at the University of Windsor.
2. Having met the 10-course criteria, membership on the Dean's Honour Roll will be based on level of demonstrated achievement, i.e., average, in subsequent semesters.
3. The student must be enrolled full-time in the semester for which the average is calculated.
4. The student must have achieved a semester average of 80% as recorded on the transcript.

**Faculty of Science**
1. At least 10 courses completed at the University of Windsor.
2. Full time status in the Fall and Winter semesters.
3. Cumulative average of 80% in the most recent Winter term.
4. Major average of 80% on the transcript of the most recent Winter term. For General Science students replace the major average with the average of all science courses, excluding science courses that cannot be used to satisfy a BSc degree.
5. Registered in a Co-op term in Winter with grades in Fall at required levels.

# BOARD OF GOVERNORS MEDALS

**Board of Governors Graduation Medals**
One medal is allocated to each AAU to be awarded to the students with the highest academic standing as defined in the criteria set out below. One medal is allocated to the General Arts programs, one to the General Social Sciences programs, and one to the General Science program to be awarded to the students with highest academic standing in each of these three general program areas as defined in the criteria set out below. Additional medals could be awarded at the discretion of the Dean, in consultation with the Provost.

Medalists are judged on their total academic performance at the University of Windsor. Students must have completed at least twenty semester courses or equivalent required in their program at the University of Windsor (with the exception of the Faculty of Education). Students will be ranked by major average, and must achieve at least an 83% cumulative average and major average. Both full-time and part-time students are eligible for consideration. Graduates from the previous Fall Convocation will be considered for medals issued at the following Spring Convocation. For programs where no major

average is calculated (such as General programs), students will be ranked by cumulative average, and must achieve a cumulative average of at least 83%.

**Board of Governors In-Course Medals**
These medals are awarded annually, at the end of the Winter term, to the undergraduate student in each Faculty who had the highest cumulative average of all non-graduating students in that Faculty. A minimum cumulative average of 78.5% is required. The student must have completed the equivalent of at least ten courses at the University and must be registered full-time in an honours degree program.

## GRADUATING "WITH DISTINCTION"/"WITH GREAT DISTINCTION"

Students in first-entry degree programs or certificate programs who graduate with a cumulative average from 80% to 89.9% will receive their degree or certificate "With Distinction". Students in first-entry degree programs or certificate programs who graduate with a cumulative average from 90% and above will receive their degree or certificate "With Great Distinction".

## APPLICATION FOR GRADUATION

Registration in any program does not constitute an application for a degree, certificate, or diploma. An official application for graduation must be filled out regardless if you are planning on attending/not attending the graduation ceremony. (Log into UWinsite Student at http://www.uwindsor.ca/registrar/uwinsite-student)

The deadline date to submit an application to graduate is March 1 for Spring Convocation and August 1 for Fall Convocation. In cases where credit is sought for work done elsewhere, all official transcripts or other documents as required by the Registrar's Office, but not already submitted, must be conveyed to the Registrar's Office no later than six weeks before Convocation. Failure to comply with these regulations will disqualify the student from graduation at the Convocation concerned (see the **Policy on Standing Required for Continuation in Programs and for Graduation** which can be found on the Central Policies website at: www.uwindsor.ca/policies).

# FACULTY OF ARTS, HUMANITIES AND SOCIAL SCIENCES (FAHSS)

## GENERAL INFORMATION ABOUT HONOURS AND GENERAL PROGRAMS

### Bachelor of Arts - Four-Year Honours Programs

Four-year Honours programs require the completion of a larger number of courses with greater concentration in a specific subject area than do three-year General programs. Total Courses: A student will qualify for the Honours BA degree normally by successfully completing forty courses, in accordance with degree requirements and program regulations.

### Bachelor of Arts - Three-Year General Programs

Three-year General programs provide a moderate concentration in a specific subject, as well as a broad educational background. Students in these programs are encouraged to extend their studies over a wide range of subjects. Students are also encouraged to take courses which specifically address diversities of human experience, including culture, ethnicity, gender, or sexual orientation. Total courses: A student will qualify for the General BA. degree normally by successfully completing thirty courses with standing as specified in undergraduate regulations.

## PROGRAMS ADMINISTERED BY THE OFFICE OF THE DEAN OF FAHSS

### Minor in Anthrozoology

Total Courses: 6 courses

a) ANZO-1600.
b) five of: ANZO-2000, ANZO-2600, ANZO-2610, ANZO-3100, ANZO-3600, PHIL-3290, SACR-3410, VSAR-3860

### Certificate in Anthrozoology

**Admission Requirements**
Minimum admission requirements for undergraduate degrees.

**Program Requirements**

Total courses: 8

ANZO-1600. Animals and Humans in Society
ANZO-2600. Animals for Sport and Entertainment
ANZO-2610. Animals and the Law
ANZO-4980. Anthrozoology Capstone

Four courses from:
ANZO-2000. The Paw and the Pen: Animals in Literature
ANZO-3600. Special Topics in Anthrozoology
ANZO-3100. The Canine Impact: Exploring the Dog-Human Relationship
PHIL-3290. Animals and Ethics
PSYC-3550. Comparative Psychology
SACR-3650. Green Criminology
VSAR-3860. Bioart: Contemporary Art and the Life Sciences
BIOL-2101. Ecology
BIOL-3230. Animal Behaviour
BIOL-3261. Ornithology
BIOL-4262. Animal Communication

## Bachelor of Interdisciplinary Arts and Science (IAS) Minor Concentration in Anthrozoology

Total Courses: 6 courses

a) ANZO-1600. Animals and Humans in Society
b) five of: ANZO-2600, ANZO-2610, ANZO-3600, PHIL-3290, SACR-3410, ANZO-2000

## Certificate in Arts Management

**Admission Requirements**
Minimum admission requirements for undergraduate degrees.

Total courses: ten.

(a) STEN-1000, ACCT-1510, MKTG-1310;
(b) DRAM-2750 and DRAM-2760, plus two of VSAR-3800, CMAF-3990, DRAM-3980, DRAM-3990
(c) one of DRAM-2100, ENGL-1001, ENGL-3002, CMAF-2250, CMAF-2820;
(d) two of DRAM-1000, DRAM-2000, DRAM-2250, DRAM-2350, DRAM-3250, DRAM-3350, DRAM-3330, DRAM-3510, DRAM-3520, DRAM-4390, VSAR-3850, VSAR-4910, MACS-2450, MACS-3450, MUSC-1260, MUSC-1270, MUSC-3460, one course from private instruction in Music MUSP-2470 to MUSP-2690 or two of the 1.50 credit hour courses MUSP-2100, MUSP-2200, MUSP-2600, MUSP-3100.

## Minor in Film Studies

Total Courses: 6 courses

a) FILM-1001
b) two Arts/Humanities from: GRMN-2480, ITLN-2480, SPAN-2480, ARAB-3610, GRST-3011, MUSC-3170, MUSC-4470;
c) two Social Sciences from: CMAF-2400, CMAF-2410, HIST-2300, HIST-4660, CMAF-3410; CMAF-3430, CMAF-4900 (as film theory, film criticism, or film studies);
d) one more of (b) or (c) from either Social Sciences or Arts/Humanities**;

Note: One of the courses taken for the Minor in Film Studies must be at the 3000 level or higher
**Or an approved special topics course (as film theory, film criticism, or film studies) from either Social Sciences or Arts/Humanities.

## Minor in Indigenous Studies

Total Courses: 6 courses

a) GART/SOSC-1210. An Introduction into Indigenous Topics
b) two Social Sciences courses: HIST-2460, HIST-2470, POLS-2000, POLS-3000, POLS-4000
c) three Arts and Humanities courses from: ENGL-2320, ENGL-3330*, PHIL-2300, PHIL-4260

**May be repeated for credit if the topics are different.*

## Minor in Race and Ethnicity Studies

Total Courses: 6 courses

a) GART/SOSC-1210. An Introduction into Indigenous Topics
b) two Arts/Humanities from: ARAB-2610, PHIL-2380, ENGL-3310, HIST-3210;
c) two Social Sciences from: SACR-2400, SWRK-2100, WGST-2200, CMAF-3430, HIST-4210;
d) one from: ARAB-2620, ARAB-3610, ENGL-3320, PSYC-4450, SACR-3330, SACR-3390, SACR-4220

## Minor in Popular Culture

Total Courses: 6 courses

a) two Arts/Humanities from: PHIL-1300, DRAM-2190, GART-2990, CMAF-3020, HIST-3680;
b) two Social Sciences from: WGST-1300, SOSC-2990, POLS-3790, SACR-3380, SACR-3740;
c) two from: POLS-2550, WGST-2800, HIST-3800, SACR-3560, WGST-3700, WGST-3850, HIST-4660

## Honours Bachelor of Interdisciplinary Arts and Science (IAS)

The Bachelor of Interdisciplinary Arts and Science program provides substantial education in the disciplines of both arts and sciences, and it puts an emphasis on critical thinking and argument. Throughout, students will take course designed to foster the skills of inquiry and, in the third and fourth years, they will take courses in the methods of inquiry and applied inquiry. In addition to developing

students' research skills and involving them with topics of public concern, these courses develop their abilities and confidence as writers and speakers.

**Degree Requirements**

Total courses: forty.

(a) ARSC-1000, PHIL-1620, PHIL-2210, MATH-1720 (or MATH-1760) and MATH-1730 if major or minor concentration is Math, Physics or Biochemistry.), STAT-2910 or SOSC-2500 (Science majors must take STAT-2910), ARSC-3010, ARSC-3100, ARSC-4100, ARSC-4990, ARSC-4210 (ARSC-4990 may be replaced by any 6 credit fourth year Honours Thesis/Research courses, subject to enrolment restrictions).
(b) One course from GRST-1100, HIST-1130, HIST-1140, PHIL-1100, POLS-2510, POLS-2520, INCS-2020, INCS-2030, INCS-2200
(c) Four courses (any two of the following pairs): ECON-1100 and ECON-1110, BIOL-1111 and BIOL-1101, CHEM-1100 and CHEM-1110, COMP-1400 and COMP-1410,ESCI-1111 and ESCI-1100, MATH-1720 and MATH-1730, PHYS-1400 and PHYS-1410, PHYS-1300 and PHYS-1310.
(d) Major Concentration (12): maximum of two 1000-level courses in the major subject, and at least four 3000-level or 4000-level courses in the major subject.
(e) Minor Concentration (6): maximum of two 1000-level courses in the minor subject; at least one 3000-level or 4000-level course in the minor subject
(f) Any remaining courses to bring the total course number to 40 may be from any area of study.
(g) At least 15 courses must be taken in each of the Faculty of Arts, Humanities and Social Sciences and the Faculty of Science.
(h) To continue in the program, and to receive the Honours IAS degree, students must maintain an Honours 70% cumulative average and major average.

When a requirement in the Major or Minor Concentration is taken as part of the core IAS program course requirements, another course must be selected from within the area of concentration and substituted with the approval of the Dean of Faculty of Arts, Humanities and Social Sciences. Similarly, when a requirement in the Major Concentration is taken as part of the course requirements in the Minor Concentration, another course must be selected from within the area of Major Concentration and substituted with the approval of the Dean of Faculty of Arts, Humanities, and Social Sciences.

***IAS students who have successfully completed a fourth year thesis/research project, in lieu of ARSC-4990, will have the "with thesis" designation added to their transcript and diploma.***

Courses used to calculate the major average are: courses listed under (d) and numbered ARSC-XXXX.

**Program Sequencing:**
Students must select a Major and a Minor Concentration at the start of Year 2. Consultation is available from the Director of the program. The selection of electives in Years 2, 3 and 4 must satisfy the requirements for the Major and the Minor concentrations, and the general program requirement that students must complete at least 15 courses in each of the two Faculties.

Year 1: ARSC-1000, PHIL-1620, MATH-1720 (or MATH-1760) (and MATH-1730 if requirement for major or minor concentration), one of GRST-1100, HIST-1130, HIST-1140, PHIL-1100, POLS-2510, POLS-2520, INCS-2030, INCS-2200, two courses selected as needed to satisfy major or minor requirements in Arts, Humanities, and Social Science, four courses consisting of any two of the following pairs: BIOL-1111 and BIOL-1101, MATH-1720 and MATH-1730, CHEM-1100 and CHEM-1110, COMP-1400 and COMP-1410,

ESCI-1111 and ESCI-1100, MATH-1720 and MATH-1730, PHYS-1300 and PHYS-1310, PHYS-1400 and PHYS-1410, ECON-1100 and ECON-1110.

Year 2: STAT-2910 or SOSC-2500; plus any nine additional courses, at least 2 from each of the Faculty of Arts, Humanities, and Social Sciences and the Faculty of Science, and consistent with satisfying the requirements for the Major and the Minor concentrations.

Year 3: PHIL-2210, ARSC-3100, ARSC-3010; Plus any seven additional courses, at least 2 from each of the Faculty of Arts, Humanities, and Social Sciences and the Faculty of Science, and consistent with satisfying the requirements for the Major and the Minor concentrations.

Year 4: ARSC-4210, ARSC-4100, ARSC-4990 (or other departmental requirement for the student's Major concentration); plus any seven additional courses as needed to satisfying the remaining requirements for the Major concentration, the Minor concentration and/or the Program.

## Honours Bachelor of Interdisciplinary Arts and Science (IAS) Double Major Concentration

**Degree Requirements**

Total courses: forty.

(a) ARSC-1000,PHIL-1620, PHIL-2210, MATH-1720 (or MATH-1760) (and MATH-1730 if major or minor concentration is Math, Physics or Biochemistry), STAT-2910, ARSC-3010, ARSC-3100, ARSC-4100, ARSC-4990 (or other departmental requirement for the student's Major concentration), ARSC-4210.
(b) One course from GRST-1100, HIST-1130, HIST-1140, PHIL-1100, POLS-2510, POLS-2520, INCS-2020, INCS-2030, INCS-2200
(c) four courses (any two of the following pairs): ECON-1100 and ECON-1110, BIOL-1111 and BIOL-1101, CHEM-1100 and CHEM-1110, COMP-1400 and COMP-1410, ESCI-1111 and ESCI-1100, MATH-1720 and MATH-1730, PHYS-1400 and PHYS-1410, PHYS-1300 and PHYS-1310.
(d) Major Concentration I (12): maximum of two 1000-level courses in the major subject; and at least four 3000-level or 4000-level courses in the major subject.
(e) Major Concentration II (12): maximum of two 1000-level courses in the major subject; and at least four 3000-level or 4000-level courses in the major subject
(f) At least 15 courses must be taken in each of the Faculty of Arts, Humanities, and Social Sciences and the Faculty of Science.
(g) To continue in the program, and to receive the Honours IAS degree, students must maintain an Honours 70% cumulative average and major average.
(h) Any remaining courses to bring the total course number to 40 may be from any area of study.

Courses used to calculate the major average are: courses listed under (d) and (e) and courses numbered ARSC-XXXX.

# Honours Bachelor of Interdisciplinary Arts and Science (IAS) Major and Double Minor Concentration

**Degree Requirements**

Total courses: forty.

(a) ARSC-1000, PHIL-1620, PHIL-2210,MATH-1720 (or MATH-1760) (and MATH-1730 if major or minor concentration is Math, Physics or Biochemistry.), STAT-2910 or SOSC-2500 (Science majors must take STAT-2910), ARSC-3010, ARSC-3100, ARSC-4100, ARSC-4990 (or other departmental requirement for the student's Major concentration), ARSC-4210.
(b) One course from GRST-1100, HIST-1130, HIST-1140, PHIL-1100, POLS-2510, POLS-2520, INCS-2020, INCS-2030, INCS-2200
(c) Four courses (any two of the following pairs): ECON-1100 and ECON-1110, BIOL-1111 and BIOL-1101, CHEM-1100 and CHEM-1110, COMP-1400 and COMP-1410, ESCI-1111 and ESCI-1100, MATH-1720 and MATH-1730, PHYS-1400 and PHYS-1410, PHYS-1300 and PHYS-1310.
(d) Major Concentration (12): maximum of two 1000-level courses in the major subject; and at least four 3000-level or 4000-level courses in the major subject
(e Minor Concentration I (6) : maximum of two 1000-level courses in the minor subject; and at least one 3000-level or 4000-level course in the minor subject
(f) Minor Concentration II (6) : maximum of two 1000-level courses in the minor subject; and at least one 3000-level or 4000-level course in the minor subject
(g) At least 15 courses must be taken in each of the Faculty of Arts, Humanities, and Social Sciences and the Faculty of Science.
(h) Any remaining courses to bring the total course number to 40 may be from any area of study.
(i) To continue in the program, and to receive the Honours IAS degree, students must maintain an Honours 70% cumulative average and major average.

Courses used to calculate the major average are: courses listed under (d) and numbered ARSC-XXXX.

**Bachelor of Interdisciplinary Arts and Science (IAS) Major and Minor Concentrations**

**Faculty of Arts, Humanities and Social Sciences (FAHSS)**
Anthrozoology
Communication, Media and Film
Dramatic Art
English and Creative Writing
History
Languages, Literatures and Civilizations
Music and Visual Arts
Philosophy
Political Science
Psychology
Sociology and Criminology
Women's and Gender Studies

**Faculty of Science**
Biological Sciences
Chemistry and Biochemistry

Computer Science
School of the Environment
Economics
Mathematics and Statistics
Physics

## Discovery Program (undeclared majors in FAHSS)

Students who have not decided on a major may remain undeclared until they have completed ten courses at the University of Windsor. These students will be placed in the Discovery Program.

The Discovery Program provides for undeclared students a home in their first year at university while they are discovering their preferred major. The “Effective Writing” courses required in this program will give them a solid foundation for the extensive amount of written work they face in courses they take throughout their university career. “Understanding the Contemporary World” will guide them into thinking critically while examining a variety of topics from several points of view. Students will receive attention to help them achieve academic success and the possibility for success after graduation.

Students in the Discovery Program (undeclared majors) must take GART-1200 Understanding the Contemporary World and GART-1500 Effective Writing in the Fall Semester of their first year, and GART-1510 Effective Writing II in the subsequent semester. Further academic counselling about choice of courses and other academic possibilities is available for students in this program through the Advising Centre.

## General Liberal Arts and Professional Studies

**Degree Requirements**

Total courses: thirty, at least sixteen of which must be at the 2000 level or above, and at least four of which must be at the 3000 level or above.

(a) One of GART-1500, MGMT-1000, GENG-1190; and GART-1510
(b) one Certificate chosen from the following list: Certificate in Anthrozoology, Certificate in Applied Information Technology, Certificate in Arts Management, Certificate in Law and Politics, Certificate in Public Administration, Certificate in Organizational Management, Certificate in Second Language Education, Certificate in Women’s and Gender Studies, and Certificate in Work and Employment Issues;
(c) One Minor from any area of study within the Faculty of Arts, Humanities, and Social Sciences, excluding the area of study selected under (b);
(d) one Minor from any area of study, excluding the area of study selected under (b):
(e) two courses from Science, Engineering, or Nursing unless this requirement is met in (b), (c), or (d);
(f) Additional courses from any area of study to a total of thirty courses.

# Honours Liberal Arts and Professional Studies

**Degree Requirements**

Total courses: forty, at least eight of which must be at the 3000 level or above, and a least two of these at the 4000 level.

(a) One of GART-1500,MGMT-1000, GENG-1190; and GART-1510
(b) One Certificate chosen from the following list: Certificate in Anthrozoology, Certificate in Applied Information Technology, Certificate in Arts Management, Certificate in Law and Politics, Certificate in Public Administration, Certificate in Organizational Management, Certificate in Second Language Education, Certificate in Women's and Gender Studies, and Certificate in Work and Employment Issues;
(c) One Minor from any area of study within the Faculty of Arts, Humanities and Social Sciences or the Department of Economics, excluding the area of study selected under (b);
(d) One Minor from any area of study, excluding the area of study selected under (b) and (c)
(e) One Minor from any area of study, excluding the area of study selected under (b), (c) and (d);
(f) Two courses from Science unless this requirement is met in (b), (c), (d) or (e) above;
(g) Additional courses from any area of study, to a total of forty courses.

# Honours in Liberal Arts and Professional Studies: Aeronautics Leadership (Flight option)

**Degree Requirements**

Total courses: 40

a) 14 courses from Arts, Humanities and Social Sciences, including 6 of the following Leadership courses:
GART-1200. Understanding the Contemporary World (double credit)
GART-3100/SOSC-3100 Ways of Doing
GART-2100/SOSC-2100 Ways of Knowing
GART-2090 Ethics in the Professions
DRAM-2100. Speech Communication to Inform
DRAM-2720 The Creative Process
SOSC-3500/SACR-3500/PSYC-3500/SWRK-3500/SJST-3500/WGST-3500 Practical Strategies for Social Change: Intervening to Prevent Sexual Assault
VSAR-3850 Green Corridor (Prerequisites: at least Semester 5 and in good standing)
GART-4000/SOSC-4000 Mentorship and Learning
SOSC-4500/SACR-4500/SJST-4500/PSYC-4500/SWRK-4500/WGST-4500 Practicum in Social Change (Prerequisite: SOSC-3500/SACR-3500/SJST-3500/PSYC-3500/SWRK-3500/WGST-3500)
EDUC-4000 Diversity and Inclusion in the Learning Organization
EDUC-4100 Learning-Centered Teaching: Planning, Delivery, Assessment and Evaluation
EDUC-4150 Learning Organizations: Management and Leadership
EDUC-4200 Theories of Individual and Collective Learning

b) 3 courses from Business
STEN-1000 Introduction to Business
MGMT-2430 Human Resources Management (Prerequisite STEN-1000)
MGMT-4520 Management of Organizational Health, Wellness and Safety (Prerequisite: MGMT-2430)

c) 4 courses from Science, Engineering, or Computer Science

d) 8 courses in Flight Training
AERO-1970 Practicum in Professional Development (double credit)
AERO-2970 Practicum in Professional Development (double credit)
AERO-3970 Practicum in Professional Development (double credit)
AERO-4970 Practicum in Professional Development (double credit)

e) GART-1500 Effective Writing I
GART-1510 Effective Writing II
f) 9 courses from any area of study

## General Liberal Arts and Professional Studies Degree Completion Program (for Lambton College Liberal Studies Graduates) (formerly General Arts and Science University (GASU))

**Admission Requirements**

Students who have completed the Liberal Studies program with an average of B or better will be granted advanced standing of ten courses under this degree completion pathway.

**Degree Requirements**

At least 16 courses must be at the 2000 level or above, and 4 of these must be at the 3000 level or above.

Total courses: 20

(a) One Certificate chosen from the following list: Certificate in Anthrozoology, Certificate in Applied Information Technology, Certificate in Arts Management, Certificate in Law and Politics, Certificate in Public Administration, Certificate in Organizational Management, Certificate in Second Language Education, Certificate in Women's and Gender Studies, and Certificate in Work and Employment Issues;
(b) One Minor from any program, excluding (a);
(c) Two courses in Science or Nursing unless this requirement is met in (a) or (b) above;
(d) Additional courses from any area of study to a total of twenty courses.

## Honours Liberal Arts and Professional Studies Degree Completion Program (for Lambton College Liberal Studies Graduates) (formerly General Arts and Science University (GASU))

**Admission Requirements**

Students who have completed the Liberal Studies program with an average of B or better will be granted advanced standing of ten courses under this degree completion pathway.

**Degree Requirements**

Total courses: 30

At least 26 courses must be at the 2000 level or above. Eight courses must be at the 3000 level or above, and a least two of these at the 4000 level.

(a) One Certificate chosen from the following list: Certificate in Anthrozoology, Certificate in Applied Information Technology, Certificate in Arts Management, Certificate in Law and Politics, Certificate in Public Administration, Certificate in Organizational Management, Certificate in Second Language Education, Certificate in Women's and Gender Studies, and Certificate in Work and Employment Issues;
(b) One Minor from any program, excluding (a);
(c) Two courses in Science or Nursing unless this requirement is met in (a) or (b) above;
(d) Additional courses from any area of study to a total of thirty courses.

## General Liberal Arts and Professional Studies for Career Professionals Degree Completion Program (for Graduates of Qualifying CAAT (or equivalent) Diploma Programs)

Students who have graduated from an approved CAAT college diploma (or equivalent) with a suggested cumulative average of 3.0 (70%) or higher in their final ten courses will be considered for admission. Approved CAAT college diploma programs include: Border Services, Business programs, Community & Justice Services, Dental Hygiene, Developmental Service Worker, Early Childhood Education, Educational Support, Engineering, General Arts and Science, Journalism, Liberal Arts, Liberal Studies, Music – Industry Arts, Paralegal, Paramedic, Police Foundations, Protection, Security, and Investigation, Recreation and Leisure Services, Social Service Worker.

**Degree Requirements**

Total courses: 20 courses

At least 16 courses must be at the 2000 level or above, and 4 of these must be at the 3000 level or above.

(a) One Certificate chosen from the following list: Certificate in Anthrozoology, Certificate in Applied Information Technology, Certificate in Arts Management, Certificate in Law and Politics, Certificate in Public Administration, Certificate in Organizational Management, Certificate in Second Language Education, Certificate in Women's and Gender Studies, and Certificate in Work and Employment Issues;
(b) One Minor from any program, excluding (a);
(c) Two courses in Science or Nursing unless this requirement is met in (a) or (b) above;
(d) Additional courses from any area of study to a total of twenty courses.

## General Liberal Arts and Professional Studies for Career Professionals Degree Completion Program (for Graduates of Qualifying CAAT (or equivalent) Advanced Diploma Programs)

Students who have graduated from a CAAT college advanced diploma with a cumulative average of 3.0 (70%) or higher in their final ten courses will be considered for admission. Approved Advanced Diploma Programs include: Business Administration, Child and Youth Care/Child and Youth Worker, Computer Science or Computer Programming or Information Technology, Dental Hygiene (the province has recently changed the program to an advanced diploma, Diagnostic Medical Sonography, Engineering, Massage Therapy, Medical Laboratory Science, Respiratory Therapy, Sport and Recreation Management.

**Degree Requirements**

Total courses: 15

At least 15 courses must be at the 2000 level or above, and 4 of these must be at the 3000 level or above. No more than eight courses may be taken in any one area.

(a) Any combination of three courses from Arts, Humanities and Languages,
The following course may also count as an Arts, Humanities and Languages requirement: NURS-3510;

(b) Any combination of three courses from Social Sciences, Economics, or Organizational Learning;
The following courses from programs may also be used as a Social Science requirement: ANZO-1600, ANZO-2600, ANZO-2610, ANZO-3600, ESTU-1000, ESTU-2100, CBMI-2000;

(c) Any two courses from the professional studies requirement:
GART-2090, GART-3100, SOSC-3100, SOSC-3200, SOSC-3210, DRAM-2100, DRAM-2750, DRAM-2760, SOSC-2500, POLS-3230, PSYC-3700, ECON-2000, ECON-2010, ACCT-1510, ACCT-2550, MGMT-2400, FINA-2700, MKTG-1310, STEN-1000, Border Management (CBMI-XXXX), KINE-3450*, KINE-3500*, KINE-3520*, KINE-4500*, KINE-4550*. *Requires the permission of the instructor

(d) Any combination of two courses from Science, Engineering, Nursing, and Kinesiology,
The following Forensics courses may be used to fulfill the science requirement: FRSC-1107, FRSC-2007, FRSC-2100, FRSC-3201, FRSC-4207, FRSC-4217, NURS-3910.

(e) five additional courses from any area of study.

## Minor in Latin American Studies

Required: six courses, including two of SPAN-2610, HIST-2720; two of HIST-4620, 48-226, SACR-2270, SACR-3520; SPAN-1010 (or SPAN-1020) or two intermediate or advanced level courses in Spanish language training (as appropriate, as determined by a placement test).

## Combined Honours in Social Justice

(As of Winter 2019, there are no new admissions to the Combined Social Justice program.)

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty

(a) DISB/SJST-1000; SJST-3000; PHIL-3230, SACR-3520; and WORK-1000;
(b) seven courses from the following list: JWST-1700, JWST-2350, JWST-2700, DRAM-3780, DRAM-4710, ENGL-1005, ENGL-2320, ENGL-3330, VSAR-3850, MACS/CMAF-4500, PHIL/WGST-2360, PHIL-2220, CMAF-2250, CMAF/DRAM/WORK-2700; CMAF-3700, HIST/WORK-3490, HIST-2510/WGST-2510, HIST-3620, POLS/WGST-2110; POLS-2480, POLS-2490, POLS-3350, POLS-3560, PSYC-2400, PSYC-3340, PSYC-4400, PSYC-4450, SWRK-1170, SWRK-2100, SACR-2270, SACR-2280, SACR-2400, SACR-3400, WGST/WORK-2600, WGST-3530 /SACR-3530, WGST-4100, WORK-2000.
(c) Course requirements-Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area.
(d) GART-1500, GART-1510;
(e) two courses from Arts or Languages
(f) two courses from Science;
(g) additional course from any area of study excluding Social Sciences, to a total of forty.

Courses used to calculate the major average are: courses listed under requirements (a) to (c), and any courses taken in the major area(s) of study.

## Minor in Social Justice Studies

Total courses: 6

Requirements: six Social Justice Studies (SJST-) or Social Justice Emphasis courses, including SJST-1000 and at least two courses at the 2000-, 3000-, or 4000-level; no more than three courses may be Social Justice Emphasis.

Social Justice Emphasis Courses:
CMAF-2250, CMAF-3700
PHIL-2270, PHIL/WGST-2360, PHIL-3230/POLS-3620, PHIL-3290, PHIL-3300
POLS-1709, POLS/WGST-2110, POLS-2300
PSYC-2400, PSYC-4400, PSYC-4450
WGST/SACR-2100, WGST-2200, WGST/HIST-2510, WGST/SACR-3530
WORK-1000, WORK-2000, WORK/WGST-2400, WORK/WGST-2600
Courses offered within the Walls to Bridges program under section code "75".

Various areas of study from time to time offer courses dealing specifically with social justice issues under specific course titles or general titles such as, "Special Topics", "Directed Readings", or "Seminars". Information regarding such courses will be available from a program advisor in Women's and Gender Studies and they may be taken with permission of the program.

*NB: Students are responsible for ensuring that they have the required pre-requisites for enrolment in the above list of courses.

## Minor in Work and Employment Issues

Required: WORK-1000, WORK-2000, WORK-2500, plus three other (WORK-***) courses.

## Certificate in Work and Employment Issues

**Admission Requirements**
Minimum admission requirements for undergraduate degrees.

Total courses: eight

**Program Requirements**
(a) one of: WORK-1000 or WORK-1500
(b) WORK-2000, WORK-2500, and WORK-3500;
(c) four of: WORK/WGST-2400, WORK/PSYC-2180, WORK/WGST-2600, WORK/DRAM/SJST/CMAF-2700, WORK/SACR-3270, WORK/HIST-3490, WORK/PSYC-3700, PHIL-2240, MGMT-3440.

# FACULTY OF ARTS, HUMANITIES, AND SOCIAL SCIENCES (FAHSS) COURSES

The following courses are offered through the Office of the Dean of Arts and Social Sciences.

## AERONAUTICS LEADERSHIP COURSES

**AERO-1970. Practicum in Professional Development, Pilot Training**
Supervised practicum in professional development in pilot training. Introduction to leadership training, and aviation theory and practice. Includes a 3 day leadership training session held just prior to the Fall term. Completion of year one of pilot training plus submission of satisfactory portfolio entries to the supervising instructor required. (Marked on a pass/fail basis. Two semester course. 6 credits. Restricted to students in LAPS Pilot option program.)

**AERO-2970. Practicum in Professional Development, Pilot Training**
Supervised practicum in professional development in pilot training. Leadership training, navigation and meteorology. Completion of year two of pilot training plus submission of satisfactory portfolio entries to the supervising instructor required. (Marked on a pass/fail basis. Two semester course. 6 credits. Restricted to students in LAPS Pilot option program.) (Pre-requisite: AERO-1970)

**AERO-3970. Practicum in Professional Development, Pilot Training**
Supervised practicum in professional development in pilot training. Leadership training on health and safety issues. Completion of year three of pilot training plus submission of satisfactory portfolio entries

to the supervising instructor required. (Marked on a pass/fail basis. Two semester course. 6 credits. Restricted to students in LAPS Pilot option program.) (Prerequisite: AERO-2970)

**AERO-4970. Practicum in Professional Development, Pilot Training**
Supervised practicum in professional development in pilot training. Leadership and management of flight crews and passenger safety. Completion of one year of post-pilot license training plus submission of satisfactory portfolio entries to the supervising instructor required. (Marked on a pass/fail basis. Two semester course. 6 credits. Restricted to students in LAPS Pilot option program. ) (Pre-requisite: AERO-3970)

# ANTHROZOOLOGY COURSES

**ANZO-1600. Animals and Humans in Society**
This course will explore and consider the different types of relationships between animals and humans in contemporary society from a variety of physical, social, and psychological perspectives. Topics may include companion animals, animal rights and welfare, animals and food and entertainment, human-animal violence, and animal-assisted therapy. (Can be taken for either Social Science or Arts credit).

**ANZO-2000. The Paw and the Pen: Animals in Literature**
This course explores the varying and significant ways in which animals are represented in literature. Throughout Western literary history, animals appear in a variety of images, symbols, characters, and themes, which can be studied from a wide array of critical perspectives: natural realism; animal society; anthropomorphism; pests vs. pets; “owned” beings vs. companions; ecocriticism; cultural icons; and ethically and morally. The way in which animals both influence and reflect societal values is examined through human-animal relationships portrayed in selected texts, through class discussion and written analysis. (Can be taken as either a Social Science or Arts option.) (Prerequisite: ANZO-1600 for Minor in Anthrozoology only.) (Open to English majors with semester 3 standing.)

**ANZO-2600. Animals For Sport and Entertainment**
Building on Animals and Humans in Society (ANZO-1600), this course will focus on many of the issues, controversies, and paradoxes, which are inherent to human relationships with animals as companions, for human entertainment, and animals in sports. Students will be expected to engage in meaningful discussions and readings, both verbally and through their own writing, applying different perspectives (ie. historical, sociological, cultural, etc.) to relevant topics. Potential topics for this class include animal fighting as entertainment (cockfighting, dog fighting, bullbaiting, etc.); zoos and aquaria; circuses and rodeos; pedigree dogs and dog shows; and racing (greyhounds and horses). (Prerequisite: ANZO-1600 or ANZO-1600). (Can be taken as either a Social Science or Arts option).

**ANZO-2610. Animals and the Law**
This course, for undergraduate non-law majors, focuses on the role of law in human-animal interactions and the balancing of competing interests within traditional areas of law. Students will explore and debate the major issues surrounding animal welfare, rights, and protection, including the legal status of animals as living property, and the evolving societal beliefs and values surrounding these issues. The course will primarily focus on examining and comparing the laws of Canada and the United States, although laws and constitutions of other countries, as well as international law, will also be considered.(Prerequisite: ANZO-1600). (Can be taken as either a Social Science or Arts option).

**ANZO-3100. Canine Impact: Exploring the Dog-Human Relationship**
This course will explore the significance of dogs in a human world from a range of perspectives, including biological, ethical, historical, psychological, and social. From the evolution of the domestic

canid to the unique construction of breeds to status as a family member, the course will examine the dog's role and value as protector, hunter, and companion within the contexts of evolution, domestication, behaviour, and cognition. Theories and complexities of the canine-human relationship will be explored through readings, discussions, media, debates, observation, and experience.

**ANZO-3600. Special Topics in Anthrozoology**
This course focuses on a selected topic in Anthrozoology, which may vary according to special faculty interests and/or significant current issues. Among others, topics could include: Animals in the Arts; Companion Animals; Human-Animal History; Politics and Animals; Food and Sustainability; Zoos; Animals in Religion, etc. (Prerequisite: ANZO-1600). (3 lecture hours a week). (May be repeated for credit, with permission of the instructor, if content is different). (Can be taken as either a Social Science or Arts option).

**ANZO-4980. Anthrozoology Capstone**
This capstone provides students the opportunity, in collaboration with the instructor, to design and implement their own unique learning experience by demonstrating their accumulated knowledge and understanding of anthrozoology in an original project of their choice, subject to the instructor's approval. This course will reflect student knowledge of the interdisciplinary field of anthrozoology, which has been acquired through previous anthrozoology courses. The projects may be in collaboration with community partners, such as animal shelters, zoological parks, or educational environments. (Prerequisites: ANZO-1600, ANZO-2600, ANZO-2610, ANZO-3600.) (Restricted to students with at least semester 5 standing and by permission of the instructor.)

## GENERAL FAHSS COURSES (GART-)

**GART-1200. Understanding the Contemporary World**
This course will explore current political, cultural and social contexts. The perceived gulf between the "ivory tower" and the "real world" will be bridged each week as we analyze major current issues with attention to popular culture. (Restricted to year 1 FAHSS majors.) (3 lecture/1 tutorial hours a week.) (6.0 credit course.)

**GART-1210. An Introduction into Indigenous Topics**
This course introduces students to Indigenous histories, perspectives, and modern realities through an Indigenous lens. The role of colonization is introduced as Indigenous relationships on Turtle Island changed as a result of contact and colonization. This survey course provides a learning opportunity for students to engage in Indigenous pedagogy and worldview as they learn how history impacts the contemporary lives of Indigenous people. Through exploring relationships, this course engages critical reading, writing and thinking skills through course lectures and seminar activities. The history of relations assists in understanding how colonization's policies and statutory documents thereafter affected Indigenous peoples, such as the Royal Proclamation, Treaties, the Indian Act, the British North America Act (1867), and the Constitution Act (1982). Today, these colonial-state governance documents are a significant part of Indigenous-Crown and Indigenous-settler relations. (2 lecture hours and 1 tutorial hour per week.) (Also offered as SOSC-1210.)

**GART-1500. Effective Writing I**
A foundational course aimed at developing effective writing skills for communicating ideas in academic and other contexts. Topics may include grammar, paragraph writing conventions, academic learning, and critical thinking. This is a hybrid course.

**GART-1510. Effective Writing II**
A continuation of GART-1500 aimed at developing and refining writing skills for communicating ideas in academic and other contexts. Topics may include grammar, essay writing conventions, research skills, scholarly citations, editing and revising, academic learning, and critical thinking. This is a hybrid course. (Prerequisite: GART-1500.)

**GART-2040. Health-Care Ethics through the Life-Span**
Explores ethical issues of general interest which arise during the life-span, from conception until death, including methods to prevent contraception, methods to aid in reproduction, medical treatment for children, organ transplantation, research on human subjects, foregoing life-sustaining treatment, advance directives, assisted suicide, and euthanasia. This course is not directed specifically to health professionals.

**GART-2050.Community Program Delivery and Evaluation**
This course provides students with an overview of principles and methods of community program delivery and evaluation. Students will explore topics including systems change, collective impact, human-centered design, engaging diverse communities, and continuous improvement and will learn how to design a comprehensive community program delivery and evaluation plan that can be implemented in a community setting. (Requires third year standing or permission of the instructor.) (Also offered as SOSC-2050).

**GART-2060. Practicing Community Program Delivery and Evaluation**
This course provides students with an opportunity to practice the principles and methods of community program delivery and evaluation, providing them with practical skills for future academic or employment opportunities. Students will be placed in community settings as supported by the local collective impact initiative, ProsperUs, and will carry out activities that may include community activation, frontline and administrative program support, and program evaluation. (Prerequisite: SOSC-2050. Instructor permission. Interview may be required.)

**GART-2090. Ethics in the Professions**
Examines what constitutes a profession, its legitimacy, and its authority from society. The responsibilities of professionals to their clients, professions, and society are mapped. Codes of ethics and other statements of ethical standards, conflict of interest, and the roles of regulatory bodies and governments are examined and related to practice through relevant case studies.

**GART-2100. Ways of Knowing – Selected Topics**
Students complete problem-based learning with internal and external community partners to explore networks of knowledge in organizations and within civic settings. The topic for each year will be announced in advance. (Restricted to students with a minimum of second semester standing. (Also offered as SOSC-2100.) (May be repeated for credit by permission of the instructor.)

**GART-2200. Investigating the Contemporary World**
This course will explore the connections among culture, politics and society in historical and contemporary contexts with the use of case studies. (Restricted to students in the Fresh Start program.) (2 lecture/1 tutorial hours a week.) (Antirequisite: GART-1200)

**GART-2990. Popular Culture: Special Topics**

This course explores a featured topic within contemporary popular culture through an Arts, Humanities and/or Social Science perspective. Topics for the course will vary and may include: between popular culture, street art, Web 2.0, gothic literature, reality television, fan culture and fandoms, celebrity culture, science fiction fantasy, and video gaming. Course delivery may also vary according to instructor preference. (Course may be repeated for credit if topic is different.) (Also offered as SOSC-2990.)

**GART-3100. Ways of Doing: Special Topics**
This course introduces students to experiential learning through student proposed and instructor-approved problem or project-based learning. Students develop solutions or execute projects with a community partner that they have reason to value. Students may develop projects/proposals with existing or new employers. The instructor, community partner, and student will collaborate on the use of experiential learning (such as Kolb's learning cycle) and well-being frameworks (the Capabilities Approach) to reflect upon the success of their project. Restricted to students with Year 2 standing. This course is also offered as SOSC-3100. Students may repeat this course for credit by permission of the instructor.

**GART-4000. Mentorship and Learning**
An intensive exploration of the theory an d practice of learning and leadership which includes a practical component where students will mentor first-year students in a first-year course. Mentorship and Learning introduces students to learning theory, learning styles, group facilitation and effective leadership, critical thinking/reading and information literacy. Students will weave theory and practice throughout the semester, leading small group break-outs of first-year students. (Restricted to students in the Faculty of Arts and Social Sciences with at least Semester 5 standing, with consent of the instructor.) (A one-semester, 3-credit course offered in the Fall term.) (Also offered as SOSC-4000.) (Credit can only be obtained for one of GART-4000 or SOSC-4000) (3 lecture/3 lab hours a week.)

**GART-4100. Modern Leadership**
Students will review modern leadership theory and practices that were developed from the early 20th century to the present. Students will cover such relevant topics as: Servant Leadership, Behavioural Leadership, Psychodynamic Leadership, e-Leadership, Gender and Cultural Leadership, Path-Goal Theory, and Leader-Member Exchange Theory. (Restricted to students with at least semester 5 standing and by permission of the instructor.) (Also offered as SOSC-4100.)

## GENERAL FAHSS COURSES (SOSC-)

**SOSC-1000. Introduction to Canadian Studies**
This course emphasizes the transition of Canada from a European colonial society to an immigrant, multicultural society. A multidisciplinary approach will be taken in dealing with the specific problems facing Canada today.

**SOSC-1210. An Introduction into Indigenous Topics**
This course introduces students to Indigenous histories, perspectives, and modern realities through an Indigenous lens. The role of colonization is introduced as Indigenous relationships on Turtle Island changed as a result of contact and colonization. This survey course provides a learning opportunity for students to engage in Indigenous pedagogy and worldview as they learn how history impacts the contemporary lives of Indigenous people. Through exploring relationships, this course engages critical reading, writing and thinking skills through course lectures and seminar activities. The history of relations assists in understanding how colonization's policies and statutory documents thereafter affected Indigenous peoples, such as the Royal Proclamation, Treaties, the Indian Act, the British North America Act (1867), and the Constitution Act (1982). Today, these colonial-state governance documents

are a significant part of Indigenous-Crown and Indigenous-settler relations. (2 lecture hours and 1 tutorial hour per week.) (Also offered as GART-1210.)

**SOSC-2050.Community Program Delivery and Evaluation**
This course provides students with an overview of principles and methods of community program delivery and evaluation. Students will explore topics including systems change, collective impact, human-centered design, engaging diverse communities, and continuous improvement and will learn how to design a comprehensive community program delivery and evaluation plan that can be implemented in a community setting. (Requires third year standing or permission of the instructor.) (Also offered as GART-2050)

**SOSC-2060. Practicing Community Program Delivery and Evaluation**
This course provides students with an opportunity to practice the principles and methods of community program delivery and evaluation, providing them with practical skills for future academic or employment opportunities. Students will be placed in community settings as supported by the local collective impact initiative, ProsperUs, and will carry out activities that may include community activation, frontline and administrative program support, and program evaluation. (Prerequisite: SOSC-2050. Instructor permission. Interview may be required.) (Also offered as GART-2060).

**SOSC-2100. Ways of Knowing – Selected Topics**
Students complete problem-based learning with internal and external community partners to explore networks of knowledge in organizations and within civic settings. The topic for each year will be announced in advance. (Restricted to students with a minimum of second semester standing. (Also offered as GART-2100.) (May be repeated for credit if the topics are different)

**SOSC-2500. Basic Quantitative Methods in the Social Sciences**
Introduction to measurement of variables, organization and description of numerical data, testing hypotheses, inference, and interpretation of findings in the Social Sciences. Topics include descriptive statistics, normal distribution, probability, sampling, hypothesis testing, t-tests, correlation, and chi-square tests. (Antirequisite: STAT-2910, STAT-2920, STAT-2950, MSCI-2020, GENG-2220, and KINE-2690.)

**SOSC-2990. Popular Culture: Special Topics**
This course explores a featured topic within contemporary popular culture through an Arts, Humanities and/or Social Science perspective. Topics for the course will vary and may include: between popular culture, street art, Web 2.0, gothic literature, reality television, fan culture and fandoms, celebrity culture, science fiction fantasy, and video gaming. Course delivery may also vary according to instructor preference. (Course may be repeated for credit if topic is different.) (Also offered as GART-2990.)

**SOSC-3100. Ways of Doing: Special Topics**
This course introduces students to experiential learning through student proposed and instructor-approved problem or project-based learning. Students develop solutions or execute projects with a community partner that they have reason to value. Students may develop projects/proposals with existing or new employers. The instructor, community partner, and student will collaborate on the use of experiential learning (such as Kolb's learning cycle) and well-being frameworks (the Capabilities Approach) to reflect upon the success of their project. Restricted to students with Year 2 standing. This course is also offered as GART-3100. Students may repeat this course for credit by permission of the instructor.

**SOSC-3150. On Death and Dying**

A critical exploration of topics related to death and dying. Topics covered may include: historical and cross-cultural perspectives on dying and death; memorial and commemoration; palliative care and medical aid in dying; death and popular culture; genocide and mass deaths; pandemics; the construction and medicalization of death; and death planning. Course delivery may vary according to instructor preference. (Pre-requisites: Semester 5 or higher standing or permission of instructor). (Cross-listed with SACR-3150)

**SOSC-3200. Working in Digital Communities I**
In this course students will learn how to negotiate work among the growing digital enterprises in the global economy. Students will study multi-disciplinary concepts of digital communities including use of or aversion to E-commerce infrastructure, financial transactions, business models, and marketing and advertising concepts. (Restricted to students with a minimum third semester standing).

**SOSC-3210. Working in Digital Communities II**
This is a continuation of Working in Digital Communities I. Students will study multi-disciplinary views regarding ethical issues, content, social networks, mobile applications, news, auctions, B2B transactions, and dispersed collaborations. (Prerequisite: SOSC-3200 or GART-2100/SOSC-2100, or GART-3100/SOSC-3100).

**SOSC-3300. Psychoactive Substance Use and Social Policy**
This course provides a critical exploration of social factors affecting our understanding of psychoactive substances (e.g., alcohol, tobacco, cannabis, opiates, cocaine, psylocibin, club drugs, etc.), their use, relevant social policy and how these have changed over time. Course delivery may vary according to instructor preference. (Prerequisite: Semester 5 standing or above, or permission of instructor). (Antirequiste: SACR-3710) (Also offered as POLS-3300).

**SOSC-3500. Practical Strategies for Social Change: Intervening to Prevent Sexual Assault**
This course introduces students to sexual violence as a social problem; why it matters, the forms it takes, and how it can be changed. The importance of personal and community responsibility for social change is emphasized. This course also provides students with the background knowledge that is needed to successfully teach sexual violence prevention workshops for their peers. Restricted to students who have attained a cumulative GPA of 66% or higher at the time of application. (Prerequisite: Semester 4 standing or above and permission of the instructor by online application at bystander initiative.ca) (Also offered as PSYC-3500, SACR-3500, SJST-3500, SWRK-3500, and WGST-3500)

**SOSC-4000. Mentorship and Learning**
An intensive exploration of the theory and practice of learning and leadership which includes a practical component where students will mentor first-year students in a first-year course. Mentorship and Learning introduces students to learning theory, learning styles, group facilitation and effective leadership, critical thinking/reading and information literacy. Students will weave theory and practice throughout the semester, leading small group break-outs of first-year students. (Restricted to students in the Faculty of Arts and Social Sciences with at least Semester 5 standing, with consent of the instructor.) (A one-semester, 3-credit course offered in the Fall term.) (Also offered as GART-4000.) (Credit can only be obtained for one of GART-4000 or SOSC-4000) (3 lecture/3 lab hours a week.)

**SOSC-4100. Modern Leadership**
Students will review modern leadership theory and practices that were developed from the early 20th century to the present. Students will cover such relevant topics as: Servant Leadership, Behavioural Leadership, Psychodynamic Leadership, e-Leadership, Gender and Cultural Leadership, Path-Goal

Theory, and Leader-Member Exchange Theory. (Restricted to students with at least semester 5 standing and by permission of the instructor.)(Also offered as GART-4100.)

**SOSC-4500. Practicum in Social Change**
Supervised practicum in a university setting. Students consolidate and enhance their knowledge of sexual assault and bystander intervention. Students co-facilitate the Bringing in the Bystander® In Person Prevention program for one or more small groups of students on campus. The practicum experience equips students to deliver educational content on sensitive issues. (Prerequisite: Final mark of 75% or higher in SOSC-3500/PSYC-3500/SJST-3500/SWRK-3500/SACR-3500/WGST-3500 and permission of the instructor by online application at bystanderinitiative.ca.) (Also offered as SJST-4500, PSYC-4500, SWRK-4500, SACR-4500, and WGST-4500.

**SOSC-4601. Seminar on Prostitution, Sexual Labour and Health**
This course engages in a critical study of the conception and construction of prostitution/sex work and sexual labour and its impact on social determinants of health. Students will be required to examine and critically reflect on a variety of issues pertaining to adult consensual sex work and the impact of public policy on the health and well-being of people working in the sex industry. Substantive topics may include: policy and regulation; the construction of sex trafficking; stigmatization; politics and the media; violence and victimization; health and safety; customers; and organizing and advocacy. Course delivery may vary according to instructor preference. (Prerequisite: Semester 7 standing or above, or permission of instructor). (Cross-listed with WGST-4601 and WORK-4601.)

## DIGITAL JOURNALISM COURSES

**DIGJ-1200. Reporting Fundamentals**
Through lessons, labs, case studies, group work, and writing and presentation assignments, students learn the fundamental principles and practices of daily and special assignment and reporting. A classroom-based curriculum taught by professional journalists, “Reporting Fundamentals” complements the hands-on design of the collaborative studios. (Enrolment initially restricted to Digital Journalism majors.)

**DIGJ-1250. Journalism Today**
This fundamental theory unit of the Digital Journalism curriculum introduces students to the history of journalism and the function of journalists in contemporary society. This unit emphasizes the distinction of Digital Journalism from traditional forms. An overview of the major themes, issues and schools of thought informing the field of media studies, “Journalism Today” addresses such topics as: the political, economic, historical, and cultural contexts of communication; policy issues and concerns; communication technology; media representation; the role of media in the social construction of reality; and the broad interaction between journalism and society. (Enrolment initially restricted to Digital Journalism majors.)

**DIGJ-1400. The Job - Collaborative Studio I**
From their first day in DJ at the University of Windsor students think and act as journalists. In “The Job” students each week identify, propose, research and prepare stories with full-time journalists as their mentors. In this collaborative studio course, students work together to solve problems in a flexible learning environment emphasizing realistic on-the-street experiences such as attending trials, news conferences, and public events. (Prerequisites: DIGJ-1250.) (Enrolment initially restricted to Digital Journalism majors.)

**DIGJ-2200. Introduction to Online Design and Publishing**

This unit concentrates on applying digitally generated content on the web. Here students will learn computer language and software used to build sites and, once the site is built, layer, insert hypertext links, prepare and post clickable maps, historical timelines, photo galleries/slide shows, etc., and their own journalistic projects. (Enrolment initially restricted to Digital Journalism majors.)

**DIGJ-2220. Introduction to Audio/Visual Production**
This fundamental production unit is organized around weekly assignments establishing students' competency in use of audio and video equipment, editing and photojournalism. With an emphasis on electronic news gathering (ENG) the objective is to ensure that all Digital Journalism students have the same basic technical skill set. Students with a particular interest in A/V production can select electives to broaden their competencies in this area and develop a specialization applicable in "Newsroom" and "Professional Studio". (Enrolment initially restricted to Digital Journalism majors.)

**DIGJ-2250. Media Law and Ethics**
Traditional standards of law and ethics are being re-evaluated as journalists increasingly work in a digital milieu. This unit establishes students' understanding of the law and ethical issues surrounding matters such as defamation, restrictions on identifying suspects in criminal cases, and intellectual property. (Enrolment initially restricted to Digital Journalism majors.)

**DIGJ-2300. Writing for Digital Journalism**
Strong writing is the cornerstone of a successful journalism career. In this unit students learn the principles of writing news for mainstream and alternative digital media. They apply these principles in the research and preparation of assignments designed to instill clarity, precision and speed. (Enrolment initially restricted to Digital Journalism majors.)

**DIGJ-2400. Advanced Skills - Collaborative Studio II**
In "Advanced Skills" – Collaborative Studio II Digital Journalism students work the field. Each week under the direction of a professional journalist they apply the advanced technical and academic skills acquired in the previous three semesters to develop original independent and collaborative projects suitable for presentation in multiple digital formats. (Prerequisite: DIGJ-1400.) (Enrolment initially restricted to Digital Journalism majors.)

**DIGJ-3200. Computer-Assisted Reporting**
Digital technology has not only changed journalists' physical work, it has also changed their intellectual work. In this course Digital Journalism students learn the practices of computer-assisted reporting (CAR), a broad area of investigative reporting that is premised on using a variety of techniques to acquire digital data and information and use it in journalism. (Enrolment initially restricted to Digital Journalism majors.)

**DIGJ-3400. Newsroom - Collaborative Studio III**
In their third year DJ students run the newsroom; they organize a management structure and select, research and report the stories that appear on the University of Windsor's Digital Journalism website. This two-semester two-credit course requires students to complete a minimum number of stories during the year for the DJ program website, other campus media, local public outlets, community platforms, and/or university units and programs. As with other studio courses, professional journalists guide and evaluate students in this studio. (Prerequisites: DIGJ-2400.) (Enrolment initially restricted to Digital Journalism majors.)

**DIGJ-4300. Digital Journalism Practicum**
The Digital Journalism Practicum provides students in their third or fourth years with hands-on experience in professional journalism settings. In the practicum, students spend either a concentrated two-week period or a day-per-week internship for a semester in organizations such as print, radio or TV newsrooms, a public affairs company, a non-governmental organization, or in offices of members of government. In the practicum students will perform tasks reflecting the journalistic theory and skills they have learned in the DJ program. Students select either the two-week or one-day-per week option depending on their co-major schedule. (Prerequisite: DIGJ-3400)

**DIGJ-4400. Professional Studio - Collaborative Studio IV**
The "Professional Studio" is built around a one-semester capstone project. Students advancing to fourth year pitch a single or a multi-part project to faculty and professional journalists who monitor progress and evaluate through e-portfolios. DJ project pitches vary because not all journalists want to report; some want to develop technical specializations, some want to produce, some want to only research. Common to all capstone projects is students' emphasis on an aspect of their interests in their co-major designation. (Prerequisites: DIGJ-3400.) (Enrolment initially restricted to Digital Journalism majors.)

# HUMAN GEOGRAPHY COURSES

Not all courses listed will necessarily be offered each year.

**HUGR-2490. Political Economy of Agriculture and Food**
Study of the physical, cultural, economic, and political factors influencing the spatial patterns and regional problems of world agriculture. (3 lecture hours a week.) (Also offered in Political Science POLS-2490.)

# INTERDISCIPLINARY ARTS AND SCIENCE COURSES

**ARSC-1000. Introduction to Interdisciplinary Arts and Science**
This course examines how various academic disciplines contribute to integrative understanding. The course examines the history of interdisciplinary studies and different models of integration. Students will develop skills in interdisciplinary research and problem solving, in oral and written communication, and in the synthesis of diverse perspectives. (Open only to students in the IAS program).

**ARSC-3010. World Civilizations**
An introduction to the politics, culture and history of world civilizations. Focus will vary from year to year, depending on the interests of the instructor. (Open only to students in the IAS program.)

**ARSC-3100. Modes and Methods of Inquiry**
This course introduces methodological themes and principles that span disciplines across the Arts and Sciences, with an emphasis on developing skills for the critical appraisal of research literature. The course will enable students to become critical readers of published research in a variety of disciplines. (Open only to students in the IAS program.)

**ARSC-4100. Inquiry and Communication**
An examination to inquiry-based learning with a focus on contemporary political and social issues emphasizing the professional preparation and presentation of research results. This course is designed to provide experiences with planning, developing, and writing a research proposal under individual

faculty supervision. In addition, group sessions on research ethics, procedures, writing, and data analysis will be provided. (Open only to students in the IAS program.) (Prerequisite: ARSC-3100.)

**ARSC-4210. Science, Ethics and Social Policy**
Students will explore the ethical dimensions of contemporary scientific controversies and their implications for social policy. The focus will vary from year to year but may include such topics as stem cell research, invitro-fertilization, and global warming, emphasizing the role of scientific and ethical arguments in policy formation. (Open only to students in the IAS Program) (Prerequisite: ARSC-3100.)

**ARSC-4990. Research Project**
Students will design and implement a research project under the supervision of a faculty member integrating methodologies, critical perspectives and theoretical approaches acquired in the core IAS program. (Open only to students in the IAS program.) (A 6.00 credit hour research project, which counts as two courses.)

## SOCIAL JUSTICE COURSES

**SJST-1000. Social Justice in Action**
Students investigate the local and global origins of a contemporary social problem through the eyes of social justice activists. Students will assess the strengths and limitations of strategies and theoretical frameworks for social change and use this knowledge to create social action messages that raise public awareness, influence government or corporate policy, or positively change attitudes and behaviours. (3 lecture hours per week) (Also offered as DISB-1000.)

**SJST-1400. Queer Activism**
Students engage with LGBTQ+ activism, past and present. Students investigate how queer communities are created and sustained through protest, alliance-building, symbols, and memes. (Also offered as WGST-1400).

**SJST-2100. Being Heard: Advocating for Social Change**
Students envision a better world by raising awareness about social problems and practicing the advocacy skills needed to create a more just society. Students prepare, present and defend action plans that address the needs of those communities whose voices are undervalued in public discussions. (Prerequisite: DISB/SJST-1000 or semester 3 standing or above or permission of the instructor.)

**SJST-2180. Everyday Conflicts and Their Resolution**
Students design and practice techniques for resolving everyday conflicts with friends and co-workers effectively and respectfully, and without damaging interpersonal relationships. Students learn to focus on the problem, not the person; identify and respond to hidden agendas and subvert personal attacks. Pre-requisite: Semester 3 or above standing or permission of the instructor. (Also offered as PSYC-2180 and WORK-2180)

**SJST-2350. Disability, Madness, and Social Justice**
This course uses first-person narratives to engage students in experiences of disability and madness. Students learn to develop a feminist intersectional, anti-ableist analysis of their own thoughts, feelings and behaviours in relation to disability, madness, and other intersecting forms of oppression. Intersections of disability, madness, race, class, sexuality, and gender identity are explored. Topics may include disability and madness in popular culture, disability and sexuality, mad activism, disability justice, and feminist perspectives on disability and madness. (Prerequisites: WGST-1000 or SJST/DISB-1000) (Also offered as WGST-2350)

**SJST-2700. Speaking Truth to Power: Voice and Activism**
An examination of contemporary campaigns to improve the standard of living of Canadians. Students learn to conduct interviews and evaluate the effectiveness of social justice messages. (Prerequisite: Semester 3 or above standing.) (Also offered as CMAF-2700, WORK-2700 and DRAM-2700).

**SJST-3000. Social Justice Seminar**
An inter-disciplinary exploration of the role of the state, alternative media, arts, literature, critical pedagogy, international and domestic law, social movements, non-governmental agencies, international governmental agencies, and scholars in bringing about social change. (Prerequisites: SJST-1000 and semester 5 standing.)

**SJST-3500. Practical Strategies for Social Change: Intervening to Prevent Sexual Violence**
This course introduces students to sexual violence as a social problem; why it matters, the forms it takes, and how it can be changed. The importance of personal and community responsibility for social change is emphasized. This course also provides students with the background knowledge that is needed to successfully teach sexual violence prevention workshops for their peers. Restricted to students who have attained a cumulative GPA of 66% or higher at the time of application. (Prerequisite: Semester 4 standing or above and permission of the instructor by online application at bystanderinitiative.ca) (Also offered as PSYC-3500, SACR-3500,SOSC-3500, SWRK-3500, and WGST-3500.)

**SJST-4500. Practicum in Social Change**
Supervised practicum in a university setting. Students consolidate and enhance their knowledge of sexual violence and bystander intervention, and they lead sexual violence prevention workshops to groups of students on campus. This course equips students to deliver educational content on sensitive issues. (Prerequisite: Final mark of 75% or higher in SOSC-3500/PSYC-3500/SJST-3500/SWRK-3500/SACR-3500/WGST-3500 and permission of the instructor by online application at bystanderinitiative.ca.) (Also offered as PSYC-4500, SACR-4500, SOSC-4500, SWRK-4500, and WGST-4500.)

## WORK AND EMPLOYMENT ISSUES COURSES

**WORK-1000. Labour and Social Movements in Canadian Society**
An interdisciplinary introduction to the study of labour and social movements, focussing on their efforts to address the needs of workers, women, gays and lesbians, social and ethnic minorities, students, and the poor.

**WORK-1500. Working for a Living**
This course uses the students' own experiences of work to examine the economic, social, and psychological significance of paid and unpaid work in Canadian society, the tasks and values assigned to various kinds of work, and the relationship between work and living standards.

**WORK-2000. Labour Law and Workers' Rights**
This course examines the everyday application of employment law and human rights legislation to workplace issues. Students investigate the rights and responsibilities of workers and employers in unionized and non-unionized environments.

**WORK-2180. Everyday Conflicts and Their Resolution**
Students design and practice techniques for resolving everyday conflicts with friends and co-workers effectively and respectfully, and without damaging interpersonal relationships. Students learn to focus on the problem, not the person; identify and respond to hidden agendas and subvert personal attacks. Pre-requisite: Semester 3 or above standing or permission of the instructor. (Also offered as PSYC-2180 and SJST-2180)

**WORK-2400. Work and Equality**
This course explores how paid and unpaid work are gendered, valued and rewarded. Students investigate how public policy, law, collective bargaining, and advocacy enhance equality in pay and working conditions for women and racialized workers. (Prerequisites: WORK-1500 or WGST-1000 or SACR-1000 or SACR-1100 (Also offered as Work and Employment Issues WGST-2400)

**WORK-2500. Worker Health and Safety**
An interdisciplinary examination of the political, legal, social, and economic aspects of occupational health and safety. This course covers the history of health and safety within industrial, office, and rural contexts in Canada and other parts of the world.

**WORK-2600. Women and Globalization**
This course introduces students to gender-sensitive analysis of the role of women in the global economy. Course materials cover the place of women in the international division of labour, the role of women in export-oriented industries in the "Third World," and women as "homeworkers" in the First and Third World. Students will utilize relevant empirical material to develop critical thinking and an understanding of gender inequalities in the "development process." (Prerequisites: at least Semester 3 standing.)(Also offered as Women's and Gender Studies WGST-2600.)

**WORK-2700. Speaking Truth to Power: Voice and Activism**
An examination of contemporary campaigns to improve the standard of living of Canadians. Students learn to conduct interviews and evaluate the effectiveness of social justice messages. (Prerequisite: Semester 3 or above standing.) (Also offered as DRAM-2700, SJST-2700, and CMAF-2700.)

**WORK-3270. Social Movements**
An examination of theories and case studies of world revolutions, class struggles, and various social movements, such as the feminist, gay and lesbian, labour, native, ecological, and other movements. (Also offered as SACR-3270 and SACR-3270.) (Prerequisites: SACR-1100/101 or WORK-1000; or Labour Studies students must have at least Semester 5 standing.)

**WORK-3490. Canadian Labour History**
A study of the development of the Canadian labour movement and an analysis of the Canadian working-class experience during the nineteenth and twentieth centuries. (Also offered as History HIST-3490.) (Prerequisites: semester 4 standing. Labour Studies majors must have Semester 4 or above standing or consent of instructor.)

**WORK-3500. Investigating Contemporary Workplace Issues**
Students consolidate and enhance their knowledge of workplace rights and responsibilities by identifying and analyzing labour management problems in union and non-union settings. (Prerequisites: WORK-2000 and WORK-2500 and semester 5 standing.)

**WORK-3700. Industrial-Organizational Psychology**
The study of employees, workplaces, and organizations. Topics include job analysis and competency models, recruitment, selection, and decision making, performance management, training, group and team processes in organizations, employee attitudes, affect, and behaviour, motivation, leadership, productive and counterproductive work behaviour. (Prerequisites: PSYC-1150 and PSYC-1160; or Labour Studies students with at least Semester 4 standing; or consent of instructor.) (Also offered as PSYC-3700.)

**WORK-4601. Seminar on Prostitution, Sexual Labour and Health**
This course engages in a critical study of the conception and construction of prostitution/sex work and sexual labour and its impact on social determinants of health. Students will be required to examine and critically reflect on a variety of issues pertaining to adult consensual sex work and the impact of public policy on the health and well-being of people working in the sex industry. Substantive topics may include: policy and regulation; the construction of sex trafficking; stigmatization; politics and the media; violence and victimization; health and safety; customers; and organizing and advocacy. Course delivery may vary according to instructor preference. (Prerequisite: Semester 7 standing or above, or permission of instructor). (Cross-listed with WGST-4601 and SOSC-4601.)

# COMMUNICATION, MEDIA AND FILM

## PROGRAMS

### General Communication, Media and Film

**Degree Requirements**

Total courses: thirty.

(a) ten courses, including CMAF-1010, FILM-1100, CMAF-2340, CMAF-2750, plus one of CMAF-2010, CMAF-2250, CMAF-3340 or CMAF-3750, plus five additional CMAF or FILM courses, at least two of which must be at the 3000 level or above (excluding CMAF-3990);
(b) GART-1500, GART-1510;
(c) two courses from Arts;
(d) two courses from Languages or Science;
(e) two courses from any area of study, excluding Social Sciences;
(f) six courses from any area of study, including CMAF and FILM;
(g) six courses from any area of study, excluding CMAF and FILM.

Courses used to calculate the major average are: All CMAF and FILM courses.

### Honours Communication, Media and Film

**Degree Requirements**

Total courses: forty.

(a) eighteen courses, including CMAF-1010, FILM-1100, CMAF-2340, CMAF-2750, plus one of CMAF-2010, CMAF-2250, CMAF-3340 or CMAF-3750, plus thirteen additional CMAF or FILM courses, at least two of which must be at the 3000 level or above (excluding CMAF-3990) and at least two of which must be at the 4000 level (excluding CMAF-4990);
(b) GART-1500, GART-1510;
(c) two courses from Arts;
(d) two courses from Languages or Science;
(e) two courses from any area of study, excluding Social Sciences;
(f) six courses from any area of study, including CMAF and FILM;
(g) eight courses from any area of study, excluding CMAF and FILM.

Courses used to calculate the major average are: All courses taken in CMAF and FILM.

# Combined Honours Communication, Media and Film

**Degree Requirements**

Total courses: forty.

(a) Communication, Media and Film – fourteen courses, including CMAF-1010, FILM-1100, CMAF-2340, CMAF-2750, plus one of CMAF-2010, CMAF-2250, CMAF-3340 or CMAF-3750, plus nine additional CMAF or FILM courses, at least two of which must be at the 3000 level or above (excluding CMAF-3990) and at least one of which must be at the 4000 level (excluding CMAF-4990);
(b) Course requirements-Other subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study;
(c) GART-1500, GART-1510;
(d) two courses from Arts;
(e) two courses from Languages or Science;
(f) two courses from any area of study, excluding Social Sciences;
(g) additional courses from any area of study, including CMAF and FILM to a total of forty courses.

Courses used to calculate the major average are: All courses taken in CMAF and FILM, as well as the combined major area(s) of study.

# Honours Film Production (Bachelor of Fine Arts)

This is a joint program with Communication, Media and Film (CMF) and the School of Creative Arts (SoCA). See School of Creative Arts for program requirements.

# Concurrent General Bachelor of Arts (Communication, Media and Film)/Bachelor of Education

Direct admissions from high school only.

This is a joint offering between Communication, Media and Film (CMF) and the Faculty of Education. See Faculty of Education for program requirements.

# Minor in Communication, Media and Film

Required: six CMAF or FILM courses, including CMAF-1010 and FILM-1100, plus four additional courses, two of which must be at the 2000 level or above.

# Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Communication, Media and Film

Major Concentration: twelve courses, including CMAF-1010, FILM-1100, CMAF-2340, CMAF-2750, plus one of CMAF-2010, CMAF-2250, CMAF-3340, CMAF-3750, plus seven additional CMAF or FILM courses three of which must be at the 3000 level or above (CMAF-3990 and CMAF-4990 do not count as fulfilling the 3000 level or above requirement).

Minor Concentration: six courses, including CMAF-1010, FILM-1100, CMAF-2340, CMAF-2750, plus one of CMAF-2010, CMAF-2250, CMAF-3340, CMAF-3750, and one additional CMAF or FILM course at the 3000 level or above (CMAF-3990 and CMAF-4990 do not count as fulfilling the 3000 level or above requirement).

# COMMUNICATION, MEDIA AND FILM COURSES

Not all courses listed will necessarily be offered each year. All courses are three hours per week (3.00 credit hours) unless otherwise indicated

**CMAF-1010. Introduction to Media and Society**
An overview of major themes, concepts and issues that inform the field of Canadian communication studies. Topics may include: the political, economic, historical, and cultural contexts of communication; new media; policy issues and concerns; representation; the role of media in the social construction of reality and the broad interaction between media and society. (3 lecture hours or 2 lecture hours and 1 tutorial hour per week.)

**CMAF-2010. New Media Studies**
This course introduces students to theories of new media, explores the historical emergence of digital media forms and examines their social, cultural, political and economic implications. Topics may include: “old” and “new” media, convergence, political economy of new media, the digital divide, social networking, participatory cultures and Web 2.0 (e.g. Facebook, Twitter, YouTube) (Prerequisite: CMAF-1010)

**CMAF-2130. Podcasting and Internet Media**
This course introduces students to the craft of production for the Internet, specifically in the form of video and audio podcasts. Students will acquire skills in a variety of software applications to produce and circulate podcasts. Emphasis will also be placed on the creation of quality content through the examination of niche audiences and current practices in digital media production and distribution. (Prerequisite: FILM-1110 or CMAF-1130.) (2 lecture hours and 1 laboratory hour per week)

**CMAF-2210. The Art of Photo-blogging**
In this course students will develop and design photography-based blog projects that combine effective research and writing skills with the creative use of image capture as a tool for visual communication. Students will learn photographic techniques and image editing software as well as communication strategies, applicable Canadian copyright laws, web analytics and search engine optimization. (Prerequisite: FILM-1110 CMAF-1130.) (2 lecture hours and 1 laboratory hour per week)

**CMAF-2250. Media Literacy**
A critical exploration of how the media contribute to the social construction of reality. Students will develop the skills and conceptual frameworks necessary to interpret and investigate the contemporary media environment with a particular focus on examples derived from Canadian informational/news sources and popular culture. Topics may include: media coverage of social and political issues, political economy of media/culture industries, media and democracy, media representation and stereotypes. (Prerequisite: CMAF-1010.)

**CMAF-2340. Research Methods in Communication**
An introductory overview of research approaches, methods, and designs in communication studies. Students will learn about the theoretical grounding of quantitative, qualitative, and interpretive

methods, and practice various methods to explore communication issues. (Prerequisite: CMAF-1010) (2 lecture hours and 1 tutorial hour per week.)

**CMAF-2400. Cinema History I (Pre-War)**
The course charts the early history of the cinema from its inception to World War II: film shorts at the turn of the century, the silent film era, the introduction of sound, and the decline of the studio system. Films are examined as technical, industrial, commercial, artistic, and, most importantly, as historical artifacts. Industry, audience, and the development of cinematic language are viewed within an international framework and their local cultural context. (Prerequisite: CMAF-1010 or FILM 1001 or CMAF 1400.)

**CMAF-2410. Cinema History II (Post-War)**
The course examines films from the post-War period to the present: the heyday of the classical Hollywood narrative and challenges to its dominance from European neo-realism and the avant-garde film movement are considered. Films are viewed as influenced by and reflective of social upheaval of the sixties, as well as their consolidation within distinct but mutually influencing categories of mainstream and alternative cinema. An important consideration is how films can either paper over or expose social fractures along the lines of gender, race, sexuality, and nationalism. (Prerequisite: CMAF-1010 or FILM-1001 or CMAF-1400.)

**CMAF-2450. Communication and Cultural Policy in Canada**
This course surveys the historical development of communication and cultural policy in the Canadian context. Students will investigate particular culture industries (e.g. music, film, television) and key themes (nation-state, public sphere, globalization, media convergence) that have informed policy debates as well as the structure, performance and regulation of culture/media industries. Topics may include: the role of the State in cultural production, national culture, citizenship, identity and multiculturalism, representations of 'Canada' in the popular imagination. (Prerequisite: CMAF-1010.)

**CMAF-2530. Introductory Photography**
This introductory course in film and chemical photographic processes provides an opportunity for students to explore techniques and concepts within the medium of photography. Students will learn the basic technical skills of operating cameras, processing film, and making black and white prints, through a series of concerns specific to photography.(Prerequisites: VSAR-1050, VSAR-1060, VSAR-1070, VSAR-1080; Prerequisites for Majors in the BFA in Film Production: VSAR-1060, VSAR-1070, VSAR-1080; Prerequisite for Communication, Media and Film Majors: FILM-1110) (students must have a 35mm adjustable film camera to complete this course.) (Also offered as Visual Arts VSAR-2530.) (Lab fees may apply.)

**CMAF-2610. Public Relations, Media and Society**
This course examines the historical and contemporary role and influence of the public relations industry on media discourses and the shaping of public opinion. Students will critically explore the emergence of the PR industry; the art of "spin" and the engineering of consent; corporate and government PR; and the symbiotic relationship between PR and informational media. (Prerequisite: CMAF-1010.)

**CMAF-2700. Speaking Truth to Power: Voice and Activism**
An examination of contemporary campaigns to improve the standard of living of Canadians. Students learn to conduct interviews and evaluate the effectiveness of social justice messages. (Prerequisite: Semester 3 or above standing.) (Also offered as DRAM-2700, SJST-2700, and WORK-2700)

**CMAF-2750. Theories of Communication and Media**

This course introduces students to various theorists and schools of thought that have shaped the discipline of communication/media studies within the Canadian context, traces the development of theoretical approaches to communication forms and processes and explores a variety of underlying philosophical perspectives and assumptions in communication and media theory. (Prerequisite: CMAF-1010.) (2 lecture hours and 1 tutorial hour per week.)

**CMAF-2820. Advertising in Historical and Cultural Context**
This course contextualizes advertising and branding within the history of capitalism and contemporary consumer culture. The course draws upon approaches from Marxism, sociology, feminism, and other critical perspectives. Topics may include: the historical rise of consumer culture, advertising's reciprocal and structural relationship with media, controversial advertising categories, issues of representation and meaning and the ideological dimensions of advertising and branding. (Prerequisite: CMAF-1010.)

**CMAF-2900. Special Topics in Communication, Media and Film**
Seminar on a selected topic in communication. Content will vary with instructor. (Prerequisite: CMAF-1010.) (May be repeated once for credit if the topics differ.)

**CMAF-3010. Digital Technologies and Everyday Life**
This course surveys critical theories of technology with a focus on how evolving and emerging communication/digital technologies are received and adapted and how they shape practices in various institutional contexts and in everyday life. Topics may include: representations of technology, technologies and the organization/perception of space and time, privacy/surveillance, gender, labour, the environment and technology. (Prerequisite: CMAF-2010 or CMAF-2750.)

**CMAF-3020. Popular Culture**
Examines the relationship between popular culture and questions of economics and social and cultural politics, through an exploration of struggles over knowledge, power and authority manifest in popular cultural artifacts and processes. Intended to provide students with tools for critical evaluation of contemporary popular culture, including the constitution of social ideologies, values and representations through cultural artifacts. (Prerequisite: CMAF-2250 or CMAF-2750.)

**CMAF-3040. Privacy, Surveillance and Security in the Digital Age**
This course provides an historical examination of the conceptual apparatuses that have traditionally framed understandings of the right to privacy, critically assesses the capacities of the State and corporate entities to monitor digital activities and explores the social, political and economic implications of surveillance practices. Topics may include: user-generated surveillance, mobile technologies, cloud computing, geo-locating technologies, tracking software, and data mining in social media contexts. (Prerequisite: CMAF-2010)

**CMAF-3340. Methods of Mass Media Criticism**
In this course, students examine mass/popular cultural texts (e.g. news, TV shows, films, music videos, advertisements, social media, etc.,) and explore representational politics using a variety of contemporary methodological approaches. These may include: content analysis, cultural studies, discourse/textual analysis, semiotics, genre study, feminist criticism, audience research, on-line ethnography, web-based inquiry. (Prerequisites: CMAF-2340 or CMAF-2750)

**CMAF-3410. Media Aesthetics**
An intermediate study of principles and tools to understand the formal qualities of visual signification within the broader contours of visual culture. Students learn aesthetic and technical terms, rules, conventions, and social assumptions used to construct meaning–across media forms and platforms–

through sound, still and moving images, texts, or graphics. The course offers a conceptual grounding for producers, consumers, and critics of media culture. (Prerequisite: one of CMAF-2250, CMAF-2400, CMAF-2410, CMAF-2310, or CMAF-2320)

**CMAF-3430. Cinema and/in Culture**
A study of cinema and its relationship to intersections of race, gender, class, and sexuality as well as its relationship to binaries such as first–third world, east–west, local–global, and national–transnational. The course interrogates cinema as a window to cultures, the transaction between social movements and cinema, the role of cinema in cross-cultural experience, and representations of race in Hollywood, Asian, and Asian diasporic cinema. (Prerequisite: one of CMAF-2250, CMAF-2400, or CMAF-2410.)

**CMAF-3610. Public Relations Today: Issues and Practices**
This course explores the contemporary world of public relations. Through case studies and in-class exercises, students will assess a variety of strategies and techniques and apply them in the planning and execution of public relations campaigns deliverable across a variety of platforms. Topics may include: PR in the social media age; media relations, journalism and PR; PR and ethical considerations. (Prerequisite: CMAF-2610 or CMAF-2820.)

**CMAF-3640. Media, Technology and the Environment**
This course explores the relationship between media practices, representations, communication technologies and the environment. Topics may include: media constructions of the environment; mainstream and alternative media coverage of environmental movements and issues; environmental impact of communication practices, technological advancements and consumer culture; environmental themes in advertisements, corporate greenwashing. (Prerequisite: CMAF-2250 or CMAF-2750.)

**CMAF-3700. Alternative Media and Digital Activism**
This course examines existing theory and scholarship on alternative media and media activism and explores the ways in which activists and citizen groups use/have used “old” as well as new media and emerging technologies to challenge mainstream media narratives and express alternative views on a range of social and political issues. Special emphasis will be placed on the Canadian context. Topics may include: mainstream versus alternative media framing; historical roots of Canadian alternative media; media reform movements; participatory journalism; culture jamming; the tactics, strategies, aesthetics and goals of alternative/activist media. (Prerequisite: One of CMAF-2010, CMAF-2250, CMAF-2700, DRAM-2700 (Dramatic Art) or WORK-2700 (Labour Studies).)

**CMAF-3750. Critical Approaches to Media and Culture**
This course explores contemporary theories and methods related to the critical study of media and culture including Marxian and neo-Marxian political economy, the Frankfurt School, Gramscian hegemony theory, structuralism, semiotics, cultural studies, social constructionism, postmodernism, poststructuralism, and feminism. Topics may include: political economy of media and the culture industries; the production, consumption, and circulation of cultural texts and artefacts; the materialities of communication and the politics and practices of representation. (Prerequisite: CMAF-2010 or CMAF-2750.)

**CMAF-3820. Advertising in the New Media Era: Contemporary Issues and Practices**
This course considers how “new media” formations including Internet, streaming, mobile, social, and user-generated media have altered the advertising industry and advertising practices. Topics may include: advertising’s structural influence over new media technologies and platforms, new media audiences/users/influencers, guerrilla marketing, advertising strategy, regulation and policy. Students

will learn advertising skills and techniques required to propose, plan, and execute campaigns in the new/social media environment. (Prerequisite: CMAF-2610 or CMAF-2820.)

**CMAF-3830 Children and the Mediated Marketplace**
This course offers a critical approach to the study of children's media, advertising, and consumer culture. Topics may include: issues of ideology and representation in children's media and consumer culture, the social construction of childhood by market forces, and the impact of internet and mobile technology on the evolving nature of childhood. (Prerequisite: CMAF-2250 or CMAF-2820.)

**CMAF-3900 Special Topics in Media and Society**
This Special Topics course will explore contemporary issues relevant to understanding the links between media institutions, cultural texts/forms and social practices. The specific focus will vary based on faculty expertise (Prerequisite: CMAF-2750.) (May be repeated for credit if the topics differ.)

**CMAF-3990. Internship I**
Application of communication skills and knowledge in work experience situations. (Prerequisites: Semester 5 standing, a Cumulative GPA of 70% and approval of Instructor.) (This course may be taken twice for credit.)

**CMAF-4010. Advanced Topics in New Media and Digital Culture**
This seminar provides an in-depth exploration of the diverse social, economic, political, cultural and artistic practices that constitute the contemporary new media landscape. Through an examination of web 2.0 technologies/digital platforms and their formations, structures, limits and possibilities, students will be engaged as both content consumers and producers. Topics may include: social networking as immaterial labour, art in the age of digital reproduction, cyber-identity/community, new media and public policy, digitally-mediated activism/social movements. (Prerequisite: CMAF-3010 or CMAF-3040)

**CMAF-4030. Advanced Studies in Media Culture**
This seminar explores various theoretical approaches to the study of media culture including semiotics, cultural ethnography, critical theory, feminism, social constructionism, structuralism and postmodernism. Students will apply theoretical frameworks to an examination and interpretation of contemporary media forms and practices. (Prerequisites: CMAF-2750 and one of CMAF-3020, CMAF-3340 or CMAF-3750.)

**CMAF-4250. Advanced Studies in the Sociology of News Media**
This seminar course explores and investigates the role played by mass media in power relations and the social construction of reality from a critical political economy perspective. Topics may include: the political economy of mainstream media, including issues of media ownership and control; the intersections of media, corporate and governmental power; mainstream media coverage/representation of domestic and foreign affairs. (Prerequisite: CMAF-2250 or permission of the instructor)

**CMAF-4340. Theory Senior Project I: Research Design**
Students will plan and write a proposal for a primary research or theoretical capstone paper, usually to be undertaken the following semester. Students will hone their skills in primary and/or secondary research, proposal writing, analysis, and the presentation of ideas. (Pre-requisite: CMAF-3340 or permission of instructor.).

**CMAF-4350. Theory Senior Project II: Writing and Presentation**
Students will carry out primary or secondary research and write the related capstone paper as per their proposal developed in CMAF-4340 the previous semester. They will present their completed work in a departmental forum. (Pre-requisite: CMAF-4340.)

**CMAF-4430. Film Theory and Criticism**
This seminar course examines the changing theoretical and critical approaches to film, including issues in the production and reception of film, such as realism, adaptation, convention, signification, and culture. (Prerequisites: CMAF-2400 and CMAF-2410)

**CMAF-4500. Border Culture**
This course addresses the role of borders in contemporary global culture as both physical boundaries and affective conditions. In the context of the Windsor-Detroit border, students from the University of Windsor compare viewpoints based upon the experience of living in a border culture. Seminars and field trips address borders from a number of perspectives and contexts. Students look to historical and contemporary ideas about borders that have been articulated in various disciplines: from political theory and cultural geography, to urban planning, art, literature, architectural and spatial theory. (Open to majors and non-majors.) (Prerequisites: MACS-2140 and MACS-2150 for all Visual Arts Majors and semester 4 standing for non-majors.) (Also offered as MACS-4500.)

**CMAF-4620. Communication Perspectives and Aboriginal People, Race and Ethnicity**
Explores theoretical and practical communication issues of race and ethnicity and links these issues to the practice of social justice. Topics include: historical and critical implications of identity politics, media (mis-) representation, cultural policy, First Nations, multicultural and multiracial media production. (Prerequisites: CMAF-2250 or CMAF-2450, and Semester 5 standing.) (Sociology majors: SACR-3330 and two courses in Communication, Media, and Film.)

**CMAF-4630. Gender and Technology**
This advanced seminar addresses issues related to gendered experiences with technology in the digital age through an examination of various theoretical debates and case studies. Topics may include: the historical gendering of technological skills; the social construction of technology and masculinity; impact of technology on the environment; critiques of techno-science; gendered representation of, and participation in, video games; gendered experiences of mobile phone and social media use. (Prerequisite: CMAF-3010 or CMAF-3640)

**CMAF-4900. Honours Seminar in Communication, Media and Film**
An advanced seminar that explores selected topics in the field of Communication, Media and Film. Topics will vary depending on the focus of the course. (Prerequisites: CMAF-2340, CMAF-2750, and two CMAF or FILM courses at the 3000 level. (May be repeated for credit if the topics are different.)

**CMAF-4950. Directed Reading**
Intended for students with special interest in areas not covered in sufficient depth by other courses. (To be taken only with permission of instructor and Department Head or delegate in Communication, Media and Film) (Normally, CMAF-4950 may be taken no more than a total of two times combined.)

**CMAF-4990. Internship II**
Application of communication skills and knowledge in work experience situations. Admission to the course is available upon approval only to Communication, Media and Film Honours students or Combined Honours students. (To be undertaken after the successful completion of relevant 3000-level

courses.) (Prerequisites: Semester 7 standing, a cumulative GPA of 70%, and approval of instructor.) (This course may be taken twice for credit).

## FILM COURSES

FILM-XXXX courses are jointly offered with the School of Creative Arts (SoCA). See School of Creative Arts for course listing.

# DRAMATIC ART

## PROGRAM REGULATIONS

1. Dramatic Art DRAM-1000 (Introduction to Theatre and Performance Studies I) and DRAM-2000 (Introduction to Theatre and Performance Studies II) are requirements for all first-year Dramatic Art majors.
2. Non-majors wishing to take a Dramatic Art course as an option may enter Dramatic Art courses (with the exception of those which are further restricted only to BFA. Acting or Drama in Education and Community students) only with the consent of the instructor.
3. Only 3rd and 4th year students may enrol in Production Problems with the consent of the Director of the School. Dramatic Art students may enrol in Directed Studies courses only with the consent of the instructor.
4. BFA students may not proceed to the next level without completing all core Dramatic Art course requirements of the previous level. Performance courses must be taken in sequence.
5. Refer to the Policy on Advanced Standing and Credit Transfer at www.uwindsor.ca/policies for information on Dramatic Art Transfer Credit Regulation (for workshop/classes offered by theatre/production professionals).

All students majoring in Dramatic Art programs are strongly advised to seek academic advising prior to registration each term.

**Requirements for degree programs in Dramatic Art make reference to the following groups of courses:**
Group A - Performance Related Courses: DRAM-2250, DRAM-2350, DRAM-2440, DRAM-2770, DRAM-2780, DRAM-2840, DRAM-3100, DRAM-3440, DRAM-3510, DRAM-3520, DRAM-4210, and DRAM-4490.
Group B - Theatre History Courses: DRAM-1300, DRAM-2300, DRAM-3350, DRAM-3330, DRAM-4390, and DRAM-4690.
Group C - Technical/Design Courses: DRAM-1170, DRAM-1180, DRAM-2110, DRAM-2130, DRAM-2150, DRAM-2170, DRAM-3150, DRAM-3170, DRAM-2500, DRAM-3190, and DRAM-4520.

## PROGRAMS

### General Bachelor of Arts in Drama

Note: As of Fall 2014, there are no direct admissions from High School. Students will be applying directly to the Honours program.

**Degree Requirements**

Total courses: thirty.

(a) 15 courses, including DRAM-1000, DRAM-1170 and DRAM-2000; plus one course from each of groups A, B, and C; and nine additional Dramatic Art courses as chosen in consultation with a Dramatic Art program advisor.
(b) GART-1500, GART-1510;
(c) eight courses from any area of study, excluding Dramatic Art;
(d) five courses from any area of study, including Dramatic Art.

Courses used to calculate the major average are: courses listed under requirement (a) and any courses taken in the major area(s) of study.

## Honours Bachelor of Arts in Drama

**Degree Requirements**

Total courses: forty.

(a) twenty courses, including DRAM-1000, DRAM-1170 and DRAM-2000; plus one course from each of groups A, B, and C; and fourteen additional Dramatic Art courses as chosen in consultation with a Dramatic Art program advisor.
(b) two courses from Social Sciences;
(c) two courses from Languages or Science;
(d) two courses from any area of study, excluding Arts.
(e) GART-1500, GART-1510;
(f) two English courses as recommended by an advisor in Dramatic Art;
(g) four courses from Arts, Languages, Social Sciences, and Science, including Dramatic Art;
(h) six courses from any area of study, excluding Dramatic Art.

Courses used to calculate the major average are: courses listed under requirement (a) and any courses taken in the major area(s) of study.

## Honours Bachelor of Arts in Drama for Graduates of the Theatre Arts Ontario College Advanced Diploma

**Admission Requirements**

Graduates of the three-year Theatre Arts Ontario College Advanced Diploma (MCU Code 61911) with a cumulative average of a B (3.0 or 75%) are eligible for admission into the BA Honours Drama through this degree completion Pathway.

**Degree requirements**

Total courses: 20
(a) twelve courses, including one course from each of groups B and C; and ten additional Dramatic Art courses as chosen in consultation with a Dramatic Art program advisor;
(b) two English courses as recommended by an advisor in Dramatic Art;
(c) six courses from any area of study, excluding Dramatic Art.

Courses used to calculate the major average are: courses taken in the major area of study.

# Honours Bachelor of Arts in Drama for Graduates of the Music Theatre Performance Ontario College Advanced Diploma

**Admission Requirements**

Graduates of the three-year Music Theatre Performance Ontario College Advanced Diploma (MCU Code 61912) with a cumulative average of a B (3.0 or 75%) are eligible for admission into the BA Honours Drama through this degree completion Pathway.

**Degree requirements**

Total courses: 20

(a) twelve courses, including one course from each of groups B and C; and ten additional Dramatic Art courses as chosen in consultation with a Dramatic Art program advisor;
(b) two English courses as recommended by an advisor in Dramatic Art;
(c) six courses from any area of study, excluding Dramatic Art.

Courses used to calculate the major average: courses taken in the major area of study.

# Honours Bachelor of Arts in Drama in Education and Community with concentration in Applied Theatre

This program is designed for those students interested in pursuing future careers in the educational and developmental fields such as elementary classroom teachers and secondary theatre arts teachers; special education teachers; drama consultants; play and recreational leaders in the community; and specialists in theatre for young audiences. Field work will be assigned only if a student is assessed to have suitable personal qualities as well as academic qualifications.

Students wishing to obtain certification from the Ontario College of Teachers must enrol in a Faculty of Education upon the successful completion of this program. Drama in Education and Community students may select courses in Visual Arts. To do so, they must apply to Visual Arts during the Winter term of their first year. Their requests will be reviewed by interview and/or portfolio.

A concentration of six courses in a second teachable subject is advisable for students wishing to apply to a Faculty of Education. Students wishing to pursue a career in teaching are strongly advised to consult an academic advisor.

**Admission Requirements**
1) All candidates must meet the requirements for admission to the University of Windsor.
2) In addition, an interview and workshop will be required.

Enrolment is limited.

**Degree Requirements**

Total courses: forty.

(a) twenty courses, including DRAM-1000, DRAM-1600, DRAM-1610, DRAM-2000, DRAM-2250, DRAM-2600, DRAM-2610, DRAM-2770, DRAM-2840, DRAM-3600, DRAM-3710, DRAM-2670, and DRAM-4790; plus two of DRAM-3780, DRAM-4700, DRAM-4710, and DRAM-4790; and five additional Dramatic Art courses to be identified in consultation with a Dramatic Art program advisor.
(b) two courses from Social Science;
(c) two courses from Languages or Science;
(d) two courses from any area of study, excluding Arts.
(e) GART-1500, GART-1510;
(f) two English courses. (Recommended: ENGL-1005 (may be repeated if topics differ));
(g) two Psychology courses: Required: PSYC-1150, PSYC-1160)
(h) eight additional courses from any area of study.

Courses used to calculate the major average are: courses listed under requirement (a) and any courses taken in the major area(s) of study.

**Standing Required for Continuation in the Program and for Graduation**

In addition to complying with the general university regulations (Standing Required for Continuation in Programs: Cumulative Average Requirement: 60%; Major Average Requirement: 70%), in order to advance in the Drama in Education and Community program, students must obtain a minimum grade of 63% in all Dramatic Art courses.

Under exceptional circumstances, and with permission of the Academic Standing Committee, a student may be permitted to upgrade. If the student obtains a grade of 63% or better in the deficient course(s), and a major average of 70% or better, the student may be re-interviewed for the Drama in Education and Community program.

Grades will be reviewed at the end of each semester, and students who do not achieve the minimum grade of 63% in all Dramatic Art courses will be required to withdraw from the program. These students may transfer into the B.A. Drama program.

## Combined Honours Bachelor of Arts in Dramatic Art

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements in the order presented, to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a) Dramatic Art: DRAM-1000, DRAM 1170 and DRAM-2000, plus thirteen courses as recommended by a Dramatic Art program advisor including at least one at the 3000 level or above.
(b) Course Requirements - Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) GART-1500, GART-1510;
(d) two courses from Social Sciences;

(e) two courses from Languages or Science;
(f) two courses from any area of study, excluding Arts.
(g) additional courses from any area of study to a total of forty courses.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

## Bachelor of Fine Arts (BFA) in Dramatic Art - Acting

The Bachelor of Fine Arts (Acting) program is available only to those who have successfully auditioned and been invited to study for an eventual career in the professional theatre. This intensive program requires four years of study. Students develop performance techniques through courses in acting, voice, interpretation, improvisation, and movement. They are also exposed to training from professional Canadian theatre artists who conduct workshops ranging in length from one day to six weeks. All BFA. (Acting) students participate in University Players productions. This professional program is designed for those students wishing to pursue a career in professional theatre, television, or film. It is also designed to prepare students to pursue graduate work and related arts. Transfer credit articulation agreements with the National Theatre School, Humber College, and George Brown College may allow graduates of their three-year Theatre Performance programs to obtain advanced standing.

**Degree Requirements**

Total courses: forty-two

(a) thirty courses, consisting of DRAM-1000, DRAM-1200, DRAM-1210, DRAM-1260, DRAM-1270, DRAM-1280, DRAM-1290, DRAM-2000, DRAM-2200, DRAM-2210, DRAM-2230, DRAM-2240, DRAM-2260, DRAM-2270, DRAM-2280, DRAM-3210, DRAM-3220, DRAM-3230, DRAM-3240, DRAM-3260, DRAM-3270, DRAM-4200, DRAM-4290, and DRAM-4510; plus DRAM-4530 taken twice; plus three of DRAM-1300, DRAM-2190, DRAM-2300, DRAM-3330, DRAM-3350, or DRAM-4390, two of which must be at the 300 or 400 level.
(b) GART-1500, GART-1510;
(c) two of GRST-2111 when the topic is dramatic literature (may be repeated for credit if topics differ), ENGL-1005, when the topic is dramatic literature (may be repeated for credit if topics differ), ENGL-2030, ENGL-2510 when the topic is dramatic literature (may be repeated for credit if topics differ), ENGL-2520 when the topic is dramatic literature (may be repeated for credit if topics differ), ENGL 2530, any ENGL-3xxx course when the topic is dramatic literature (may be repeated for credit if topics differ), or FREN 3540, FREN 3830;
(d) two additional English courses, including any not already selected from the previous list;
(e) two courses from any area of study, excluding Dramatic Art;
(f) three courses from any area of study, including Dramatic Art;
(g) DRAM-2750***.

***DRAM-2750 will not be counted in the major average for the BFA.

Courses used to calculate the major average are: courses listed under requirement (a) and any courses taken in the major area(s) of study.

**Standing Required for Continuation in the Program and for Graduation**

In addition to complying with the general university regulations (Standing Required for Continuation in Programs: Cumulative Average Requirement: 60% Major Average Requirement: 70%), in order to advance in the BFA program, students must obtain a minimum grade of 65% in all Dramatic Art courses completed in the 1st year and a minimum grade of 70% in all Dramatic Art courses completed in the 2nd, 3rd, and 4th years. Grades will be reviewed at the end of each semester.

Students who do not achieve the minimum grades will be required to withdraw from the program. These students may transfer into the BA Dramatic Art program. Under exceptional circumstances, and with permission of the Academic Standing Committee, a student may be permitted to continue in the BFA program.

## Concurrent General Bachelor of Arts (Drama)/Bachelor of Education

Direct admissions from high school only.

This is a joint offering between the School of Dramatic Art and the Faculty of Education. See Faculty of Education for program requirements.

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) – Dramatic Art

Major Concentration: DRAM-1000; DRAM-2000; one courses from each of Category A, B, and C; seven course selected in association with a Dramatic art advisor.

Minor Concentration: DRAM-3350, DRAM-3330, four additional courses. (No more than two courses at the 1000-level.)

# UNIVERSITY PLAYERS

University Players is a serious and dedicated training ground for young theatre artists. It is a venue where faculty, staff, and guest artists find an opportunity for creative expression and showcase professional-calibre content and conduct. All Dramatic Art programs come together at University Players. First-year students learn the backstage and front-of-house operation of the theatre as members of running crews for s. In later years, students work in the areas that correspond to their chosen BA. or BFA degree programs. University Players produces fifty-five performances of six plays annually, to a total of 15,000 audience members.

# DRAMATIC ART COURSES

Not all courses listed will necessarily be offered each year. Courses are three hours a week (3.00 credit hours) unless otherwise indicated.

**DRAM-1000. Introduction to Theatre and Performance Studies I**
Introduction to the Process of Theatre and Performance Studies. Several of the following topics will be covered: play and performance analysis; genre and style; alternative articulations of performance; theories and process of production design; a survey of technical practices; and communication and collaboration. Introduction to Theatre and Performance Studies is a two-part sequence, required for majors in all School of Dramatic Art programs. A laboratory assignment supporting the production schedule of University Players is required for DRAM-1000 This course must be successfully completed in the first year of the program. (Laboratory hours by arrangement). (Open to non-majors).

**DRAM-1170. Drawing for Theatrical Design**
Introductory course in the theory and practice of drawing for the theatre with practical, historical and aesthetic aspects. This is a skills development course that involves the exploration of a variety of concepts, techniques and media used for visual expression. Emphasis is placed on observation, spacial relationships and effective visual communication in a two-dimensional format. This course must be completed by all BA(H) and DRAMACOMM in their first year. Open to non-drama majors.

**DRAM-1180. Rendering for the Theatre**
Introductory course confronting challenges in creating colourized renderings for the theatre. Areas covered will include common and innovative materials, colour theory and psychology, script and character analysis, textural creation, sheen, reflections, and their computer enhancement. (Pre-requisite: DRAM-1170) (Restricted to Dramatic Art majors.)

**DRAM-1200. Voice for the Actor I**
An introduction to the study and practice of voice and speech for the theatre. .(co-requisites: DRAM-1260, DRAM-1280.) (Restricted to BFA Acting students only.) (Laboratory hours by arrangement.)

**DRAM-1210. Voice for the Actor II**
Continuation of DRAM-1200. The study and practice of voice and speech for the theatre. (Restricted to BFA Acting students only.) (Prerequisite: DRAM-1200.)(Co-requisites: DRAM-1270, DRAM-1290.) (Laboratory hours by arrangement.)

**DRAM-1260. Movement for the Actor I**
An introduction to the study and practice of movement for the actor. (Co-requisites: DRAM-1200, DRAM-1280.) (Restricted to BFA Acting students only.) (Laboratory hours by arrangement.)

**DRAM-1270. Movement for the Actor II**
Continuation of DRAM-1260. The study and practice of movement for the actor. (Prerequisite: DRAM-1260.) (Co-requisites: DRAM-1200, DRAM-1280.) (Restricted to BFA Acting students only.) (Laboratory hours by arrangement.)

**DRAM-1280. Improvisation and Introduction to Acting for the Theatre I**
An introduction to the study and practice of acting with an emphasis on the basic elements of improvisation. (Co-requisites: DRAM-1200, DRAM-1260.) (Restricted to BFA Acting students only.) (Laboratory hours by arrangement.)

**DRAM-1290. Improvisation and Introduction to Acting for the Theatre II**
Continuation of DRAM-1280. The study and practice of basic elements of acting and improvisation (Prerequisite: DRAM-1280.) (Co-requisites: DRAM-1210, DRAM-1270.) (Restricted to BFA Acting students only.) (Laboratory hours by arrangement.)

**DRAM-1300. Theatre History I**
Critical approaches to the main elements of Greek and Roman theatre, medieval western and Asian theatre, Italian, Spanish, and English Renaissance Theatre. (Open to non-Dramatic Art majors.)

**DRAM-1600. Introduction to Drama in Education and Community I**
An introduction to the principles, theories and applications of Drama in Education and Community with an emphasis on creativity, storytelling, and the developmental aspects of play. (Restricted to Drama in Education and Community Concurrent Drama/BEd Majors, or consent of instructor.)

**DRAM-1610.Introduction to Drama in Education and Community II**
A continuing study of Drama in Education and Community. (Prerequisite: DRAM-1600 or consent of instructor.) (Restricted to Drama in Education and Community and Concurrent Drama/BEd Majors, or consent of instructor.)

**DRAM-2000. Introduction to Theatre and Performance Studies II**
Continuation of DRAM-1000. Several of the following topics not covered in DRAM-1000 will be covered in DRAM-2000: play and performance analysis; genre and style; alternative articulations of performance; theories and process of production design; a survey of technical practices; and communication and collaboration. Introduction to Theatre and Performance Studies is a two-part sequence, required for majors in all School of Dramatic Art programs. A laboratory assignment supporting the production schedule of University Players is required for DRAM-2000. This course must be successfully completed in the first year of the program. (Laboratory hours by arrangement). (Open to non-majors)

**DRAM-2100. Speech Communication to Inform**
A beginning course designed to help the student to develop poise and confidence in communicating information. (2 lecture hours and 1 laboratory hour per week.) (Not available on an Audit basis.)

**DRAM-2110. Scenic Design I**
Introduction to the technical aspects of design for the stage; communicating the design idea through basic drafting techniques. (Prerequisite: DRAM-1180, or consent of instructor.)

**DRAM-2130. Scene Painting for the Theatre**
Laboratory and demonstration course with an emphasis on materials, texturing techniques, and the creation of three-dimensional effects.

**DRAM-2150. Lighting Design I**
The introduction and application of basic principles, including electricity, instruments, and design theory. (Laboratory hours by arrangement.)

**DRAM-2170. Costume Design**
Introduction to the principles, theory and practice of costume design for theatre, film and television This course involves the practical, historical and aesthetic exploration of the design process, text, character analysis, costume rendering and collaboration. (Prerequisite: DRAM-1170 (or consent of instructor). Open to non-drama majors.

**DRAM-2190. Gender, Movement and Performance**
This course explores how people come to know themselves and others through their bodies. Students investigate movement as a cultural message and explore how stereotypes connected to gender, race, sexuality, and ability are created and contested through the body. Prerequisite: WGST-1000 or DRAM-1000 or with consent of the instructor. (Cross-listed as a Social Science course in Women and Gender Studies, WGST-2190)

**DRAM-2200. Voice for the Actor III**
Continuation of DRAM-1210. The study and practice of voice and speech for the theatre. (Prerequisite: DRAM-1210.) (Co-requisites: DRAM-2230, DRAM-2260, DRAM-2280.) (Restricted to BFA Acting students only.) (Laboratory hours by arrangement.)

**DRAM-2210. Voice for the Actor IV**
Continuation of DRAM-2200. The study and practice of voice and speech for the theatre. (Prerequisite: DRAM-2200.)(Co-requisites: DRAM-2230, DRAM-2260, DRAM-2280.) (Restricted to BFA Acting students only.) (Laboratory hours by arrangement.)

**DRAM-2230. Acting for the Theatre I**
Continuation of DRAM-1290. The emphasis will be on acting exercises, script analysis and scene work. (Prerequisite: DRAM-1290.) (Co-requisites: DRAM-2200, DRAM-2260, DRAM-2280.) (Restricted to BFA Acting students only.) (May be taken twice with the consent of instructor if assignments or their treatments are significantly varied.)

**DRAM-2240. Acting for the Theatre II**
Continuation of DRAM-2230. The emphasis will be on the analysis and performance of scenes from plays. (Prerequisite: DRAM-2230.)(Co-requisites: DRAM-2200, DRAM-2260, DRAM-2280.) (Restricted to BFA Acting students only.) (May be taken twice with the consent of instructor if assignments or their treatments are significantly varied.)

**DRAM-2250. Introductory Acting I**
A practical study of the fundamentals of acting experienced through acting exercises. (Not open to BFA Acting students.)

**DRAM-2260. Movement for the Actor III**
Continuation of DRAM-1270. The study and practice of movement for the actor. (Prerequisite: DRAM-1270.) (Co-requisites: DRAM-2200, DRAM-2230, DRAM-2280.) (Restricted to BFA Acting students only.) (Laboratory hours by arrangement.)

**DRAM-2270. Movement for the Actor IV**
Continuation of DRAM-2260. The study and practice of movement for the actor. (Prerequisite: DRAM-2260.)(Co-requisites: DRAM-2200, DRAM-2230, DRAM-2280.) (Restricted to BFA Acting students only.) (Laboratory hours by arrangement.)

**DRAM-2280. Psychophysical Acting Techniques**
Exercises in improvisation designed to support the rehearsal process for scripted works (Prerequisite: DRAM-1290). (Co-requisites: DRAM-2200, DRAM-2230, DRAM-2260.) (Restricted to BFA Acting majors only.) (Laboratory hours by arrangement.)

**DRAM-2290. Dance for the Theatre**
A practical course in a variety of dance styles for the theatre. (Not open to BFA Acting Majors except by consent of instructor.) (Laboratory hours by arrangement.)

**DRAM-2300. Theatre History II**
Critical approaches to the main elements of theatre of the seventeenth, eighteenth, and nineteenth centuries. (Open to non-Dramatic Art majors.)

**DRAM-2350. Introductory Acting II**
Emphasis is on acting exercises based on script analysis. (Prerequisite: DRAM-2250, or consent of instructor.) (Not open to BFA Acting students.)

**DRAM-2440. Directing I**
An examination of the principles of play direction, including the role of the director, choosing plays, casting, analysis, picturization and composition, rehearsal techniques, and scene presentation. (Prerequisite: DRAM-2250, or consent of instructor.) (Laboratory hours by arrangement.)

**DRAM-2500. Stage Makeup**
An introduction to the theory and practice of theatrical make-up application. Topics covered will include basic stage make-up, corrective make-up and aging. (Restricted to Drama majors only.)

**DRAM-2600. Drama in the Classroom: Principles and Theories**
A course in the use of drama as it relates to the school curriculum and the community. (Prerequisite: DRAM-1610.) (Restricted to Drama in Education and Community and Concurrent Drama/BEd Majors only.)

**DRAM-2610. Drama in the Classroom: Applications I**
Applications of drama as they relate to the curriculum for Grades K through Six. Completion of a classroom contact is required. (Field contacts are with the consent of Drama in Education and Community instructors and may be outside class time.) (Prerequisite: DRAM-2600 or consent of instructor.) (Restricted to Drama in Education and Community and Concurrent Drama/BEd Majors only.)

**DRAM-2670. Applied Theatre**
An introduction to the theory and practice of Applied Theatre to promote and maintain health and well-being for individuals and communities. Focus will be on developing skills in performance, leadership and facilitation in a wide range of community settings. (Prerequisite: DRAM-2000 or consent of instructor.)

**DRAM-2700. Speaking Truth to Power: Voice and Activism**
An examination of contemporary campaigns to improve the standard of living of Canadians. Students learn to conduct interviews and evaluate the effectiveness of social justice messages. (Prerequisite: Semester 3 or above standing.) (Also offered as WORK-2700, SJST-2700, and CMAF-2700)

**DRAM-2720. The Creative Process**
An introduction to the creative process through an exploration of various theories, principles, and techniques of selected theorists and innovative thinkers. Students may explore such topics as: Creative Problem Solving, Idea Generation, and Innovation. Through academic study and practical work, students will explore ways of developing their own creative potential and applying it to their daily lives. (Not open to 1st year students.)
**DRAM-2750. Principles and Practices of Arts Management I**

Structures and functions of arts organizations. Examination of core competencies as applied to arts organizations: marketing and publicity, financial management, various forms of fund-raising, board and volunteer management, and interaction with Unions and Associations.

**DRAM-2760. Principles and Practices of Arts Management II**
A continuation of the study of Arts Management I. An exploration of the concepts and practices of organizational design, human resources, leadership, legal concerns, strategic planning, Board governance, policy making and advocacy relating to management of the not for profit and non-profit Arts sectors in Canada today. (Prerequisite: DRAM-2750)

**DRAM-2770. Improvisation**
Involves the development of performance skills through a practical application of theatre games and basic elements of improvisation with emphasis on self-development. (Prerequisite: DRAM-1000 and DRAM-2000; or consent of instructor.)

**DRAM-2780. Improvisation: Working with Text**
A continuation of the study of improvisation. Involves practical applications of improvisation to improvised scenes and written texts. (Prerequisite: DRAM-2770 or consent of instructor.) (Individual course sections may be restricted to Drama in Education and Community students only.)

**DRAM-2840. Creative Movement and Voice I**
The study and practice of movement and voice as they relate to the individual, theatre, and the classroom. Emphasis may be on one or both disciplines as necessary. (Prerequisite: DRAM-1000 or consent of instructor.) (Laboratory hours by arrangement.)

**DRAM-3100. Play Creation**
A study of the principles and techniques involved in play creation, culminating in a final staged reading or performance. Modules may include playwriting, devising, adaptation, dramaturgy, and translation. (Prerequisite: DRAM-1000 and DRAM-2000 or by permission of the instructor.)

**DRAM-3150. Stage Management**
A study of the role of the theatrical stage manager. Particular emphasis will be given to rehearsal organization and communication, cue notation, crew supervision, safety issues, Canadian Actors' Equity guidelines, and managing the production while in technical/dress rehearsals and performance. (Prerequisite: DRAM-2000, or consent of the instructor.)

**DRAM-3170. Costume Design II**
Continuation of DRAM-2170, involving theoretical and practical design projects; formal presentation of costume designs. (Prerequisite: DRAM-2170, or consent of the instructor.)

**DRAM-3190. Studies in Design**
Designed for the advanced student who wishes to explore further studies in scenic, lighting, or costume design. (Prerequisite: consent of a faculty advisor.) (May be repeated for credit if assignments or their treatments are significantly varied.)

**DRAM-3210. Acting-Work in Progress I**
Rehearsal project in a performance style selected by Dramatic Art. The play or scenes from plays become the catalyst for the discovery of the style related to its period. (Prerequisite: DRAM-2240.)(Co-requisites: DRAM-2200, DRAM-2230, DRAM-2260.) (Restricted to BFA Acting students only.) (May be repeated for credit if assignments or their treatments are significantly varied.)

**DRAM-3220. Acting-Work in Progress II**
Rehearsal project in a performance style selected by Dramatic Art. The play or scenes from plays become the catalyst for the discovery of the style related to its period. (Prerequisite: DRAM-2240.)(Co-requisites: DRAM-3260 or DRAM-3270, if offered.) (Restricted to BFA Acting students only.) (May be repeated for credit if assignments or their treatments are significantly varied.)

**DRAM-3230. Acting-Work in Progress III**
Rehearsal project in a performance style selected by Dramatic Art. The play or scenes from plays become the catalyst for the discovery of the style related to its period. (Prerequisite: DRAM-2240.) (Co-requisites: DRAM-3260 or DRAM-3270, if offered.) (Restricted to BFA Acting students only.) (May be repeated for credit if assignments or their treatments are significantly varied.)

**DRAM-3240. Performing Shakespeare**
A course in the acquisition of the skills required to interpret and perform Shakespearean text through the rehearsal and public performance of a play or scenes from a Shakespearean play or plays. (Prerequisite: DRAM-2240) (Corequisite: DRAM-3260 or DRAM-3270, if offered) (Restricted to BFA. students only.) (May be repeated for credit if assignments or their treatments are significantly varied.)

**DRAM-3250. Intermediate Acting III**
Emphasis is on the development of situation and characterization. The period to be studied may vary from year to year. (Prerequisite: DRAM-2350 or consent of instructor.) (Not open to BFA Acting students.)

**DRAM-3260. Voice and Movement for the Actor I**
Application of voice and movement techniques as they relate to performance assignments. Emphasis may be on one or both disciplines as necessary. (Prerequisite: DRAM-2270.) (Co-requisites: DRAM-3210 and DRAM-3220 or DRAM-3230 and DRAM-3240.) (May be taken twice for credit.) (Restricted to BFA Acting students only.) (Laboratory hours by arrangement.)

**DRAM-3270. Voice and Movement for the Actor II**
Advanced application of voice and movement techniques as they relate to performance assignments. Emphasis may be on one or both disciplines as necessary. (Prerequisite: DRAM-2210.) (Co-requisites: DRAM-3210 and DRAM-3220 or DRAM-3230 and DRAM-3240.) (Restricted to BFA Acting students only.) (Laboratory hours by arrangement.)

**DRAM-3330. Canadian Theatre History**
A study of the evolution of theatre in Canada. (Open to non-Dramatic Art majors.)

**DRAM-3350. Theatre from the Twentieth Century to the Present Day**
Critical approaches to major theatrical movements and experiments in theatre during the twentieth and twenty-first centuries. (Open to non-Dramatic Art majors.)

**DRAM-3440. Directing II**
A practical course involving rehearsal techniques and the presentation of scenes or one-act plays. (Prerequisite: DRAM-2230 and DRAM-2240; or DRAM-2440 or consent of instructor.) (Laboratory hours by arrangement.)

**DRAM-3510. Production Problems**

Advanced explorations of current trends, materials, or practices in performance or non-performance, with an emphasis on problem solving techniques. The student will research and develop solutions to one or more production problems and present his/her findings in a seminar or performance situation. (Prerequisite: A minimum of two courses and/or equivalent experience in the subject area(s) explored and, consent of a faculty advisor and Director of the School.) (Hours by arrangement.) (May be repeated for credit if assignments or their treatments are significantly varied.)

**DRAM-3520. Production Problems**
Advanced explorations of current trends, materials, or practices in performance or non-performance, with an emphasis on problem solving techniques. The student will research and develop solutions to one or more production problems and present his/her findings in a seminar or performance situation. (Prerequisite: A minimum of two courses and/or equivalent experience in the subject area(s) explored and, consent of a faculty advisor and the Director of the School.) (May be repeated for credit if assignments or their treatments are significantly varied.) (Hours by arrangement.)

**DRAM-3530. Production Problems: Stage Management**
A theoretical and practical course examining the duties and responsibilities of the theatrical stage manager, including rehearsal procedures, protocol and etiquette, assembling the production script, cuing methods and notations, and security/safety regulations. (Prerequisite: DRAM-3150 plus previous experience as an assistant stage manager and consent of a faculty advisor.) (May be repeated for credit if assignments or their treatments are significantly varied.) (Laboratory hours by arrangement.)

**DRAM-3600. Drama in the Classroom: Applications II**
Applications of drama as they relate to the curriculum for Grades Seven through Twelve. Completion of a classroom contact is required. (Field contacts are with the consent of Drama in Education and Community instructors and may be outside class time.) (Prerequisite: DRAM-2610 or consent of instructor.) (Restricted to Drama in Education and Community and Concurrent Drama/BEd Majors only.)

**DRAM-3710. Literacy in Action**
A course in the use of drama as it relates to the development of literacy in classroom and community settings. (Prerequisite: DRAM-2610.) (Restricted to Drama in Education and Community students only.)

**DRAM-3780. Theatre for Social Action**
A study of the theory, practice, and development of popular, community, and collective theatre. Students will examine various approaches to theatre for social action through a combination of academic study and practical exercises in popular theatre techniques. (Open only to 3rd and 4th year Dramatic Art majors.) (May be repeated for credit twice if assignments or approaches are significantly different.)

**DRAM-3980. Internship I: Arts Management Certificate**
Completion of field placement in an arts organization. (Prerequisitie: DRAM-2750 with a minimum grade of 70%.)

**DRAM-3990. Internship II: Arts Management Certificate**
Completion of second field placement in an arts organization involving in-depth analysis of the organization. (Prerequisitie: DRAM-2750 and DRAM-3980 with a minimum grade of 70%.)

**DRAM-4000. Style in Theatre**

An exploration of selected theatrical styles. Topics and materials may vary from year to year. (Students may use this course number to register for the Stratford Summer Campus. Contact Dramatic Art for further information.) (May be repeated for credit twice if assignments or approaches are significantly varied.)

**DRAM-4200. Graduation Recital**
The selection, preparation, and presentation of suitable audition material in a recital situation. An introduction to the business of being a professional actor will be addressed. (Prerequisite: All required first, second, and third year BFA performance courses; restricted to fourth-year BFA Acting students only.) (Laboratory hours by arrangement.)

**DRAM-4210. Television Performance**
Introduction to basic television performance techniques. Each student performs behind and in front of the camera although the emphasis is on performance. (Prerequisite: DRAM-2250 or DRAM-2350, or DRAM-3230 and DRAM-3240. or by consent of instructor. Restricted to third- and fourth-year Dramatic Art and Communication Studies students in the Combined Dramatic Arts and Communication Studies program, and third and four year Dramatic Art students.) (May be taken for credit twice.)

**DRAM-4290. Character Study**
Independent work in researching, developing, and presenting character projects based on life studies. (Restricted to Fourth year BFA Acting students only.) (May be taken for credit twice with consent of instructor if assignments or their treatments are significantly varied.)

**DRAM-4390. Directed Studies in History, Theory, or Theatre Administration**
Designed for the advanced student who wishes to explore a special area of history, theory, or theatre administration with a faculty advisor. (Prerequisite: consent of a faculty advisor.) (May be taken for credit twice if assignments or their treatments are significantly varied.) (Hours by arrangement.)

**DRAM-4490. Directed Studies in Direction**
Designed for the advanced student who wishes to explore a special area of direction with a faculty advisor. (Prerequisite: consent of the faculty advisor.) (May be taken for credit twice.)

**DRAM-4510. Advanced Shakespeare Performance**
An extension and intensification of 24-324 Acting Work in Progress IV Performing Shakespeare. An advanced course in the acquisition of the skills required to interpret and perform Shakespearean text through the rehearsal and public performance of a play or scenes from a Shakespearean play or plays.(Co-requisites: 24-420 and 24-429, if offered)(Restricted to B.F.A. acting students only.)

**DRAM-4520. Directed Studies in Production**
An opportunity for the advanced student to research, develop, and execute a major technical/design assignment under the supervision of a faculty advisor. (May be repeated for credit if assignments or approaches are significantly varied.) (Prerequisites: A minimum of three production/design courses, DRAM-3520, and/or equivalent experience in the subject area(s) explored, and consent of a faculty advisor and the Director of the School.) (Hours by arrangement.)

**DRAM-4530 to DRAM-4580. Directed Studies in Performance**
The emphasis in these courses will be a series of plays selected and produced by Dramatic Art or by a theatre company outside of the University as approved by Dramatic Art. Students will research, develop, and execute a role in the performance situation under the supervision of a faculty advisor-director. (May be taken for credit twice.) (Prerequisites: All required first, second, and third year BFA

performance courses: DRAM-1200, DRAM-1210, DRAM-1260, DRAM-1270, DRAM-1280, DRAM-1290, DRAM-2200, DRAM-2210, DRAM-2230, DRAM-2240, DRAM-2260, DRAM-2270, DRAM-2280, DRAM-3210, DRAM-3220, DRAM-3230, DRAM-3240, DRAM-3260, and DRAM-3270.)

**DRAM-4690. Directed Studies in Cross-Cultural Theatre**
Designed for the advanced student who wishes to explore a special area of theatre of a unique culture with a faculty advisor. (Prerequisite: previous experience/courses in the subject area(s) explored and consent of a faculty advisor.) (Restricted to students in Semester 5 and above.) (May be taken for credit twice.)

**DRAM-4700. Theatre for Young Audiences**
Research and practical work in the history, principles, and techniques of theatrical performance by, with, and for young audiences. Students may explore international perspectives on topics such as: Theatre in Education, Children's Theatre, Theatre for Youth, Collective Creation, and Devised Theatre. (Only open to 3rd and 4th year Dramatic Art majors.) (Prerequisites: DRAM-2250.) (May be repeated for credit twice if assignments or approaches are significantly varied.)

**DRAM-4710. Drama and Community: Applications**
A project-based practical course in the principles and techniques of drama and theatre as they relate to community, educational, and healthcare settings. Students will develop and deliver projects based on topics such as: Drama/Theatre and Disabilities, Theatre in Education, Socio-political Theatre, Popular Theatre, and Theatre for Young Audiences. Projects will be driven by the current research interest and involvement of the instructor or the need and interests of community groups. (Open only to 3rd and 4th year Dramatic Art majors or by consent of instructor.) (May be repeated for credit if assignments or approaches are significantly varied.)

**DRAM-4790. Directed Studies in Drama in Education and Community**
Independent, directed study in a special area of interest in drama in education under the supervision of a faculty advisor. (May be taken for credit twice.) (Prerequisite: DRAM-3710 and DRAM-2670 or consent of the faculty advisor.) (Placement hours by arrangement.)

# ENGLISH AND CREATIVE WRITING

## PROGRAM REGULATIONS

No more than five 1000-level English courses may count toward the Major requirements for a degree program in English.

ENGL-1001 does not count toward the English major or minor or IAS requirements.

ENGL-2710 and ENGL-4710 are two-term (6.0 credit) courses that take place over two consecutive semesters.

The following courses require portfolio application or permission of instructor: ENGL-2710, ENGL-3710, ENGL-4003, ENGL-4004, ENGL-4710.

Any major, minor, or IAS student, even if not in the English and Creative Writing degree program, may submit a portfolio to take any of the Creative Writing courses for credit.

ENGL-1006 does not count as a substitute for ENGL-2710, ENGL-3710, or ENGL-4710.

## PROGRAMS

### General English

**Degree Requirements**

Total courses: thirty.

(a) ENGL-1002, ENGL-1003, and ENGL-1004;
(b) one of ENGL-2010, ENGL-2020, ENGL-2030, or ENGL-2040;
(c) one of ENGL-2110, ENGL-2120, or ENGL-2130;
(d) one of ENGL-2210, ENGL-2220, or ENGL-2230;
(e) one of ENGL-2310, ENGL-2320, or ENGL-2330;
(f) one of ENGL-2410, ENGL-2420, or ENGL-2430;
(g) any four ENGL courses at 3000-level or 4000-level;
(h) two courses from Social Sciences;
(i) two courses from Languages or Science;
(j) two courses from any area of study, excluding Arts;
(k) GART-1500;
(l) four courses from any area of study, including English;
(m) seven courses from any area of study, excluding English

Note: Five (5) 1000-level English courses may count toward the major.

Courses used to calculate the major average are: courses listed under requirements (a) to (g), and any courses taken in the major area of study.

## Honours English

**Degree Requirements**

Total courses: forty

(a) ENGL-1002, ENGL-1003, and ENGL-1004;
(b) two of ENGL-2010, ENGL-2020, ENGL-2030, or ENGL-2040;
(c) two of ENGL-2110, ENGL-2120, or ENGL-2130;
(d) one of ENGL-2210, ENGL-2220, or ENGL-2230;
(e) one of ENGL-2310, ENGL-2320, or ENGL-2330;
(f) one of ENGL-2410, ENGL-2420, or ENGL-2430;
(g) any eight ENGL courses at 3000-level or 4000-level;
(h) any two ENGL courses at the 4000-level;
(i) two courses from Social Sciences;
(j) two courses from Languages or Science;
(k) two courses from any area of study, excluding Arts;
(l) GART-1500;
(m) four courses from any area of study, including English;
(n) nine courses from any area of study, excluding English

Note: Five (5) 1000-level English courses may count toward the major

Courses used to calculate the major average are: courses listed under requirements (a) to (h), and any courses taken in the major area of study.

## Honours English and Creative Writing

### Degree Requirements

Total courses: forty.

(a) ENGL-1002, ENGL-1003, and ENGL-1004;
(b) two of ENGL-2010, ENGL-2020, ENGL-2030, or ENGL-2040;
(c) one of ENGL-2110, ENGL-2120, or ENGL-2130;
(d) one of ENGL-2210, ENGL-2220, or ENGL-2230;
(e) one of ENGL-2310, ENGL-2320, or ENGL-2330;
(f) one of ENGL-2410, ENGL-2420, or ENGL-2430;
(g) any five ENGL courses at 3000-level or 4000-level;
(h) one of ENGL-4001, ENGL-4002, ENGL-4003, or ENGL-4005;
(i) ENGL-2710 (a 6.0-credit course), ENGL-3710, and ENGL-4710 (a 6.0-credit course);
(j) two courses from Social Sciences;
(k) two courses from Languages or Science;
(l) two courses from any area of study, excluding Arts;

(m) GART-1500;
(n) four courses from any area of study, including English;
(o) nine courses from any area of study, excluding English

Note: Five (5) 1000-level English courses may count toward the major

Courses used to calculate the major average are: courses listed under requirements (a) to (i), and any courses taken in the major area of study.

## Combined Honours English

**Degree Requirements**

Total courses: forty.
(a) ENGL-1002, ENGL-1003, and ENGL-1004;
(b) two of ENGL-2010, ENGL-2020, ENGL-2030, or ENGL-2040;
(c) two of ENGL-2110, ENGL-2120, or ENGL-2130;
(d) one of ENGL-2210, ENGL-2220, or ENGL-2230;
(e) one of ENGL-2310, ENGL-2320, or ENGL-2330;
(f) one of ENGL-2410, ENGL-2420, or ENGL 2430;
(g) any six ENGL courses at 3000-level or 4000-level;;
(h) one ENGL course at the 4000-level;
(i) Course Requirements - Other Subject:courses used to calculate the major average in the other subject area, as prescribed by that area of study;
(j) two courses from Social Sciences;
(k) two courses from Languages or Science;
(l) two courses from any area of study, excluding Arts;
(m) GART-1500;
(n) additional courses from any area of study to a total of forty courses.

Note: Five (5) 1000-level English courses may count toward the major.

Courses used to calculate the major average are: courses listed under requirements (a) to (i), and any courses taken in the major area(s) of study.

## Combined Honours English and Creative Writing

**Degree Requirements**

Total courses: forty.
(a) ENGL-1002, ENGL-1003, and ENGL-1004;
(b) two of ENGL-2010, ENGL-2020, ENGL-2030, or ENGL-2040;
(c) one of ENGL-2110, ENGL-2120, or ENGL-2130;
(d) one of ENGL-2210, ENGL-2220, or ENGL-2230;
(e) one of ENGL-2310, ENGL-2320, or ENGL-2330;
(f) one of ENGL-2410, ENGL-2420, or ENGL-2430;
(g) any three ENGL courses at 3000-level or 4000-level;
(h) ENGL-2710 (a 6.0-credit course), ENGL-3710, and ENGL-4710 (a 6.0-credit course);

(i) Course Requirements - Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study;
(j) two courses from Social Sciences;
(k) two courses from Languages or Science;
(l) two courses from any area of study, excluding Arts;
(m) GART-1500;
(n) additional courses from any area of study to a total of forty courses.

Note: Five (5) 1000-level English courses may count toward the major.

Courses used to calculate the major average are: courses listed under requirements (a) to (i), and any courses taken in the major area(s) of study.

## Concurrent General Bachelor of Arts (English)/Bachelor of Education

Direct admissions from high school only.

This is a joint offering between Department of English and Creative Writing and the Faculty of Education. See Faculty of Education for program requirements.

## Minor in English

Required: a minimum of six English courses, including:
(a) 2000-level: Any 3 ENGL courses
(b) 3000-level: Any 2 ENGL courses
(c) Any 1 additional ENGL course at any level

Note: ENGL 1001 does not count towards the English major or minor requirements

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - English

Major Concentration:
(a) ENGL-1002, ENGL-1003, and ENGL-1004;
(b) one of ENGL-2010, ENGL-2020, ENGL-2030, or ENGL-2040;
(c) one of ENGL-2110, ENGL-2120, or ENGL-2130;
(d) one of ENGL-2210, ENGL-2220, or ENGL-2230;
(e) one of ENGL-2310, ENGL-2320, or ENGL-2330;
(f) one of ENGL-2410, ENGL-2420, or ENGL-2430;
(g) any four ENGL-courses at 3000-level.

Minor Concentration:
(a) 2000-level: Any 3 ENGL courses
(b) 3000-level: any 2 ENGL courses
(c) Any 1 additional ENGL course at any level

Note: ENGL 1001 does not count towards the English minor requirements.

# ENGLISH AND CREATIVE WRITING COURSES

Not all courses listed will be offered each year. All courses are three hours a week (3.0 credit hours) unless otherwise indicated. Students should consult the Departmental office or website for details of Topics and Seminar courses offered in a given year.

**ENGL-1001. Composition**
An introduction to the fundamentals of effective writing, including attention to rhetorical concepts of audience, purpose, context, planning, logical development, organization, format, and style. (Arts elective only; does not count for credit in English.)

**ENGL-1002. Writing about Literature**
An introduction to analyzing and writing about literary texts, focusing on: the major genres (poetry, drama, and narrative prose), the use of literary terms, and frequent writing assignments in practical criticism. (Not available on an Audit basis.) (Restricted to majors in English and IAS only.)

**ENGL-1003. Early British Literature**
A survey of representative texts to 1750: the Medieval, Renaissance, seventeenth-century and eighteenth-century periods. (Restricted to majors in English and IAS only.) Credit cannot be obtained for both ENGL-1003 and ENGL-2109).

**ENGL-1004. Later British Literature**
A survey of representative texts from 1750: the Romantic, Victorian, Modern, and contemporary periods. (Restricted to majors in English and IAS only.) Credit cannot be obtained for both ENGL-1004 and ENGL-2119.)

**ENGL-1005. Topics in Literature**
An introduction to literary texts selected by subject, genre, or relation to another field of study. (May be repeated for credit if the topics are different.) (Credit cannot be obtained for both ENGL-1005 and ENGL-1229, ENGL-1239, ENGL-1289 or ENGL-1409 unless topic is different.)

**ENGL-1006. Writing Creatively**
An introduction to the fundamentals of writing creatively in various genres with emphases on reading and writing skills, discussions of published texts, and in-class workshops and writing exercises. (No portfolio submission required for admission.) (Does not count as a substitute for one of the three creative writing courses of the English and Creative Writing program.)

**ENGL-2010. Medieval Literature**
A study of Medieval British literature and/or drama read in either Middle English or modern English translation. Authors may include Chaucer, Langland, Malory, Julian of Norwich, the Gawain-poet. (Prerequisite: Semester two standing.) (Credit cannot be obtained for both ENGL-2010 and ENGL-3129 or ENGL-2149.)

**ENGL-2020. Renaissance Literature**
A study of continuity and change in British literature, and/or drama, culture, and intellectual history in the sixteenth and seventeenth centuries. Authors may include Sidney, Spenser, Shakespeare, Herbert, Donne, Milton. (Prerequisite: Semester two standing.) (Credit cannot be obtained for both ENGL-2020 and ENGL-3229, ENGL-3239, ENGL-3249 or ENGL-3289.)

**ENGL-2030. Shakespeare**
A study of Shakespeare's selected Elizabethan and/or Jacobean texts considered from literary and theatrical perspectives. (Prerequisite: Semester One standing (Credit cannot be obtained for both ENGL-2030 and ENGL-3269 or ENGL-3279.)

**ENGL-2040. Restoration and 18th Century Literature**
A study of British literature from the Restoration to the beginnings of Romanticism, focusing on major literary figures as they represent and respond to intellectual and social changes. Authors may include Dryden, Behn, Pope, Swift, Johnson. (Prerequisite: Semester two standing.) (Credit cannot be obtained for both ENGL-2040 and ENGL-3339, ENGL-3349, ENGL-3359 or ENGL-3369.)

**ENGL-2110. Romantic Literature**
A study of British literature culture between 1770 and 1830, focusing on major literary figures. Authors may include Wordsworth, Coleridge, Austen, Blake, Shelley. (Prerequisite: Semester two standing.) (Credit cannot be obtained for both ENGL-2110 and ENGL-3439, ENGL-3449 or ENGL-3499.)

**ENGL-2120. Victorian Literature**
A study of representative texts by major British authors between 1832 and 1901 as they reflect and respond to aesthetic developments and cultural and socio-political contexts. Authors may include Dickens, Tennyson, the Brownings, the Brontës, the Rossettis, Hardy, Wilde. (Prerequisite: Semester two standing.) (Credit cannot be obtained for both ENGL-2120 and ENGL-3469, ENGL-3479 or ENGL-3489.)

**ENGL-2130. Modern and/or Contemporary British and/or Irish Literature**
A study of texts by major authors since the start of the twentieth century. Authors may include Conrad, Yeats, T.S. Eliot, Woolf, Orwell, Rushdie, Beckett, Auden, Dylan Thomas, Larkin. (Prerequisite: Semester two standing.) (Credit cannot be obtained for both ENGL-2130 and ENGL-3529, ENGL-3539, ENGL-3559 or ENGL-3579.)

**ENGL-2210. Canadian Literature**
A study of representative texts in the major genres, in their cultural contexts from imperial exploration through Confederation, Modernism, and Postmodernism, to the present. Authors may include Leacock, Moodie, Pauline Johnson, Roberts, F.R. Scott, A.J.M. Smith, Livesay, Kroetsch, MacLeod, Munro, Highway. (Prerequisite: Semester two standing.) (Credit cannot be obtained for both ENGL-2210 and ENGL-2609, ENGL-3619, ENGL-3669 or ENGL-3679.)

**ENGL-2220. US Literature pre-20th Century**
A study of representative texts in the major genres as well as autobiography, sermons, and political writing from early Indigenous orature to cultural representations of slavery and its abolition to the emergence of Transcendentalism, Realism and Naturalism. Authors may include Bradford, Bradstreet, Zitkála-Šá, Douglass, Whitman, Poe, Melville, Dickinson, Wharton, Gilman, Chopin. (Prerequisite: Semeste rtwo standing.) (Credit cannot be obtained for both ENGL-2220 and ENGL-2709, ENGL-3719, ENGL-3729 or ENGL-3739.)

**ENGL-2230. Modern and Contemporary US Literature**
A study of texts in various genres in the contexts of social, political, and artistic change in the modern and contemporary eras. Authors may include Faulkner, Stein, Hurston, Ellison, Plath, Olson, Anzaldúa, Baldwin, Momaday, Morrison. (Credit cannot be obtained for both ENGL-2230 and ENGL-3749 or ENGL-3759.) (Prerequisite: Semester two standing.)

**ENGL-2310. World Literatures in English**
A study of literatures in English or in translation from Asian, African, Caribbean, Latin American and Indigenous cultures. Authors may Achebe, Zakes Mda, King, Márquez, Chang Rae Lee, Naipaul, Lahiri. (Prerequisite: Semester two standing.)

**ENGL-2320. Indigenous Literatures**
A study of literature by Indigenous writers from Canada, the Americas, New Zealand, or Australia. Authors may include Wagamese (Cree), Robinson (Haisla), Hobson (Cherokee), King (Cherokee), Silko (Laguna), Maracle (Coast Salish), Howe (Choctaw). (Prerequisite: Semester two standing.) (Credit cannot be obtained for both ENGL-2320 and ENGL-3589.)

**ENGL-2330. Gender and Literature**
A study of literature and cultural texts from various periods with emphasis on historical context as well as feminist, gender, sexuality, and queer theories. (Prerequisite: Semester two standing.) (Credit cannot be obtained for both ENGL-2330 and ENGL-3019.)

**ENGL-2410. Rhetoric**
A study of the history and theory of rhetoric from Ancient Greece to the present, including explorations of the relationships between rhetoric, epistemology, ethics, and politics. (Prerequisite: Semester two standing.)

**ENGL-2420. History of the English Language**
A study of the background and origins of the English language and its various forms from Old English to the end of the eighteenth century. (Prerequisite: Semester twostanding.)

**ENGL-2430. Topics in Literary, Cultural, and Language Theory**
A study of major theories, theorists, and movements associated with literary and cultural texts. Topics may include disability, critical theory, performance studies, linguistics. (Prerequisite: Semester two standing.) (May be repeated for credit if topics are different.) (Credit cannot be obtained for both ENGL-2430 and ENGL-2809, ENGL-2859, ENGL-2939, ENGL-3839 or ENGL-3420 unless the topic is different.)

**ENGL-2510. Topics in Literary Genres**
A study of texts in a single major genre (poetry, prose, drama, comics) or subgenre (comedy, tragedy, fantasy, science fiction). (Prerequisite: Semester two standing.) (May be repeated for credit if topics are different.) (Credit cannot be obtained for both ENGL-2510 and ENGL-1229, ENGL-1239, ENGL-2029, ENGL-3509, or ENGL-3569 unless topic is different.)

**ENGL-2520. Topics in Literature**
A study of texts on a single theme or subject. Topics may include children’s literature, women's literature, monsters, disability, the environment, animals, film and literature. (Prerequisite: Semester two standing.) (May be repeated for credit if the topics are different.) (Credit cannot be obtained for both ENGL-2520 and ENGL-1289, ENGL-2029 or ENGL-2059 unless topic is different.)

**ENGL-2530. Shakespeare in Performance**
Studies in selections of Shakespearean drama in performance. (Prerequisite: Semester two standing.) (May be repeated for credit.)

**ENGL-2710. Creative Writing I**

An introductory workshop in the practice and theory of writing in various genres. (Requires portfolio application.) (Not available on an Audit basis.) (A 6.0-credit, two semester course.) (Prerequisite: Semester two standing.)

**ENGL-3002. Writing Creative Nonfiction**
A workshop in writing in a specific genre of nonfiction. Topics may include life writing, nature/science writing, travel writing, food writing. (Restricted to majors and minors in English and IAS only.) (Prerequisite: Semester Four standing, and three 2000-level English courses.) (May be repeated for credit if topics are different.)

**ENGL-3010. Medieval Literature**
A study of texts with emphasis on genre, theme, subject, or author(s) from 800 to 1500. Topics may include Chaucer, romance, allegory, Arthurian literature, mystical and religious writing. (Restricted to majors and minors in English and IAS only.) (May be repeated for credit if the topics are different.) (Prerequisite: Semester Four standing, and three 2000-level English courses.) (Credit cannot be obtained for both ENGL-3010 and ENGL-3109, ENGL-3129 or ENGL-2149 unless topic is different.)

**ENGL-3020. Renaissance Literature**
A study of texts with emphases on genre, theme, subject, or author(s) from 1500 to 1800. Topics may include humanism and rhetoric, literature and science, early seventeenth-century lyric, Shakespeare, Milton and Paradise Lost. (Restricted to majors and minors in English and IAS only.) (May be repeated for credit if the topics are different.) (Prerequisite: Semester four standing, and three 2000-level English courses.) (Credit cannot be obtained for both ENGL-3020 and ENGL-3229, ENGL-3239, ENGL-3249, or ENGL-3289 unless topic is different.)

**ENGL-3040. Literature of Restoration and 18th-Century**
A study in a genre, theme, subject, or author(s) from 1660 to 1790. Topics may include drama, the emergent novel, women writers, popular literature, literature of emancipation and human rights, literature of environmentalism and animal welfare. (Restricted to majors and minors in English and IAS only.) (May be repeated for credit if the topics are different.) (Prerequisite: Semester Four standing, and three 2000-level English courses.) (Credit cannot be obtained for both ENGL-3010 and ENGL-3339, ENGL-3349, ENGL-3359 or ENGL-3369 unless topic is different.)

**ENGL-3110. Romantic Literature**
A study in a genre, theme, subject, or author(s) from 1770 to 1830. Topics may include lyric poetry, the novel, autobiography, travel writing, the literature of slavery and abolition. (Restricted to majors and minors in English and IAS only.) (May be repeated for credit if the topics are different.) (Prerequisite: Semester Four standing, and three 2000-level English courses.) (Credit cannot be obtained for both ENGL-3110 and ENGL-3439, ENGL-3349 or ENGL-3499 unless topic is different.)

**ENGL-3120. Victorian Literature**
A study in a genre, theme, subject, or author(s) from 1832 to 1901. Topics may include the “Woman Question”, imperialism, the Brontës, the Pre-Raphaelites, the working classes, disability, Gothicism, childhood. (Restricted to majors and minors in English and IAS only.) (May be repeated for credit if the topics are different.) (Prerequisite: Semester Four standing, and three 2000-level English courses.) (Credit cannot be obtained for both ENGL-3120 and ENGL-3469, ENGL-3479 or ENGL-3489 unless topic is different.)

**ENGL-3130. Modern and/or Contemporary British and/or Irish Literature**

A study of a genre, theme, subject, or author(s) from 1890. Topics may include World War I poets, Modernism, neo-Romanticism, women writers. Authors may include Conrad, T.S.Eliot, Woolf, Lessing, Rushdie, Golding, Larkin, Yeats, Synge, Joyce, Beckett, Flann O'Brien, Ann Enright. (Restricted to majors and minors in English and IAS only.) (May be repeated for credit if the topics are different.) (Prerequisite: Semester Four standing, and three 2000-level English courses.) (Credit cannot be obtained for both ENGL-3130 and ENGL-3529, ENGL-3539, ENGL-3559 or ENGL-3579 unless topic is different.)

**ENGL-3210. Canadian Literature**
A study of a genre, theme, subject, or author(s) from a period, region, or community. Topics may include Indigenous writing, drama, poetry, the short story, the novel. (Restricted to majors and minors in English and IAS only.) (May be repeated for credit if the topics are different.) (Prerequisite: Semester Four standing, and three 2000-level English courses.) (Credit cannot be obtained for both ENGL-3210 and ENGL-3619, ENGL-3669 or ENGL-3679 unless topic is different.)

**ENGL-3220. US Literature**
A study of a genre, theme, subject, or author(s). Topics may include American gothic, citizenship, Indigenous writing, Transcendentalism, Harlem Renaissance, American moderns, L=A=N=G=U=A=G=E poetry, women writers, contemporary literature. (Restricted to majors and minors in English and IAS only.) (May be repeated for credit if the topics are different.) (Prerequisite: Semester Four standing, and three 2000- level English courses.) (Credit cannot be obtained for both ENGL-3220 and ENGL-3569, ENGL-3719, ENGL-3729, ENGL-3739, ENGL-3749, or ENGL-3759 unless topic is different.)

**ENGL-3310. Postcolonial Literature**
A study of English-language writing and relevant theories of various nations and peoples as they respond to European colonization and the end of colonization, to racism, assimilation, and genocide, and to concerns such as reclaiming place and identity, asserting cultural integrity, and rewriting history beyond the colonial. (Restricted to majors and minors in English and IAS only.) (Prerequisite: Semester Four standing, and three 2000-level English courses.) (May be repeated for credit if the topics are different.) (Credit cannot be obtained for both ENGL-3310 and ENGL-3759.)

**ENGL-3320. Literature of the African Diaspora**
A study of genre, theme, regional identity, or writings by authors in communities originating in the historical movement of peoples, largely through Trans-Atlantic slavery, from Africa throughout the world. (Restricted to majors and minors in English and IAS only.) (Prerequisite: Semester Four standing, and three 2000-level English courses; or permission of instructor.) (May be repeated for credit if the topics are different.)

**ENGL-3330. Indigenous Literature of Turtle Island**
A study of the literatures of the Indigenous Peoples of Turtle Island from the oral tradition to the written word to contemporary media. Topics may include Earth connections, role of women, humour, song lyrics, drama, Indigenous film. (Restricted to majors and minors in English and IAS only.) (Prerequisite: Semester Four standing, and three 2000-level English courses.) (May be repeated for credit if the topics are different.) (Credit cannot be obtained for both ENGL-3330 and ENGL-3589)

**ENGL-3410. Rhetoric**
A study in rhetoric, with emphasis on historical and/or contemporary aspects of the field. Topics may include emotion and rhetoric, the rhetoric of science, visual rhetorics, the rhetoric of social media, rhetoric and contemporary society. (Restricted to majors and minors in English and IAS only.) (May be repeated for credit if the topics are different.) (Prerequisite: Semester Four standing, and three 2000-level English courses.)

**ENGL-3420. Literature and Language**
A study of how language and literature intersect with particular emphasis on language theory. Topics may include stylistics, dialogism, aspects of cognition, speech, and narration. (Restricted to majors and minors in English and IAS only.) (May be repeated for credit if the topics are different.) (Prerequisite: Semester four standing, and three 2000-level English courses.)

**ENGL-3710. Creative Writing II**
An intermediate workshop focusing on a genre, topic, approach, or trope, involving analysis of published texts and peer review of student writing. (Requires portfolio application.) (May be repeated for credit if the topics are different.) (Not available on an Audit basis.) (Prerequisite: Semester Three standing.) (Credit cannot be obtained for both ENGL-3710 and ENGL-3002 unless topic is different.)

**ENGL-4000. Honours Seminar**
A seminar focused on a specific topic in literary, cultural, language, or rhetoric studies. (Restricted to majors in English and IAS only.) (Prerequisite: Semester Five standing and three 3000-level English courses.) (May be repeated for credit if the topics are different.) (Credit cannot be obtained for both ENGL-4000 and ENGL-4119, ENGL-4129, ENGL-4139, ENGL-4149, ENGL-4159, ENGL-4169, ENGL-4179, ENGL-4189, ENGL-4199, ENGL-4209 or ENGL-4249 unless topic is different.)

**ENGL-4001. Scholarship and Bibliography**
A workshop in implementing methods of literary research and textual scholarship, including research techniques and bibliographic description, the study of editing procedures, and the examination of the historical and theoretical contexts of textual production. (Restricted to majors in English and IAS only.) (Prerequisite: Semester Five standing, and three 3000-level English courses.) (Not available on an Audit basis.) (Credit cannot be obtained for both ENGL-4001 and ENGL-3099.)

**ENGL-4002. Writing Practicum**
A project-based workshop course focused on both individual writing and collaborative projects geared towards the wider community (such as the Windsor non- profit sector and its clients). Topics may include writing for the non-profit sector, writing for radio, writing for start-ups, writing about music. (Restricted to majors in English and IAS only.) (Prerequisite: Semester Five standing, three 3000-level English courses.) (Not available on an Audit basis.) (May be repeated for credit if the topics are different.) (Credit cannot be obtained for both ENGL-4002 and ENGL-3979 or ENGL-3410.)

**ENGL-4003. Editing Practicum**
A workshop in the theory and practice of editing historical, scholarly, and creative texts for publication. Students will assist in current editorial projects of a publishing house or the Department. (Permission of the instructor required.) (Restricted to majors in English and IAS only.) (Not available on an Audit basis.) (Prerequisite: Semester Five standing, and three 3000-level English courses.) (Credit cannot be obtained for both ENGL-4003 and ENGL-3059.)

**ENGL-4004. Publishing Practicum**
A workshop in the theory and practice of book production starting with an edited manuscript and ending with the creation of a bound publication. Completed projects will be published through a professional Press, or in the format of a scholarly journal. (Permission of instructor required.) (Restricted to majors in English and IAS only.) (Not available on an Audit basis.) (Prerequisite: Semester Five standing, and three 3000-level English courses.) (Credit cannot be obtained for both ENGL-4004 and ENGL-3069.)

**ENGL-4005. Digital Journalism and Storytelling**
A workshop in writing across mainstream and alternative digital and social media. Students will develop strategies for conducting effective interviews, discover new approaches to packaging stories with available contemporary elements, find target audiences, develop their skills using digital communications tools, and identify the best social media platforms to deliver their stories. (Restricted to majors in English and IAS only.) (Not available on an Audit basis.) (Prerequisite: Semester Five standing, and three 3000-level English courses.) (Credit cannot be obtained for both ENGL-4005 and ENGL-3079.)

**ENGL-4710. Creative Writing III**
An advanced workshop that includes analyzing published texts and the peer review of student writing. (Requires portfolio application.) (Not available on an Audit basis.) (A 6.0-credit, two-term course.) (Credit cannot be obtained for both ENGL-4710 and ENGL-4710.) (Prerequisite: Semester Five standing, and three 3000-level English courses.)

**ENGL-4900. Directed Readings**
Students may, under exceptional circumstances, apply to undertake a Directed Reading after obtaining the support of an appropriate departmental supervisor. Candidates must then seek approval via written proposal justifying the need for the course. Proposals will be reviewed and approved or denied by the Department Head. (Not available on an Audit basis.) (Permission of instructor required.)

# HISTORY

## PROGRAM REGULATIONS

The major areas of concentration include Canadian, American, British, European, and Women's History. Courses are also offered which are designed to provide insight into current national or international issues. Additional offerings which have relevance to contemporary Canadian society include the History of Crime and Cities in North America. Students taking History as an option may select courses through the 3000 level. Permission for 4000-level courses is necessary unless these are required in an existing program.

**General Information**
The study of history provides skills essential to many careers - in teaching, law, business, museums, journalism, or public service. It develops critical thinking, research, and writing skills, using both old and new technologies, in a small department with ready access to professors. History is also fascinating in itself, offering a window on various groups and perspectives that shaped the past, both in Canada and comparatively across the globe. Finally, studying the societies, politics, and ideas of past times sharpens the historical memory we can bring to issues of the present, informing and inspiring an active citizenship.

**Course Outside of the Department Which May Be Counted Toward History Requirements**
Up to four of the following courses may be used to satisfy the Major requirements for any history degree: GRHS-2100, GRHS-2101, GRHS-2200, GRHS-2201, DRAM-1300, DRAM-2300, CMAF-2400, CMAF-2410, KINE-2400. (Please note, instructor's permission may be required.) No more than one of this list may be used to satisfy the requirements for a Minor in History.

## PROGRAMS

### BA General History

**Degree Requirements**

Total courses: thirty.

(a) HIST-1030, HIST-2030;
(b) 7 more History courses at the 1000 or 2000 Level, up to 2 of which may be 1000 Level;
(c) 3 more History courses at the 3000 Level or higher.*
(d) two courses from Arts;
(e) two courses from Languages, Science, or one of each;
(f) two courses from any area of study, excluding Social Sciences.
(g) GART-1500, GART-1510;
(h) four courses from any area of study, including History, but of which only one may be an additional 1000-level History course;
(i)six courses from any area of study, excluding History.

*Up to four of the following courses may be used to satisfy the requirements under (b) and (c): GRHS-2100, GRHS-2101, GRHS-2200, GRHS-2201, DRAM-1300, DRAM-2300, CMAF-2400, CMAF-2410, KINE-2400. (Please note, instructor's permission may be required.) No more than one of this list may be used to satisfy the requirements for a Minor in History.

Courses used to calculate the major average are: courses listed under requirements (a) to (c), and any courses taken in the major area(s) of study.

## BA Honours History

**Degree Requirements**

Total courses: forty.

(a) HIST-1030, HIST-2030, and HIST-3030;
(b) 8 more History courses at the 1000 or 2000 Level, up to 3 of which may be 1000 Level, and including at least one of HIST-1130, HIST-1140, HIST-2010, HIST-2070, HIST-2460, HIST-2490, and at least one of HIST-2100, HIST-2110, HIST-2120, HIST-2200, HIST-3100, HIST-3200, HIST-3210; *
(c) 7 more History courses at the 3000 Level or higher, at least three of which must be at the 4000 Level.*
(d) two courses from Arts;
(e) two courses from Languages, Science, or one of each
(f) two courses from any area of study, excluding Social Sciences.
(g) GART-1500, GART-1510;
(h) six courses from any area of study, including History;
(i) eight courses from any area of study, excluding History.

*Up to four of the following courses may be used to satisfy the requirements under (b) and (c): GRHS-2100, GRHS-2101, GRHS-2200, GRHS-2201, DRAM-1300, DRAM-2300, CMAF-2400, CMAF-2410, KINE-2400. (Please note, instructor's permission may be required)
No more than one of this list may be used to satisfy the requirements for a Minor in History.

Courses used to calculate the major average are: courses listed under requirements (a) to (c), and any courses taken in the major area(s) of study.

## Combined BA Honours History Programs

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements in the order presented, to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a) HIST-1030, HIST-2030, and HIST-3030;

(b) 7 more History courses at the 1000 or 2000 Level, up to 3 of which may be 1000 Level, and including at least one of the following: HIST-1130, HIST-1140, HIST-2010, HIST-2070, HIST-2460, HIST-2490, and at least one of HIST-2100, HIST-2110, HIST-2120, HIST-2200, HIST-3100, HIST-3200, HIST-3210; *
(c) 6 more History courses at the 3000 Level or higher, at least three of which must be at the 4000 Level
(d) Course requirements -Other Subject: as prescribed by that area of study.
(e) GART-1500, GART-1510;
(f) two courses from Arts;
(g) two courses from Languages, Science, or one of each
(h) two courses from any area of study, excluding Social Sciences.
(i) additional courses from any area of study to a total of forty courses.

*Up to four of the following courses may be used to satisfy the requirements under (b) and (c) : GRHS-2100, GRHS-2101, GRHS-2200, GRHS-2201, DRAM-1300, DRAM-2300, CMAF-2400, CMAF-2410, KINE-2400. (Please note, instructor's permission may be required.) No more than one of this list may be used to satisfy the requirements for a Minor in History. Fourth year courses are restricted to History Majors and other students with at least semester 5 standing and permission of the instructor.

Courses used to calculate the major average are: courses listed under requirements (a) to (d), and any courses taken in the major area(s) of study.

## Concurrent General Bachelor of Arts (History)/Bachelor of Education

Direct admissions from high school only.

This is a joint offering between Department of History and the Faculty of Education. See Faculty of Education for program requirements.

## Minor in History

Required: six History courses, only one of which may be at the 1000 level, and two of which must be at the 3000 level or above. Students seeking a second teachable subject area in History are advised that they must take two courses in Canadian History.

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - History

Major Concentration: HIST-1030 and HIST-2030; five 2000-level three 3000-level and two 4000-level courses.

Minor Concentration: one of HIST-1130, HIST-1140, or HIST-1240, two 2000-level courses, three 3000-level or above courses.

# HISTORY COURSES

Not all courses listed will necessarily be offered each year. All courses are three hours a week (3.00 credit hours).

Some courses are labeled I and II. These numbers are meant to distinguish the subject matter. Except where specifically indicated, this does not imply the order in which the courses must be taken.

**HIST-1030. Past to Present: Understanding History**
This course is specifically designed for first semester history majors, to introduce them to the history department, different kinds of historical inquiry, and the basics of historical research. Further, it is designed to create a cohort of the new history majors, both through participating in this class together and by working in small groups.

**HIST-1130. Europe Encounters the World: Facing Islam, 8th-15th Century**
This course looks at the different forms of contact between Europeans and the rest of the world during the Middle Ages, focusing on conflict and coexistence with Islam. It will consider exchanges between civilizations, whether of an economic, cultural, artistic or spiritual nature. Topics include Muslim Spain, the Crusades, the Ottoman Empire and Venice.

**HIST-1140. Europe Encounters the World: The Age of Discovery, 15th-18th Century**
This course looks at the different forms of contact between Europeans and the rest of the world during their first period of imperial expansion (15th-18th Century). Special attention will be paid to the discovery, conquest and settlement of India, Asia, and the Americas, as well as the relationship of Europeans with native populations of these continents.

**HIST-1230. The World in the Twentieth Century, 1914-1945**
An overview of the major events and movements during the first half of the 'short' twentieth century. The course will broadly explore the world-wide impact of the world wars, communism, fascism, colonialism, the Great Depression, etc. The geographical focus of the material will vary with the instructor.(3 lecture hours or 2 lecture hours, 1 tutorial hour a week.)

**HIST-1240. The World in the Twentieth Century, 1945-Present**
An overview of the major events and movements during the second half of the 'short' twentieth century. The course will broadly explore the world-wide impact of the Cold War, communism, decolonization, globalization, terrorism, etc. The geographical focus of the material will vary with the instructor. (3 lecture hours or 2 lecture hours, 1 tutorial hour a week.)

**HIST-1970. Selected Topics**
Topics of current interest in history which may vary from year to year. (May be repeated for credit if content changes.)

**HIST-2010. Early Modern Europe**
A survey of Europe from the Age of Discovery to the French Revolution. Areas of study will include the formation of a world economy, the industrial revolution, the rise of the nation state, popular culture, the Catholic and Protestant Reformations, the printing revolution, the Renaissance, the scientific revolution, and the Enlightenment. (3 lecture hours a week.)

**HIST-2020. Modern Europe**
A survey of Europe from the French Revolution to the present. Areas of study may include political ideologies, revolution, imperialism, world war, cold war, and European union. (3 lecture hours a week.)

**HIST-2030. Making History: Methods and Practices**

This course builds on historical skills and knowledge of the discipline introduced in HIST-1030. It emphasizes skills in research, assessing evidence, analyzing primary sources, bibliographic skills, and others tools needed for writing history papers. It will also introduce students to public history, digital history, and the ethics of research. At a larger level, it helps students think critically about the past and to recognize the way historians interpret the past and use evidence. (Pre-requisite: HIST-1030 or consent of instructor) (Anti-requisite: HIST 2030)

**HIST-2070. Early Modern England, 1485-1714**
A survey of England's transition from a medieval realm to a modern state. Areas of study may include relations with Scotland, Ireland and Europe, as well as dynastic, religious, and constitutional change. (3 lecture hours or 2 lecture hours/1 tutorial hour a week.)

**HIST-2080. Modern Britain, 1714 - Present**
A survey of Britain's experience of industrialism, imperialism and post-colonialism. Areas of study may include political and social reform, the world wars, the welfare state, and the European Union. (3 lecture hours or 2 lecture hours/1 tutorial hour a week.)

**HIST-2100. Islamic History: Formative Period 600-1000**
This is a survey course that examines the development of a distinctive Islamic civilization over the course of four centuries in southern Europe, North Africa, the Middle East, and portions of Central Asia. The lectures will emphasize the following themes: 1) the formation of Islamic civilization as a long-term and gradual process engaged in by the conquering Arab Muslims and their conquered subjects; 2)the diversity of expressions of Islamic culture and religious practices; and 3) the important role played by historical memory in the formation of Islamic culture.

**HIST-2110. Islamic History: Consolidation, Expansion and Empire 1000 - 1800**
This is a survey course that explores the middle and early modern periods of Islamic history from 1000 to 1800 C.E. The middle period was one of continuing change and innovation as new political and religious institutions were developed. Throughout this period, the influence of Islamic civilization continued to expand to new regions including sub-Saharan Africa, Central Asia, and Southeast Asia. From 1500-1800 C.E. Muslims founded the Ottoman, Safavid, and Mughal empires. The subjects of these empires adopted new technologies and new patterns of trade as participants in the developing new world economy. The close of the course will be devoted to considering growing European dominance over these empires over the course of the 18th century, and the military and reforming modernizing schemes adopted by Muslims in response. (3 lecture hours per week.)

**HIST-2120. Modern Islamic History 1800-Present: The Rise of Secular Nationalism and Political Islam**
This survey course explores the history of the modern Islamic World. The dissolution of early modern empires led to a loss of sovereignty for most Muslims. The very serious challenges of colonialism, Zionism, war and civil war, and the impact of the oil economy were part of the Islamic world's encounter with modernity. So was the activism in the public and private spheres with which these challenges were met including the adoption of civil law codes, the creation of new national identities, Islamic reform movements and debates about gender and the role of women driven by intellectuals and elites. The final weeks of the course will address the tumultuous twenty-first century in the region, the Arab Spring and Political Islam in its various forms. (3 lecture hours per week.)

**HIST-2180. War in the 20th Century**
An overview of the evolution of military conflict during the last one hundred years. In addition to traditional military history, this course will introduce many facets of the New Military History, such as

the social history of soldiers, life on the homefront, gender and war, etc. (3 lecture hours, or 2 lecture hours and 1 tutorial hour per week.)

**HIST-2200. History of Africa, 700-1800**
This course is an overview of the major historical shifts in Africa during the pre-modern period (700-1800 AD). Its purpose is to introduce the student to Africa and the Africans: the space and its occupants. Main topics include climatic and linguistic maps, major networks of trade and communication, the cultivation of the `Semitic' heritage (Christianity and Islam) and its impact on African experiences and relations with the rest of the world.

**HIST-2300. History of Documentary Film**
A survey of the history of documentary film, from the development of moving pictures in the late 19th to the present, with emphasis on the economic, social, and political context in the development of the documentary film genre, and the emergence of documentary filmmaking in all parts of the world. An introduction to major documentary films, and to the main stylistic schools that have defined the genre. (Prerequisite: At least semester 3 standing.)

**HIST-2430. Canada from Early European Contacts to the Origins of Confederation, 1600-1867**
An overview covering Aboriginal societies, European colonialism, and the emergence of the Canadian federation. Areas may include native-newcomer relations, colonial culture and society, imperial conflict, and the origins of confederation. (3 lecture hours or 2 lecture hours, 1 tutorial hour a week.)

**HIST-2440. Canada since Confederation, 1867 to the Present**
An overview of the development of the Canadian federation. Areas may include competing visions of the Canadian "nation", relations with Aboriginal peoples, industrialization and social change, and shifts in politics and political culture. (3 lecture hours or 2 lecture hours, 1 tutorial hour a week.)

**HIST-2460. Aboriginal Peoples in Canadian History: Beginnings to Mid-Nineteenth Century**
Aboriginal peoples and their impact on the history of Canada. Areas will include an overview of aboriginal nations, and the changing dynamics of the relationship between the first peoples and Europeans. (2 lecture, 1 lab hour per week.)

**HIST-2470. Aboriginal Peoples in Canadian History: Mid-Nineteenth Century to the Present**
Aboriginal peoples and their impact on the history of Canada since 1850. Areas will include relations with the state, cultural, land and resource issues, and politics and protest movements.
(2 lecture, 1 lab hour per week.)

**HIST-2490. Women in Canada and the United States, 1600-1870**
A social history from the period of Native-European contact to the mid-nineteenth century. Work, family and sexuality, cultural ideals, and political status and activism among women of Native, African, and European origins will be examined. (3 lecture hours or 2 lecture hours, 1 tutorial hour a week.)

**HIST-2500. Women in Canada and the United States, 1870-Present**
A social history from the mid-nineteenth century to the present. Native, black, immigrant, and native-born white women's roles in paid and household labour, family and cultural life, and reform movements will be examined. (3 lecture hours or 2 lecture hours, 1 tutorial hour a week.)

**HIST-2510. History of Women's Movements in North America**
An exploration of the collective action of women in the past and present in North America. Areas of study may include women's involvement with the temperance, civil rights, suffrage, trade union,

environmental, reproductive rights, and women's liberation movements. (Also offered as Women's and Gender Studies WGST-2510.) (3 lecture hours or 2 lecture hours, 1 tutorial hour a week.)

**HIST-2610. History of America, 1600-1877**
The social, economic, and political history of the British North American colonies and the United States. Areas may include Native-European contact and conflict, the growth of the British Empire, slavery, the American Revolution, industrialization, reform movements, and the Civil War and Reconstruction. (3 lecture hours or 2 lecture hours, 1 tutorial hour a week.)

**HIST-2620. History of America, 1877 to the Present**
The social, economic, and political history of the United States since Reconstruction. Topics may include urbanization and immigration, Progressive reform, women's suffrage, the Great Depression, the World Wars, McCarthyism, civil rights and women's liberation, the Vietnam War, and the end of the Cold War. (3 lecture hours or 2 lecture hours, 1 tutorial hour a week.)

**HIST-2720. Modern Latin America**
Nation-states in Spanish America, Brazil and the Caribbean, from the revolutions of independence to the present. Covers patterns of political and economic development shared throughout the continent. Country and thematic focus may vary from year to year, and may include the Haitian, Mexican, and Cuban revolutions, modern military dictatorships, resources and the environment, and gender and ethnic relations.

**HIST-2870. History of Crime**
Examines the ways in which crime and criminal justice were shaped by the societies in which they occurred and the ways in which they changed as these societies changed.

**HIST-2970. Selected Topics in History**
Topics of current interest, which may vary from year to year. (May be repeated for credit with consent of an advisor in History.)

**HIST-3020. History Workshop**
A series of modules that gives students first-hand experience in carrying out historical research and exposes them to sources for doing so. Activities may include visiting an archive and cataloguing sources, designing an historical web page, using computers for quantitative research, creating videos

**HIST-3030. Schools of Historical Thought**
This course is specifically designed to introduce third year history students to a case study in historiography. Each time it is taught, the instructor's specialization will be the theme, and he or she will outline the various historiographical approaches to that theme.

**HIST-3100. Gender in Islamic History**
This course is a historical study of gender in Islamic History, with special emphasis given to the modern Middle East and Afghanistan. We will examine the role of gender systems at different times and places in Islamic history through primary sources. Some themes of the course may be 1) the ways in which discourses of gender were constructed in ways usually disadvantageous to women. Though careful attention must be paid to important differences in time and place; 2) The relationship of gender systems to other hierarchical social structures such as class, ethnicity and age; 3) women and mens' roles in preserving and constructing the gender systems of their society; and 4) the ways in which women and men were able to exercise agency in overcoming or transcending limitations of the dominant discourses on gender.

**HIST-3160. The European Renaissance**
A study of European intellectual, cultural and artistic life from the 14th to the 16th century. Centered around the notions of Humanism and the revival of Greco-Roman Antiquity, special attention will be given to Italy and the Germano-Flemish lands, but areas of study will also include Spain, France, Eastern Europe, and the Ottoman empire.

**HIST-3200. Africa and the Atlantic System**
This course explores the nature and terms of West Africa's interaction with the Atlantic commercial system that materialized after European colonization of the Americas. It revolves around the birth, growth and demise of the Trans-Atlantic Slave Trade (1600s-1800s). The major themes cover the rationale and mechanics of this slave trade, and its impact on the African side of the Atlantic system. Students will be introduced to the general parameters of academic discourses on the Transatlantic Slave Trade and its legacy. (Prerequisite: Semester 4 standing or Permission of instructor.)

**HIST-3210. Colonialism in Africa, 1830s-1960s**
This course explores the imposition and liquidation of European colonialism in Africa. It focuses on the political, economic, and cultural forces behind colonialism, and the attitudes of its agents. Emphasis will be placed on highlighting the major similarities and differences between European colonial power structures and African resistance to, adaptation to and adoption of those structures. (Prerequisites: HIST-2200 or semester 4 standing.)

**HIST-3340. Love, Honour, and Obey: Marriage and Gender**
Romantic heterosexual love shapes contemporary notions of marriage for both straight and gay women. But marriage is about much more than love. It shapes women's lives and organizes relations between women and men. This course examines the interpersonal, economic, social, cultural, and legal aspects of marriage past and present, primarily in North America. (Also offered as History WGST-3340.) (Prerequisite: One Women's and Gender Studies course or HIST-2510 or permission of the instructor.)

**HIST-3360. Becoming Visible: Women in European History**
An introduction to women's status, roles and significance in European history, with emphasis on feminist ideologies and women's movements from the eighteenth- through the mid-twentieth centuries. The geographic focus may vary from year to year.

**HIST-3400. Women, War and Peace**
This course examines the various and distinct ways in which women experience war and peace, in both historical and contemporary contexts. Topics include home fronts during wartime in both combat and non-combat zones, women's peace activism, displacement, war crimes against women, women in combat, and media coverage of women and war/peace across the 20th and 21st centuries. (Also offered as Women's and Gender Studies WGST-3400.) (Prerequisite: one 2000-level Women's and Gender Studies or History course or POLS-2600 or consent of the instructor.)

**HIST 3480. Borderlands: Canada-United States Relations since 1783**
This course examines the relations between British North America/Canada and the United States from the end of the American Revolution (1776-1783) until today. It looks at the multiple ways that both the people and the federal government from each side of the border interacted with their counterparts. It discusses several topics, including Indigenous peoples and Euro-American borders, colonial wars, diplomatic relations, transnational economies, cultural influences, borderland communities, and cross-border migrations. (Prerequisties: At least semester 5 standing.)

**HIST-3490. Canadian Labour History**
The development of the Canadian labour movement and the working-class experience from the nineteenth century to the present. (Also offered as Labour Studies WORK-3490.) (Prerequisites: semester 4 standing. Labour Studies majors must have Semester 4 or above standing or consent of instructor.)

**HIST-3610. Slavery In North America, 1600-1877**
The history of racial slavery, including both Amerindians and Africans, the emergence of the concept of "race", male and female experiences, resistance to slavery, British abolition, Civil War, and Reconstruction. The Canadian and U.S. experiences will be compared.

**HIST-3620. African Americans/Canadians After Emancipation, 1877 to the Present**
The history of racial discrimination, violence, and segregation, struggles for political rights, labour, migration and immigration, and the cultural activity of people of African descent in the U.S. and Canada from the end of American slavery to the present. Women's and men's lives will be treated equally. (Prerequisite: semester 4 standing.)

**HIST-3630.American History, 1945 to the Present**
Selected themes in the political and social history of the United States from the end of World War II to the present. (Prerequisite: HIST-2620 or consent of instructor.)

**HIST-3680. North American Popular Culture**
An investigation of North American popular culture from the nineteenth century to the present. Topics of study may include sports and masculinity, youth culture, media representations of women, "the Sixties," the impact of cinema and television, and popular music. (Prerequisite: One of HIST-2440, HIST-2620, or HIST-3630 or consent of the Instructor.)

**HIST-3800. History on the Web**
This course will explore the various ways in which history is currently being learned, studied, researched, created, manipulated, and enjoyed on the internet today. Students will both interrogate and analyze these various uses, as well as participate in each approach to history on the web, including creation. (Prerequisite: Semester 5 standing or above.)

**HIST-3820. Storytelling and Design in Public History**
A project-based course in which students do historical research as the basis for non-fiction storytelling and design, with an emphasis on practical approaches to creating monuments, documentary films, podcasts, websites, museum shows, and corporate and community heritage sites. Students develop typical public history projects based on an analysis of existing examples, combining research, storyboarding and design in a workshop environment. (Prerequisite: Semester 5 standing or above.)

**HIST-3970. Selected Topics in History**
Topics of current interest which may vary from year to year. (May be repeated for credit with consent of an advisor in History.)

**History courses at the 400 level are restricted to History majors and to third- and fourth-year majors in other programs with a History component. Others may register only with the consent of the instructor.**

**HIST-4030. Medicine, Healing and the Health Professions**

A social history of medicine, including non-Western and unorthodox traditions, with a cross cultural focus on healers and an emphasis on the evolution of the allied health professions. Topics may include the consolidation of biomedicine, women and indigenous healers, the modern hospital, and the patient's perspective. (Prerequisite: Semester 7 standing or permission of instructor.)

**HIST-4080. Culture and Society in Victorian Britain**
A thematic approach to Victorian studies. Areas may include labour and leisure, science and religion, history and memory, gender and sexuality, class and national identity, literature and education. (Prerequisite: Restricted to History majors and other students with at least semester 5 standing and permission of the instructor.)

**HIST-4110. The Life and Legacy of Muhammad**
This course is designed to introduce students to four strands of thought in the history of constructing the life and legacy of the prophet Muhammad. These are 1) the traditional Muslim account of his life, 2) a variety of approaches to the topic by modern social scientists, 3) traditional delegitimizing of Muhammad in historic Western European polemics and their modern equivalents, 4) the role that Muhammad plays in the beliefs and practices of modern Muslims. (Semester 5 standing or above.)

**HIST-4200. Religion and Politics in Modern Africa**
This course deals with the intersection between religion and politics in Africa. The main focus of the course is on the role of religion in territorial expansion and political centralization. Comparable examples of the deployment of `providential truth' to legitimize the conquest of space, control of its resources and the management of its occupants in different geographical settings will be introduced, and how it shaped African interactions with Asians or Europeans with comparable ideas about providential truth. (Prerequisite: Semester 5 standing or Consent of Instructor.)

**HIST-4210. State of Apartheid: South Africa (1900s-1990s)**
This course introduces students to the cumulative South African historical experience known as Segregation (1910-1948) and Apartheid (1948-1994). Students will explore how "race" became a determinant of where one could live, what one could do for a living, for 'how much', and even who one could marry. To emphasize the casual relation between power relations and the production of knowledge, the readings assigned for this course are, mostly, produced by South African literati with first-hand experience of Segregation and/or Apartheid. (Prerequisites: HIST-2200 or HIST-3210, and Semester 6 standing and/or permission of instructor.)

**HIST-4350. The Early Modern Atlantic World**
This course looks at the foundation, development and interaction of the different European empires (Portuguese, Spanish, French, Dutch, British) in the Americas and Africa from the 15th to the 18th century. Topics include encounters with Africans and the native peoples of the Americas, cross-cultural exchanges, circulation of peoples, ideas, and commodities, migration, missions, conversion, and slavery.

**HIST-4450.Politics and Society in Industrializing Canada, 1890s-1930s**
The impact of modernity on politics and the Canadian state. Topics may include political culture and ideology, political and social movements, and the beginning of state intervention in society. (Prerequisite: Restricted to History majors and other students with at least semester 5 standing and permission of instructor.)

**HIST-4460.The Making of Post-War Canada**
The changing relationship between the state and society during and after the Second World War. Topics may include the politics of post-war planning, the welfare state, nationalism, and political and

social protest movements. (Prerequisite: Restricted to History majors and other students with at least semester 5 standing and permission of instructor.)

**HIST-4580.Early American History, 1600-1800**
Selected themes in the political and social history of early America, which may include European and Native American contacts, the political and social development of the American colonies, slavery, war and society, the changing status of women, and the American Revolution and its aftermath.(Restricted to History majors and other students with at least semester 5 standing and permission of the instructor.)

**HIST-4600. British North America and the United States of America, 1776-1867**
This course examines the history of British North America from the Declaration of Independence of the United States in 1776 to the Confederation of Canada in 1867. Specifically, it examines the interactions between the various colonies that made up British North America (Cape Breton, Nova Scotia, New Brunswick, Newfoundland, Lower Canada, Upper Canada, British Columbia, and Vancouver Island) and the northern United States. Using a continental approach to Canada's history in the eighteenth and nineteenth centuries, this course focuses on these cross-border links. It addresses many topics, including colonial wars, political loyalties and cultural identities, migration, trade, diplomacy, American perceptions of British North America and its residents, and the transnational origins of Canadian Confederation.

**HIST-4620. United States-Latin American Relations in the 20th Century**
The rise and shaping of U.S. power in the hemisphere, with emphasis on Latin American responses. Topics may include military intervention and anti-imperialist movements, cultural and other non-governmental exchanges, and the evolution of inter-American trade. (Prerequisite: Restricted to History majors and other students with at least semester 5 standing and permission of the instructor.)

**HIST-4630. History of Gender and Sexuality**
This course explores major themes in the history of gender and sexuality. These may include reproduction, contraception, and abortion; gender, race, and power; sexuality and the state; heterosexual relations and marriage; gay, lesbian, and transgender identities. Time period and geographical region will vary with the instructor.)(Prerequisite: Semester 5 or above standing and one of HIST-2490, HIST-2500, or HIST-2510/WGST-2510 or permission of the instructor.)(Also offered as Women's and Gender Studies WGST-4630.)

**HIST-4660. History in the Movies**
This course treats films as historical documents through which to lens broader social and cultural phenomena. Distinct from film history, that is the study of the history of cinema, the course pairs more "traditional" historical research materials, such as academic historical writing and primary documentation, to what became the dominant cultural medium of the 20th century. Films function as both historical artefacts (objects implicitly capturing moments in time) and as historical narratives (mediums explicitly disseminating points of view relevant to the time of production). Engaging with them at both levels, students will be expected to examine the experiences, values, politics, and social identities within a particular period (such as 1970s America) or as related to a specific historical theme (gender, for example) as a means of better understanding the history of the subject. (The topic will vary with the instructor and may be re-taken by permission of History's undergraduate coordinator.)

**HIST-4700. The Era of the Great War**
This course will explore the political, military, cultural and social history of the First World War and surrounding period, primarily in Germany, France, and Britain, but including some attention to Eastern

Europe, Africa and Asia. The course will address the historiography of the Great War, with a focus on the experience of the war for soldiers, for women on the home front, for artists, and for those under occupation. (Prerequisites: Restricted to History majors with at least semester 5 standing; and restricted to other students with at least semester 5 standing and permission of instructor.)

**HIST-4800. Public History**
This course explores the theory and practices of Public History, including the ways in which History is communicated to the wider public by museums, cultural institutions, heritage sites, archives, film, social media, advertising, and national parks. Topics may include approaches to digital history, curating, digitizing archival documents, and exhibit design and presentation. (Prerequisite: Semester 5 standing or above.)

**HIST-4810. Public History Practicum**
This practicum provides students in the History program with the opportunity to apply learned concepts and theory to a practical setting and become further familiarized with an area of interest in Public History. Students will be placed in organizations in the Windsor-Essex and Chatham-Kent regions related to their area of interest in Public History (e.g., museums, historical societies, heritage sites, etc.), and will be expected to dedicate a total of 100 hours to both in-class and on-line learning, and practicum components of the course. The course is open to History majors only. (Prerequisites: HIST-4800 and minimum average in History courses of 75% or permission of instructor).

**HIST-4820. Making Historical Documentaries**
A project-based, seminar-workshop on issues and problems specific to the historical documentary genre in which students research, write and make a short historical documentary film (or video). Study of methods and practices for incorporating historical elements into documentary, and analysis of traditional and experimental historical documentary practices. Student work will be developed through presentation in a workshop environment. (Prerequisite: Semester 5 standing).

**HIST-4830. Local History and Research Methods**
This seminar-based course introduces students to the history of southwestern Ontario and metro Detroit from the pre-colonial era to the twentieth century. It addresses many topics, including pre-colonial Indigenous history, the founding of Detroit and the local French presence, political regime changes in the eighteenth century and the creation of the border, Indigenous treaties and settler-Indigenous relations, the War of 1812, slavery and the Underground Railroad, industrialization/ urbanization and environmental history, cross-border economic and cultural ties, transportation, African Americans in Detroit, immigration, and collective memories.

**HIST-4970. Selected Topics in History**
Topics of current interest which may vary from year to year. (May be repeated for credit with permission of a program advisor.) (May be repeated for credit with consent of an advisor in History.) (Prerequisite: Restricted to History majors and other students with at least semester 5 standing and permission of the instructor.)

**HIST-4990. Research Capstone Thesis**
Students will receive training in the methods and skills of advanced historical research, ultimately composing an undergraduate research thesis based on their own original research in the subject area of the course as offered. In the first term of this two-term course, they will identify a practical research topic, perform a review of relevant scholarly literature, and produce a research proposal outlining the topic and identifying a body of relevant research materials, either in manuscript form or available digital

archives. In the second term, students will implement the research proposal, spending much of the term engaged in original research. Having collected the relevant research materials, they will write, edit, and revise their final research thesis, the cumulative exercise of the course. The course's specific theme or region/time-period will vary with the instructor. (Pre-requisite: At least Semester 6 standing, and 75% average in History courses or permission of instructor.)

# LANGUAGES, LITERATURES AND CULTURES/LANGUES, LITTÉRATURES ET CULTURES (LLC)

## PROGRAM REGULATIONS

Greek and Roman Studies are devoted to the examination, analysis, and understanding of the languages, literature's, and history of the ancient Near East, Greece and Rome, and to an exploration of their cultural and linguistic legacies to modern society.

The Modern Languages program is devoted to the study and analysis of world languages in the context of their literary and cultural traditions. In addition to providing the opportunity to learn a new language and explore another culture, the Modern Languages Program focuses on Second Language Education, which explores the process through which a second language is learned. Such knowledge enables our students to become more effective language students and language teachers.

French Studies: The French language is an essential part of Canada's culture, not only for those who become teachers or translators, but also for those who enter the legal profession, the federal or provincial civil service, social work, business, or industry - in short, all walks of life.

Options in French Studies: Students wishing to take French as an option are free to select any course provided that they have demonstrated a sufficient command of the language, and/or sufficient preparation in literary studies.

Not all courses listed will be offered in each term. The programs reserve the right to limit enrolment in language courses and to place students in courses deemed appropriate to their level of language competence.

Native speakers must consult a program advisor for placement. All majors should plan their programs in consultation with an advisor.

# PROGRAMS

## GREEK AND ROMAN STUDIES

## Honours Greek and Roman Studies (Greek or Latin Option)

**Degree Requirements**

Total courses: forty.

(a) twenty courses, consisting of four Greek (GREK-) or Latin (LATN-) Language and Literature courses; plus GRST-1100 and GRST-1200; plus fourteen additional Greek and Roman Studies (GRST-), Greek and Roman History (GRHS-), Greek Language and Literature (GREK-), or Latin Language and Literature (LATN-) or the Ancient Greek Philosophy course PHIL-2730, including at least one in each of the following four areas:
(i) Art and Archaeology: GRST-2120, GRST-2220, GRST-4020;
(ii) Greek and Roman History: GRHS-2100, GRHS-2101, GRHS-2200, GRHS-2201, GRHS-3000;
(iii) Literature: GRST-2110, GRST-2111, GRST-2210, GRST-2211, GRST-3010;
(iv) Mythology and Religion: GRST-3130, GRST-3230.
(b) two courses from Social Sciences;
(c) two courses from Arts or Science;
(d) two courses from any area of study, excluding Arts.
(e) GART-1500, GART-1510;
(f) four other courses from Arts, Languages, Social Sciences, or Science, including Greek and Roman Studies (GRST-), Greek and Roman History (GRHS-), Greek Language and Literature (GREK-), and Latin Language and Literature (LATN-);
(g) eight courses from any area of study, excluding Greek and Roman Studies (GRST-), Greek and Roman History (GRHS-), Greek Language and Literature (GREK-), and Latin Language and Literature (LATN-).

Courses used to calculate the major average are: courses listed under requirement (a) and any courses taken in the major area(s) of study.

## Combined Honours Greek and Roman Studies

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a) GRST-1100 and GRST-1200 plus fourteen other courses in Greek and Roman Studies (GRST-), Greek and Roman History (GRHS-), Greek (GREK-) or Latin (LATN-) Language and Literature, or the Ancient Greek Philosophy course PHIL-2730 plus four of GREK-1100, GREK-1101, GREK-2100, GREK-2101, GREK-4000, LATN-1200, LATN-1201, LATN-2200, LATN-2201 or LATN-4200; and at least one course in each of the following four areas:
(i) Art and Archaeology: GRST-2120, GRST-2220, GRST-4020;
(ii) Greek and Roman History: GRHS-2100, GRHS-2101, GRHS-2200, GRHS-2201, GRHS-3000;
(iii) Literature: GRST-2110, GRST-2111, GRST-2210, GRST-2211, GRST-3010;
(iv) Mythology and Religion: GRST-3130, GRST-3230.
(b) Course requirements - Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) GART-1500, GART-1510;
(d) two courses from Social Sciences;
(e) two courses from Arts or Science;
(f) two courses from any area of study, excluding Arts.
(g) additional courses from any area of study to a total of forty courses.

Courses used to calculate the major average are: courses listed under requirement (a) and (b), and any courses taken in the major area(s) of study.

**Minor in Greek and Roman Studies**
Greek and Roman Studies: six courses in Greek and Roman Studies, with no more than four at the 1000-level.

**Major and Minor Concentrations - Bachelor of Arts and Science (BAS) - Greek and Roman Studies**

Major Concentration:
(a) GRST-1100, GRST-1200
(b) at least one course each in any three of the following areas:
Art and Archaeology: GRST-2120, GRST-2220
Greek and Roman History: GRHS-2100, GRHS-2101, GRHS-2200, GRHS-2201
Literature: GRST-2110, GRST-2111, GRST-2210, GRST-2211
Mythology and Religion: GRST-3130, GRST-3230
(c) Plus, any seven Greek and Roman Studies courses (prefix GRST-, GRHS-, GREK-, LATN-)

Minor Concentration: six courses in Greek and Roman Studies (prefix GRST-, GRHS-, GREK-, LATN-) with no more than four at the 1000-level; and at least one at the 3000-level or above.

# FRENCH STUDIES

**French Studies Course Categories**
Requirements for degree programs in French Studies make reference to the following groups of courses:
Preparatory French: FREN-1140.
French Language Training: FREN-1210, FREN-1220, FREN-2150, FREN-2210, FREN-2220, FREN-3150, FREN-3250.
Translation Courses: FREN-3280, FREN-3290.

Linguistics: FREN-2300, FREN-2310, FREN-3300, FREN-3320, FREN-3330.
French Literature: FREN-1410, FREN-2520, FREN-2530, FREN-2550, FREN-2570, FREN-3500, FREN-3530, FREN-3540, FREN-3560, FREN-3570.
Franco-Canadian Literature: FREN-2840, FREN-3830, FREN-3850.
Franco-Canadian Culture: FREN-2700.
Francophone Culture: FREN-2810, FREN-2830
Modern French Culture: FREN-2600.
Special Topics: FREN-4000 to FREN-4960.
Directed Readings: FREN-4970, FREN-4980, FREN-4990.

## General Bachelor of Arts in French Studies

**Degree Requirements**

Total courses: thirty.

(a) five Literature courses: FREN-1410; plus one of FREN-2520, FREN-2530, FREN-2550, FREN-2570, FREN-3500, FREN-3530, FREN-3540, one of FREN-3560, FREN-3580; and one of FREN-2840, FREN-3830, FREN-3850. Plus one more FREN (3000-level) literature course from the preceding list;
(b) six Language Training courses: FREN-1210, and FREN-1220; FREN-2210, and FREN-2220; one of FREN-2150, FREN-3150; and one of FREN-3250, FREN-3280, FREN-3290;
(c) three Linguistics courses: FREN-2300 and FREN-2310; and one of FREN-3300, FREN-3320, FREN-3330;
(d) one Culture course: FREN-2600, FREN-2700, FREN-2810 or FREN-2830;
(e) one additional course from any area in French Studies.
(f) two courses from Social Sciences;
(g) two courses from Arts or Science;
(h) two courses from any area of study, excluding Arts.
(i) GART-1500, GART-1510:
(j) six courses from any area of study, excluding French.

Courses used to calculate the major average are: courses listed under requirements (a) to (e), and any courses taken in the major area(s) of study.

All courses with the prefix FREN are taught entirely in French. Courses are three hours per week (3.00 credit hours) unless otherwise indicated. Not all courses are offered every year. Please contact the French Studies program at the Department of Languages, Literatures and Cultures office or its web site at www.uwindsor.ca/french to learn which courses will be offered in future years for program planning purposes. An antirequisite specified in the online course description lists a specific course or level of attainment which, if already successfully completed, does not permit registration for credit in the course.

Language training courses FREN-1140, FREN-1210, FREN-1220; FREN-2210, FREN-2210 must be taken in sequence. Students that begin the program at an advanced level because they possess native proficiency must complete the total number of French Studies course requirements by substituting other approved French Studies courses.

## Honours Bachelor of Arts in French Studies

**Degree Requirements**

Total courses: forty.

(a) eight Literature courses: FREN-1410 and FREN-3570; plus one of FREN-2520, FREN-2530, FREN-2550, FREN-2570, FREN-3500, FREN-3530, FREN-3540, one of FREN-3560, FREN-3580, ; and one of FREN-2840, FREN-3830, FREN-3850. Plus three more FREN- literature courses from the preceding list, of which one must be a (3000-level) course;
(b) seven Language Training courses: FREN-1210 and FREN-1220; FREN-2210, and FREN-2220; one of FREN-2150, FREN-3150 ; and two of FREN-3250, FREN-3280, FREN-3290;
(c) four Linguistics courses: FREN-2300 and FREN-2310; and two of FREN-3300, FREN-3320, FREN-3330;
(d) two Culture courses: FREN-2600, FREN-2700, FREN-2810, or FREN-2830;
(e) one (3000-level) course from any area in French Studies.
(f) one Special Topics (4000-level) course.
(g) two courses from Social Sciences;
(h) two courses from Arts or Science;
(i) two courses from any area of study, excluding Arts.
(j) GART-1500, GART-1510;
(k) one course from any area of study, including French;
(l) eight courses from any area of study, excluding French.

Courses used to calculate the major average are: courses listed under requirement (a) to (f), and any courses taken in the major area(s) of study.

All courses with the prefix FREN are taught entirely in French. Courses are three hours per week (3.00 credit hours) unless otherwise indicated. Not all courses are offered every year. Please contact the French Studies program at the Department of Languages, Literatures and Cultures office or its web site at www.uwindsor.ca/french to learn which courses will be offered in future years for program planning purposes.

An anti-requisite specified in the online course description lists a specific course or level of attainment which, if already successfully completed, does not permit registration for credit in the course.

Language training courses FREN-1140, FREN-1210, FREN-1220; FREN-2210, FREN-2210 must be taken in sequence. Students that begin the program at an advanced level because they possess native proficiency must complete the total number of French Studies course requirements by substituting other approved French Studies courses.

## Combined Honours French Studies Programs

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a) six Literature courses: FREN-1410, FREN-3570 plus one of FREN-2520, FREN-2530, FREN-2550, FREN-2570, FREN-3500, FREN-3530, FREN-3540,one of FREN-3560, FREN-3580; and one of FREN-2840, FREN-3830, FREN-3850. Plus one more FREN (3000-level) literature course from the preceding list;
(b) six Language Training courses: FREN-1210 and FREN-1220; FREN-2210, and FREN-2220; one of FREN-2150, FREN-3150; and one of FREN-3250, FREN-3280, FREN-3290;
(c) three Linguistics courses: FREN-2300 and FREN-2310; and one of FREN-3300, FREN-3320, FREN-3330;
(d) one Culture course: FREN-2600, FREN-2700, FREN-2810, or FREN-2830;
(e) one Special Topics (4000-level) course.
(f) Course requirements - Other Subject: courses used to calculate the major average in the other subject, as prescribed by that area of study.
(g) GART-1500, GART-1510;
(h) two courses from Social Sciences;
(i) two courses from Arts or Science;
(j) two courses from any area of study, excluding Arts.
(k) additional courses from any area of study to a total of forty courses.

Courses used to calculate the major average are: courses listed under requirement (a) to (f), and any courses taken in the major area(s) of study.

All courses with the prefix FREN are taught entirely in French. Courses are three hours per week (3.00 credit hours) unless otherwise indicated. Not all courses are offered every year. Please contact the French Studies program at the Department of Languages, Literatures and Cultures office or its web site at www.uwindsor.ca/french to learn which courses will be offered in future years for program planning purposes.

An anti-requisite specified in the online course description lists a specific course or level of attainment, which, if already successfully completed, does not permit registration for credit in the course.

Language training courses FREN-1140, FREN-1210, FREN-1220; FREN-2210, FREN-2210 must be taken in sequence. Students that begin the program at an advanced level because they possess native proficiency must complete the total number of French Studies course requirements by substituting other approved French Studies courses.

## Concurrent General Bachelor of Arts (French Studies)/Bachelor of Education

Direct admissions from high school only.

This is a joint offering between Department of Languages, Literatures, and Cultures and the Faculty of Education. See Faculty of Education for program requirements.

## Minor in French Studies

Required: a minimum of six French Studies courses, including FREN-1210, FREN-1220, FREN-2210, and FREN-2220; plus two courses that may be in Language Training, Translation, Linguistics, Literature or Culture.

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - French Studies

Major Concentration: FREN-1210, FREN-1220, FREN-1410, FREN-2150 (or FREN-3150), FREN-2210, FREN-2220, FREN-2300, FREN-2310, plus one additional French Literature course, three courses from any area of French studies. At least one course must be in the literature or culture of Francophone Canada.

Minor Concentration: FREN-1210, FREN-1220, FREN-2210, and FREN-2220; plus two courses that may be in Language Training, Translation, Linguistics, Literature or Culture.

# FRENCH STUDIES OUTSIDE THE UNIVERSITY OF WINDSOR

Students can immerse themselves in the French language and culture by spending their third year at the Université de Nice, France, in a program operated jointly with The University of Western Ontario, The University of Guelph and Memorial University, or can spend their third year at any of the French universities participating in the Ontario/Rhône-Alpes student exchange.

Students can also pursue studies in French at the Université du Québec à Montréal at the undergraduate level, for one or two semesters.

It is also possible to pursue studies in French at Quebec universities with the Summer Language Bursary Programme, or to study in Quebec for a year and be paid as a part-time, second-language monitor.

# MODERN LANGUAGES

## Honours Modern Languages (with year abroad)

The Honours Modern Languages (with year abroad) program will offer students the possibility of completing an Honours degree in either German, Italian or Spanish. The Modern Languages Area Committee will determine whether transfer credit courses from other universities fulfill program requirements.

**Degree Requirements**

Total courses: forty

(a) seven of the following: INCS-1200, INCS-1370, INCS-2200, INCS-2370, INCS-3200, INCS-3370, and INCS-4370
(b) six language training courses in one language option area from the following: GRMN-1020, GRMN-2020, GRMN-3000, GRMN-3010, GRMN-4000, GRMN-4010 or ITLN-1020, ITLN-2020, ITLN-3000, ITLN-3010, ITLN-4000, ITLN-4010 or SPAN-1020, SPAN-2020, SPAN-3000, SPAN-3010, SPAN-4000, SPAN-4010 (The level of required courses depends on a placement test. The 3000-level language training courses are compulsory for all students)*
(c) one of the following courses: INCS-2020, INCS-2030, INCS-2350, INCS-3210, GRMN-2480, ITLN-2480, ITLN-3560, SPAN-2480
(d) two of the following civilization courses in the chosen language option area: GRMN-2600 and GRMN-2610 or ITLN-2600 and ITLN-2610 or SPAN-2600 and SPAN-2610;

(e) five pre-approved international courses taught in the target language in either “Literature” and/or “Linguistics” and/or “Culture” and/or “Civilization”, taken at a foreign university during the year abroad (see Notes below);
(f) two “Directed Studies Abroad” Distance Education courses (INCS-3570 and INCS-3580) taken during the year abroad (see Note {3} below)
(g) two Social Sciences courses
(h) two Arts or two Sciences courses
(i) two additional courses from Arts, Social Sciences or Science.
(j) GART-1500, GART-1510
(k) three international courses from a foreign university, in any area of study, including Modern Languages
(l) additional courses from any area of study, excluding Modern Languages, to a total of forty courses.

Courses used to calculate the major average are: courses listed under requirement (a) to (f), and any courses taken in the major area(s) of study.

* Students beginning the program at an advanced level must adhere to the following sequence of priorities in selecting their courses to replace the standard 6 language training course requirement.
1. Complete all available courses taught in the target language(s).
2. Complete additional courses in the chosen language option area(s).
3. Complete additional courses in Modern Languages

All courses must be selected in consultation with the program advisor.

Notes:
1. Students are required to take courses in distinct areas of concentration while abroad. They will have their choice of taking three pre-approved courses in either “Literature” and/or “Linguistics” and/or “Culture” and/or “Civilization”. The specific courses taken in an area depend upon the availability of courses in the area at the host university and the student’s program concentration. As well, all students will be required to take two advanced language-training courses. These are standard and available at any exchange partner university.
2. Students in the Honours program that are unable to take the required courses abroad, for any reason, will be permitted to transfer to the General or Honours with SLE programs. The modular design of the Modern Languages curriculum (a common first two years curriculum) permits this transfer to another program without any loss in time or additional costs to the student.
3. Students also will register for the “Directed Studies Abroad” Distance Education courses. Students on exchange will be required to attend specific cultural events (museums; art galleries, etc.), participate in assigned activities and write reports on their experiences.

## Honours Modern Languages and Second-Language Education*

*NOTE: Students who complete the requirements under "(b) Language Stream" as part of the successful completion of this degree are eligible for the Certificate in Second Language Education upon application at graduation.

**Degree Requirements**

Total courses: forty
(a) INCS-1200; INCS-2200; INCS-3200; INCS-3210; INCS-4200;
(b) 17 course equivalents from the Language Stream or 18 course equivalents from the Intercultural Stream:
Language Stream:
(i) six language training courses in one language option area from the following: GRMN-1020 (6.0 credits), GRMN-2020 (6.0 credits), GRMN-3000, GRMN-3010, GRMN-4000, GRMN-4010; or ITLN-1020 (6.0 credits), ITLN-2020 (6.0 credits), ITLN-3000, ITLN-3010, ITLN-4000, ITLN-4010; or SPAN-1020 (6.0 credits), SPAN-2020 (6.0 credits), SPAN-3000, SPAN-3010, SPAN-4000, SPAN-4010. (The level of required courses depends on a placement test. The 3000-level language training courses are compulsory for all students.)**
(ii) two of the following culture and civilization courses in the chosen language option area: GRMN-2600 and GRMN-2610; or ITLN-2600 and ITLN-2610; or SPAN-2600 and SPAN-2610;
(iii) three additional courses from: INCS-2020, INCS-2030, INCS-2350, GRMN-2480, GRMN-2600, GRMN-2610, ITLN-2480, ITLN-2600, ITLN-2610, ITLN-3560, SPAN-2480, SPAN-2600, SPAN-2610
(iv) INCS-1370; INCS-2370; INCS-3370; INCS-4370.
OR
Intercultural stream: GRMN-2600 or ASIA-2620; GRMN-2610; ITLN-2600 or ASIA-2640; ITLN-2610; SPAN-2600; SPAN-2610; JWST-1200; ARAB-2610; ARAB-2620; GRMN-2480; ITLN-2480; SPAN-2480; INCS-4990 (6.0 credits); plus one of the following language pairs: GRMN-1020 (6.0 credits) and GRMN-2020 (6.0 credits); or ITLN-1020 (6.0 credits) and ITLN-2020 (6.0 credits); or SPAN-1020 (6.0 credits) and SPAN-2020 (6.0 credits).

(c) two courses from Arts or Science;
(d) two courses from Social Sciences;
(e) two courses from any area of study, excluding Arts.
(f) GART-1500, GART-1510;
(g) Language stream: five more courses from any area of study, including Modern Languages; OR
Intercultural stream: four more courses from any area of study, including Modern Languages;
(h) five courses from any area of study, excluding Modern Languages;

** Students beginning the program at an advanced level must adhere to the following sequence of priorities in selecting their courses to replace the standard 6 language training course requirement.
(i) Complete all available courses taught in the target language;
(ii) Complete two courses in another language offered by Languages, Literatures and Cultures in which the student has not had prior university-level training including: Arabic, French, German, Italian, Japanese, Ojibwe and Spanish;
(iii) Complete additional courses in the chosen language option area.
(iv) Complete additional courses in Modern Languages
All courses must be selected in consultation with the program advisor.

Courses used to calculate the major average are: courses listed under requirement (a) to (d), and any courses taken in the major area(s) of study.

## Combined Honours Modern Languages

**Program Regulation**

Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a) INCS-1200, INCS-2200, INCS-1370, INCS-2370, INCS-3200, INCS-3370, and INCS-4370
(b) six language training courses in one language option area from the following: GRMN-1020, GRMN-2020, GRMN-3000, GRMN-3010, GRMN-4000, GRMN-4010 or ITLN-1020, ITLN-2020, ITLN-3000, ITLN-3010, ITLN-4000, ITLN-4010 or SPAN-1020, SPAN-2020, SPAN-3000, SPAN-3010, SPAN-4000, SPAN-4010 (The level of required courses depends on a placement test. The 3000-level language training courses are compulsory for all students)*
(c) two culture or civilization courses in the chosen language option area: GRMN-2600 and GRMN-2610 or ITLN-2600 and ITLN-2610 or SPAN-2600 and SPAN-2610;
(d) one courses from the following: INCS-2020, INCS-2030, INCS-2350, INCS-3210, GRMN-2480, ITLN-2480, ITLN-3560, SPAN-2480
(e) Course requirements - Other Subject: courses used to calculate the major average in the other subject, as prescribed by that area of study.
(f) GART-1500, GART-1510;
(g) two courses from Social Sciences;
(h) two courses from Arts or Science;
(i) two courses from any area of study, excluding Arts.
(j) additional courses from any area of study to a total of forty courses

* Students beginning the program at an advanced level must adhere to the following sequence of priorities in selecting their courses to replace the standard 6 language training course requirement.
(i) Complete all available courses taught in the target language(s).
(ii) Complete additional courses in the chosen language option area(s).
(iii) Complete additional courses in Modern Languages
All courses must be selected in consultation with the program advisor.

Courses used to calculate the major average are: courses listed under requirement (a) to (e), and any courses taken in the major area(s) of study.

## Honours Modern Languages with Two Languages Option

*NOTE: Students who successfully complete this degree are eligible for the Certificate in Second Language Education upon application at graduation.

**Degree Requirements**

Total courses: forty.

(a) INCS-1200, INCS-2200, INCS-1370, INCS-2370, INCS-3200, INCS-3370, and INCS-4370
(b) six language training courses in each of two language option areas from the following: GRMN-1020, GRMN-2020, GRMN-3000, GRMN-3010, GRMN-4000, GRMN-4010 or ITLN-1020, ITLN-2020, ITLN-

3000, ITLN-3010, ITLN-4000, ITLN-4010 or SPAN-1020, SPAN-2020, SPAN-3000, SPAN-3010, SPAN-4000, SPAN-4010 (The level of required courses depends on a placement test. The 3000-level language training courses are compulsory for all students)*

(c) two of the following culture and civilization courses in each of the two chosen language option areas: GRMN-2600 and GRMN-2610; or ITLN-2600 and ITLN-2610; or SPAN-2600 and SPAN-2610
(d) one of the following courses: INCS-2020, INCS-2030, INCS-2350, INCS-3210, GRMN-2480, ITLN-2480, ITLN-3560, SPAN-2480
(e) two courses from Social Sciences;
(f) two courses from Arts or Science;
(g) two courses from any area of study, excluding Arts.
(h) GART-1500, GART-1510;
(i) four courses from any area of study, including Modern Languages;
(j) four courses from any area of study, excluding Modern Languages

* Students beginning the program at an advanced level must adhere to the following sequence of priorities in selecting their courses to replace the standard 6 language training course requirement.
(i) Complete all available courses taught in the target language(s).
(ii) Complete additional courses in the chosen language option area(s).
(iii) Complete additional courses in Modern Languages
All courses must be selected in consultation with the program advisor

Courses used to calculate the major average are: courses listed under requirement (a) to (d), and any courses taken in the major area(s) of study.

## Concurrent Honours Modern Languages with Second Language Education (Intercultural Stream)/Bachelor of Education

Normally, direct admission will be to first year only.

This is a joint offering between Department of Languages, Literatures, and Cultures and the Faculty of Education. See Faculty of Education for program requirements.

## Certificate in Second Language Education

**Admission Requirements**
Admission requirements are the same as those for the Honours Modern Languages program.

Total courses: eight.

(a) INCS-1200, INCS-2200, INCS-3200, INCS-3210, INCS-4200;
(b) one course from any area of Modern Languages, excluding language training courses;
(c) plus any two language training courses in which the student does not have prior university level training (either Arabic, French, German, Italian, Spanish, Japanese or Ojibwe).
Native or heritage speakers of any of these languages must take two courses in a language with which they are not familiar.

NOTE: The Certificate in Second Language Education is not equivalent to nor does it provide the necessary qualification for professional certification by the Ontario College of Teachers.

# Minor in Modern Languages (Concentration in Language)

Required Courses:
To complete the requirement for this minor, students normally will take the following language-training courses in one language-option area:

German: GRMN-1020*, GRMN-2020*, GRMN-3000, GRMN-3010;
Italian: ITLN-1020*, ITLN-2020*, ITLN-3000, ITLN-3010;
Spanish: SPAN-1020*, SPAN-2020*, SPAN-3000 and SPAN-3010.

NOTE: Students with a prior knowledge of the target language must meet with a Modern Languages counsellor before registering for a Minor in that language.
*Double-weighted course.

# Minor in Modern Languages (Concentration in Language and Culture)

Required Courses:
(a) one of the following intensive language-training course*, or equivalent, in one language-option area (German: GRMN-1020; Italian: ITLN-1020; Spanish: SPAN-1020);
NOTE: Students with a prior knowledge of the target language must meet with a Modern Languages counsellor before registering for a Minor in that language.
(b) INCS-1370;
(c) two of the following culture and/or civilization courses in the chosen language option area: (German GRMN-2480, GRMN-2600, GRMN-2610; Italian ITLN-2480, ITLN-2600, ITLN-2610; Spanish SPAN-2480, SPAN-2600, SPAN-2610);
(d) one of INCS-2020 or INCS-2030.

NOTE: Modern Languages students may take a minor in a language other than their major. If courses in the minor also form part of the major, a substitution of these courses will be permitted with the approval of the Programme Co-ordinator.

*Double-weighted course.

# Minor in Modern Languages (Concentration in Linguistics and Literature)

Required Courses: 6
(a) three linguistics courses as follows: INCS-1200. INCS-2200, INCS-3200
(b) three literature courses as follows: INCS-1370, INCS-2370, INCS-3370

# Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Modern Languages

Major Concentration: INCS-1200, INCS-2200, INCS-1370, INCS-2370; six language training courses in one language option area (the level of required courses depends on a placement test); two literature, culture or civilization courses in the area of the language option. Students entering the program at an

advanced level must complete their language training requirements by selecting from among 3000- and 4000-level courses taught in the target language.

Minor Concentration: four language training courses in one language option area (the level of required courses depends on a placement test), plus two literature, culture or civilization courses in the area of the language option. Students entering the program at an advanced level must complete their language training requirements by selecting from among 3000- and 4000-level courses taught in the target language.

## Minor Concentration - Bachelor of Interdisciplinary Arts and Science (IAS) - Linguistics and Literature

Minor Concentration: 6 courses
(a) three linguistics courses as follows: INCS-1200, INCS-2200, INCS-3200
(b) three literature courses as follows: INCS-1370, INCS-2370, INCS-3370

## Minor in Arabic Studies

The Minor in Arabic Studies is offered in either a language intensive or culture intensive stream.

Required: a minimum of six courses, including ARAB-1100 and ARAB-1110. (Those with prior language proficiency cannot register for these courses and will have to take ARAB-2100 and ARAB-2110 in their place.)

Language stream requirements:
(a) ARAB-2100, ARAB-2110 and any two of the following: ARAB-2610, ARAB-2620, FREN-2830, FREN-3580, POLS-2610, POLS-3650, WGST-1600.

Culture stream requirements:
(a) any four of the following: ARAB-2610, ARAB-2620, FREN-2830, FREN-3580, POLS-2610, POLS-3650, WGST-1600.

## Minor in Jewish Studies

Required Courses: A minimum of six Jewish Studies courses, including JWST-1200 and any five of the following; JWST-1100, JWST-1110, JWST-1700, JWST-2200, JWST-2300, JWST-2350, JWST-2700, JWST-3700.

# LANGUAGES, LITERATURES AND CULTURES/LANGUES, LITTÉRATURES ET CULTURES (LLC) COURSES

## ARABIC STUDIES COURSES

**ARAB-1100. Introduction to Arabic I**

Introduces vocabulary and the basic elements of Arabic language structure. Students will acquire a basic level of expertise in the four communication skills: listening, speaking, reading and writing. (Only for students with no prior knowledge of Arabic.

**ARAB-1110. Introduction to Arabic II**
This course is the continuation of "Introduction to Arabic I". It is designed to increase vocabulary, enhance knowledge of the elements of Arabic language structure and provide additional oral (listening and speaking) and written (reading and writing) communication skills. (Prerequisite: ARAB-1100 or permission of instructor.)

**ARAB-2100. Intermediate Arabic I**
The course targets the four basic language skills of modern standard Arabic: listening, speaking, reading, and writing. Reading and writing assignments in this class will expose students to a large variety of vocabulary and topics in religion, culture, and politics. Students are expected to read, to report on written material in Arabic (newspapers, comics, magazines), and to listen to Arabic news and songs. The ultimate objective of the course is to help them to acquire and to apply language tasks such as paraphrasing and summarizing short texts, communicating their points of view in writing and speaking, as well as describing and narrating events. (Prerequisite: ARAB-1100 and ARAB-1110, or permission of instructor.)

**ARAB-2110. Intermediate Arabic II**
This course will serve as a continuation of Intermediate Arabic I with equal emphasis on speaking, reading, oral and aural skills. The course will cover advanced aspects of grammar and structure of modern written Arabic. Selected readings from contemporary Arabic culture and politics will be introduced into the curriculum and will serve as basis for reading and conversation. (Prerequisite: ARAB-2100, or permission of instructor.)

**ARAB-2610. Introduction to Arabic Culture**
An interdisciplinary cultural studies course surveying the complex history that has shaped Arabic culture and the major forces that continue to effect changes in Arabic culture. (The course is offered in English.)

**ARAB-2620. Modern Arabic Literature**
A survey of modern Arabic literature (in English translation). Selected texts are studied as literature with constant reference to the social, cultural and political contexts in which they were written. Students are introduced to the major modern Arabic genres and discursive practices, with particular emphasis on poetry and fiction, as well as major Arabic literary and intellectual figures. (The course is offered in English.)

**ARAB-3610. Literature and Film in North Africa and the Middle East**
This course introduces students to North African and Middle Eastern film and literature as interrelated activities involved in the process of cultural production and consumption. It offers a structured elaboration of the social, political and cultural context in which Arabic cinema and literature have evolved and provides students with a critical introduction to the language of film and literary and cultural criticism.

**ARAB-3620. Modern Arabic Poetry in Translation**
This course will introduce students to modern Arabic poetry, its language, style, and themes. It will also highlight the influence of western poetic movements and schools on Arab poets.

**ARAB-4010. Directed Studies in Arabic Language**
This course is designed for students who wish to do independent research on any aspect of contemporary Arab literature and or to fulfill an Arabic language requirement.

**ARAB-4020. Directed Studies in Arabic Culture**
The course is designed for students who wish to do independent research on any aspect of contemporary Arab culture to fulfill a Minor in Arabic Studies requirement. (Pre-requisites: GART-1500 and GART-1510)

**ARAB-4030. Directed Studies in Arabic Literature**
These courses are designed for students who wish to do independent research on any aspect of contemporary Arab literature and or to fulfill an Arabic language requirement. (Pre-requisites: GART-1500 and GART-1510)

# ASIAN STUDIES COURSES

**ASIA-2620. Special Topics in Chinese Culture**
This course will provide a topical introduction to Chinese culture. The topics may be either historical or contemporary. Topics may change from year to year. (Students may repeat the course for credit if the content changes.)

**ASIA-2640. Special Topics in Chinese Literature**
This course covers the development of modern Chinese literature in English translation. Classic works and literary characters will be classified and analyzed. Students will compare different writing genres and integrate them with the socio-cultural background of modern Chinese writers. Students will be expected to present their own perspectives through written papers and oral presentations. (Three lecture hours per week.)

**ASIA-4090. Directed Readings in Asian Studies**
(May be repeated for credit with approval of LLC.)

# FRENCH STUDIES COURSES

All courses with the prefix FREN- are taught in French. Not all courses are offered every year. Please contact the French Studies program at the Department of Languages, Literatures and Cultures office or its web site at www.uwindsor.ca/french.

Courses are three hours a week (3.00 credit hours) unless otherwise indicated. Language and linguistics courses may require laboratory and/or field work.

An antirequisite is a specific course or level of attainment which, if already successfully completed, does not permit registration for credit in another desired course, or which may not be taken for credit concurrently with another course.

**FREN-1120. Intensive French for Beginners**
Designed for beginning students who wish to accelerate their learning of the French language, the course emphasises the acquisition of basic reading and writing skills, aural comprehension and oral practice. Students will obtain credit for two courses. (6 credits hours; 6 hours of class time per week.) (Antirequisites: Grade 10 French or higher.)

**FREN-1130. Intensive Preparatory French: Intermediate Level**
This course targets further development of all four language skills (speaking, listening, reading, and writing) and provides a thorough grammar review. Students will obtain credit for two courses. (6 credits hours; 6 hours of class time per week.) (Antirequisites: Grade 12"U" French or Français, or equivalent, or higher.) (Prerequisite: FREN-1120, Grade 10 French, or equivalent, or permission of instructor).

**FREN-1140. Preparatory French: Intermediate Level II**
Further training in grammar. Reading and writing skills. Additional aural comprehension and oral practice. Laboratory work. This course is equivalent to Grade 12"U" French or equivalent. (Antirequisite: Grade 12"U" French or equivalent, or higher.) (Prerequisite: Grade 11 French, or equivalent.)

**FREN-1210. French Language Training I**
A study of norms and functions of the French verb system, nouns, pronouns, and modifiers. Oral practice, pronunciation and composition. (Prerequisite: Grade 12"U" French or Français, or equivalent.) (Antirequisite: any previous 2000-level French language training courses.)

**FREN-1220. French Language Training II**
Further study of the norms and functions of the French verb system, nouns, pronouns, and modifiers. Development of reading comprehension. Oral practice, composition. (Prerequisite: Grade 12"U" French or Français, or equivalent.) (Antirequisite: any previous 2000-level French language training courses.)

**FREN-1240. French for Law Professionals**
In this course, students will build their general competence in French through listening, speaking, reading and writing activities. In particular, they will learn how to read and write different types of texts including memos, emails, reports, minutes of meetings, communiqués, etc. Some emphasis will be laid on terminology and collocations pertaining to the different branches of law including family, business, criminal, and labour law, as well as appropriate French lexicon to discuss the administration of law, contracts, obligations and ownership in the Canadian context. (Prerequisite: Grade 12U French)

**FREN-1410. Introduction to Literary Studies**
An introduction to the analysis of literary genres: poetry, drama and prose fiction. (Prerequisite: Grade 12"U" French or Français, or equivalent.) (Note: FREN-1410 is a prerequisite course for all literature courses in French Studies.)

**FREN-2150. Oral Proficiency in French I**
A course designed to strengthen the student's competence in oral French through intensive training at an intermediate level, in both oral expression and aural comprehension. (May not be taken for credit by native speakers of French.) (Prerequisite: permission of instructor.)

**FREN-2210. French Language Training III**
Effective oral and written communication; practice in the logical development of ideas; vocabulary expansion. (Prerequisites: FREN-1210 and FREN-1220.)

**FREN-2220. French Language Training IV**
Effective oral and written communication. Demonstration and discussion of the spoken and written codes, oral exercises, written practice. (Prerequisites: FREN-1210 and FREN-1220.)

**FREN-2300. Introduction to Linguistics I**

A survey of fundamental linguistic concepts and ideas of language. Language analysis at the first three levels of description: phonetics, phonology and morphology. (Prerequisites: FREN-1210 and FREN-1220, or permission of instructor.)

**FREN-2310. Introduction to Linguistics II**
Language analysis at the remaining levels of description: syntax, semantics, discourse analysis and pragmatics. A brief introduction to sociolinguistics, psycholinguistics and neurolinguistics. (Prerequisites: FREN-1210 and FREN-1220, or permission of instructor.)

**FREN-2520.French Classicism**
An introduction to the literature of seventeenth-century France and its principal doctrines. (Prerequisite: FREN-1410.)

**FREN-2530.The French Enlightenment**
An introduction to the literature and thought of eighteenth-century France. (Prerequisite: FREN-1410.)

**FREN-2550.French Romanticism**
A study of the romantic aesthetic through the poetry, prose, and drama of major romantic writers of the nineteenth century. (Prerequisite: FREN-1410.)

**FREN-2570.Realism and Naturalism**
A study of post-romantic prose writing in the nineteenth century. (Prerequisite: FREN-1410.)

**FREN-2600.Modern French Culture**
A general study of the patterned behaviour which constitutes the modern French cultural system, focusing on its intellectual, sociological, political, and religious aspects. Students will be required to read texts and will also avail themselves of the latest audiovisual technology. Prerequisites: FREN-1210.)

**FREN-2700.Introduction to the Cultural Heritage of French Canada**
An introduction to the francophone cultural experience in Canada.(Prerequisites: FREN-1210)

**FREN-2810. Introduction to the Culture of Sub-Saharan Francophone Africa**
An introduction to various cultures of sub-Saharan Francophone Africa from pre-colonial times to the present. Students will be required to read some historical texts and representative literature. Some television documentaries and films will also be viewed. (Prerequisites: FREN-1210)

**FREN-2830. Introduction to Francophone Culture of the Maghreb and the Middle East**
An introduction to contemporary francophone culture in North Africa (Morocco, Algeria, and Tunisia) and the Middle East (Lebanon), largely through the study of films, popular music, media, newspapers, art exhibits and/or television programs as well as theoretical works that formulate the (post)colonial discourse. (Prerequisites: FREN-1210).

**FREN-2840. The Novel in Quebec and in Other Francophone Regions of Canada**
From the novel of the land to the post-modern novel in Francophone Canada. (Prerequisite: FREN-1410.)

**FREN-3150. Oral Proficiency in French II**
A course designed to strengthen the student's competence in oral French through intensive training at an advanced level, both in oral expression and aural comprehension. (Prerequisite: permission of instructor.)

**FREN-3250. Error Analysis**
A course designed to strengthen the student's competence in French through an analysis of the three most common sources of errors: the differences between spoken and written French, the first language and the interlanguage (unfinished French grammar) of the student. (Prerequisites: FREN-2210 and FREN-2220, or FREN-2230.)

**FREN-3280. Aspects of Translation I**
A comparative analysis of French and English structures with special emphasis on translation processes. Accompanied by regular exercises in translation. (Prerequisites: FREN-2210 and FREN-2220, or FREN-2230.)

**FREN-3290. Aspects of Translation II**
A comparative analysis of French and English structures with special emphasis on questions of meaning related to the sentence and its context. Accompanied by regular exercises in translation. (Prerequisites: FREN-2210 and FREN-2220, or FREN-2230.)

**FREN-3300. Applied Linguistics**
An introduction to modern linguistic theories about language acquisition, followed by a comparative study of first and second language acquisition and a survey of second language teaching techniques highlighting the linguistic concepts underlying these techniques. (Prerequisite: FREN-2300 and FREN-2310.)

**FREN-3320. The History of the French Language**
This course will examine successive stages in the development and spread of the French language from Late Antiquity to the present. (Prerequisite: FREN-2300 and FREN-2310, or permission of instructor.)

**FREN-3330. Sociolinguistic Aspects of French in Canada**
A survey of the main characteristics of French in Canada with emphasis on its variations and varieties. Sociolinguistic concepts are introduced and discussed in relation to the situation of French in Canada. (Prerequisites: FREN-2300 and FREN-2310.)

**FREN-3500. French Literature of the Middle Ages and the Renaissance**
This course will examine the major authors and genres of the Middle Ages and the Renaissance, from the twelfth to the sixteenth century, including: the chanson de geste, the love songs of the troubadours, the Arthurian Romance, the sonnets of Ronsard, and the works of Rabelais. (Prerequisite: FREN-1410.)

**FREN-3530. Poetry from Baudelaire to Surrealism**
A study of post-romantic, modernist poetry from the mid-nineteenth century to the mid-twentieth century. (Prerequisite: FREN-1410.)

**FREN-3540. The Modern Novel and Theatre**
A study of modern theatre and of the novel from the turn of the century (1900) until the Nouveau Roman. (Prerequisite: FREN-1410.)

**FREN-3560. Contemporary Francophone Literature and Thought**
The post-modern aesthetic and writing in francophone countries of sub-Saharan Africa and the French West Indies. (Prerequisite: FREN-1410.)

**FREN-3570. Contemporary Critical Theory**

An introduction to a variety of major critical approaches and their applications to the literary text. (Prerequisites: FREN-1410, plus two additional courses in literature.) (Note: FREN-3570 is a required course for students enrolled in an Honours Bachelor of Arts in French Studies, and will be of particular value to those intending to pursue a Master of Arts degree.)

**FREN-3580. Francophone Literature of the Maghreb and the Middle East**
Introduction to Francophone literature of the Maghreb (Morocco, Algeria, Tunisia) and the Middle East (Lebanon) (Prerequisite: FREN-1410)

**FREN-3830. Drama in Quebec and in other Francophone Regions of Canada**
A study of the main dramatic works in Francophone Canada. (Prerequisite: FREN-1410.)

**FREN-3850. Poetry in Quebec and in other Francophone Regions of Canada**
A study of the main works of poetry in Francophone Canada. (Prerequisite: FREN-1410.)

**FREN-4340. The French Lexicon**
Detailed examination of the morphological, semantic and sociolinguistic characteristics of the French lexicon. (Prerequisite: FREN-2310.)

**FREN-4440. Phraseology: Theory and Applications**
In this course, students will explore the theoretical aspects of phraseology and apply them to the French language. Different forms of prefabricated units or phrasemes (full idioms, semi-idioms, weak idioms, collocations, clichés, proverbs, formulaic expressions, etc.) will be studied and used to enhance students' linguistic competence. Insofar as phraseology is a universal feature of natural languages, students will also explore the challenges associated with the translation of various phrasemes. (Prerequisites: FREN-2300 and FREN 2310.)

**FRENCH STUDIES SPECIAL TOPICS**

**FREN-4000 to FREN-4960. Special Topics**
[Topics include: The Grotesque Body in the Modern French Novel (4000); Theories of Semantics (4310); Individual and Societal Bilingualism (4350)] Special topics courses include the 4000-series courses listed in the French Studies program. They cover language, linguistics and literature and may take the form of directed readings. (Prerequisites for special topics courses in language and linguistics: FREN-2300 and FREN-2310; for special topics courses in literature: FREN-1410; plus one additional course in literature.) (May be repeated for credit if content changes.)

**FRENCH STUDIES DIRECTED READINGS**

**FREN-4970 to FREN-4990.**
(Prerequisite: Permission of instructor.) (May be repeated for credit if content changes.)

## GREEK LANGUAGE AND LITERATURE COURSES

**GREK-1100. Introduction to Ancient Greek I**
Designed to equip the beginner with the basic skills needed for reading ancient Greek literature, including the New Testament.

**GREK-1101. Introduction to Ancient Greek II**

Designed to equip the beginner with the basic skills needed for reading ancient Greek literature, including the New Testament. (Prerequisite: GREK-1100.)

**GREK-2100. Intermediate Greek I**
Review of vocabulary and grammar. Readings from classical prose, poetry, or the New Testament. (Prerequisite: GREK-1101.)

**GREK-2101. Intermediate Greek II**
Continuation of GREK-2100. (Prerequisite: GREK-2100.)

**GREK-4000. Directed Readings in Greek Literature**
Designed for the student who wishes to explore a special area of interest with the aid of a faculty advisor. (May be repeated for credit if content changes.) (Hours by arrangement.)

## GREEK AND ROMAN HISTORY COURSES

**GRHS-2100. Greek History I: To the End of the Classical Period**
This course is an illustrated survey of the historical and social development of Greek civilization from the Neolithic period (circa 6000 BC) to the death of Alexander the Great (323 BC), with particular emphasis on the political history of Athens in the sixth through fourth centuries BC. Selected readings of Greek texts in translation examine particular events or themes in greater depth. (Prerequisite: GRST-1100 or consent of instructor.)

**GRHS-2101. Greek History II: To the End of the Hellenistic Period**
This course is an illustrated survey of the historical and social development of Greek civilization from the time of Alexander the Great's conquests (326-323 BC) to Rome's annexation of the last major Greek kingdom, Cleopatra's Egypt, in 30 BC. The continuing role of Greek cities under the Roman Empire can also be examined. Selected readings of Greek texts in translation examine particular events or themes in greater depth. (Prerequisite: GRST-1100 or consent of instructor.)

**GRHS-2200. Roman History I: To the End of the Republic**
An exploration of Roman social and political history from Rome’s earliest foundations to the collapse of the Republic (1000-27 BC). This will include a close examination of the Roman conquest of the Italian peninsula, the Punic Wars and Civil Wars, as well as the study of such important figures as Hannibal and Julius Caesar. (Prerequisite: GRST-1200 or consent of instructor.)

**GRHS-2201. Roman History II: To the End of the Empire**
An exploration of Roman social and political history from the establishment of the Empire by Augustus to its fall (27 BC. - AD 476). This will include a close examination of the expansion and administration of the Empire and wars against the Parthians, Persians and Germans as well as the study of individual Emperors and other important literary and historical figures of the time. (Prerequisite: GRST-1200 or consent of instructor.)

**GRHS-3000. Topics in Ancient History**
This rotating topics course is an in-depth study of some aspect of ancient history that may be thematic or chronological in scope. Required readings usually consist of ancient sources in English translation and/or articles in modern scholarly journals than formal textbooks. May be repeated for credit if content changes. (Prerequisite: at least one GRHS-2xxx course, or by consent of instructor)

**GRHS-4002. Directed Reading in Ancient History**

This directed reading course provides an advanced study of some aspect of Greco-Roman history that may be thematic or chronological in scope. The course is limited to Greek and Roman Studies majors in the final two years of their program. The particular topic and schedule of instruction in each case is to be determined by mutual agreement of instructor and student. (May be repeated for credit if content changes.) (Prerequisite: GRHS-3000)

## GREEK AND ROMAN STUDIES COURSES

**GRST-1100. Introduction to Greek Civilization**
An introduction to the cultural values and achievements of the ancient Greeks. Topics will include geography, history, mythology and religion, language and literature, art and daily life. (Recommended for prospective Greek and Roman Studies majors.)

**GRST-1200. Introduction to Roman Civilization**
An introduction to the cultural values and achievements of the ancient Romans. Topics will include geography, history, mythology and religion, language and literature, art and daily life. (Recommended for prospective Greek and Roman Studies majors.)

**GRST-2000.Topics in Classical Culture**
A thematic examination of a single social historical topic in Greco-Roman antiquity. Topics may vary from year to year. (May be repeated for credit if content changes.)

**GRST-2030. Religions of the Ancient World**
An introduction to religions from the ancient Near East and Mediterranean, such as those of Mesopotamia, Egypt, Israel, Greece, and Italy. Topics may include the decline of paganism and polytheism and the rise of Christianity and monotheism, sacred texts and rituals, priests and other religious personnel, and mystery religions and mysticism. (Prerequisite: GRST-1100 or GRST-1200, or consent of instructor)

**GRST-2110. Greek Prose**
An introduction to ancient Greek prose literature from the fifth century BC to the second century AD, with selected readings in translation. Authors may include historiographers, orators, philosophers, or novelists. Topics may vary from year to year. (May be repeated for credit if content changes.)

**GRST-2111. Greek Poetry**
An introduction to ancient Greek poetry from the eighth century BC to the second century AD, with selected readings in translation. Authors may include Homer, Hesiod, other early Greek poets, or dramatists (including those of tragedy, comedy, and the satyr play). Topics may vary from year to year. (May be repeated for credit if content changes.)

**GRST-2120. Greek Art and Archaeology**
A study of the artistic masterpieces and monuments of ancient Greece. Topics will include the search for Troy, the spirit of Greek sculpture, and Athens in the Golden Age. (Prerequisite: GRST-1100 or consent of instructor.)

**GRST-2210. Latin Prose**
An introduction to ancient Latin prose literature from the third century BC to the second century AD, with selected readings in translation. Authors may include orators, historiographers, novelists, or philosophers. Topics may vary from year to year. (May be repeated for credit if content changes.)

**GRST-2211. Latin Poetry**
An introduction to ancient Latin poetry from the third century BC to the fourth century AD, with selected readings in translation. Authors may include dramatists, epic poets, elegists, or satirists. Topics may vary from year to year. (May be repeated for credit if content changes.)

**GRST-2220. Roman Art and Archaeology**
A study of the artistic masterpieces and monuments of ancient Rome. Topics will include the tombs of the Etruscans and treasures of Pompeii and Rome in the days of the Caesars. (Prerequisite: GRST-1200 or consent of instructor.)

**GRST-3010. Topics in Classical Literature**
An in-depth study of some aspect of ancient Greco-Roman literature that may be thematic or generic in scope. Topics may vary from year to year. May be repeated for credit if content changes. (Prerequisite: GRST-1100 and GRST-1200, or consent of instructor)

**GRST-3011. The Ancient World on the Screen**
An exploration of modern depictions of ancient Greece and/or Rome in movies and/or on television. (Prerequisite: GRST-1100 and GRST-1200, or consent of instructor.)

**GRST-3012. Ancient Impacts on the Modern World**
This course explores the reception and (re)interpretation of ancient Greco-Roman culture by, and in, the modern world in a variety of different media (e.g., literature, visual arts, architecture, film). Topics may vary from year to year. (May be repeated for credit if content changes.) (Prerequisites: GRST-1100, GRST-1200.)

**GRST-3020. Topics in Ancient Material Culture**
This rotating topics course provides an in-depth study of some aspect of ancient material culture that may be thematic or chronological in scope. Required readings more usually consist of ancient sources in English translation and/or articles in modern scholarly journals than formal textbooks. May be repeated for credit if content changes. (Prerequisite: GRST-2120 or GRST-2220).

**GRST-3130. Greek Mythology**
A study of the myths and legends of ancient Greece. Modern theories of myth will be used to analyze the Greek material. They study will include both literacy sources in translation and the portrayal of myth in visual art and in architecture. (Prerequisite: GRST-1100 and GRST-1200, or consent of instructor.)

**GRST-3230. Roman Mythology**
A study of the myths and legends of ancient Rome. Modern theories of myth will be used to analyze the Roman material. The study will include both literary sources in translation and the portrayal of myth in visual art and in architecture. (GRST-1100 and GRST-1200, or consent of instructor)

**GRST-4000. Seminar in Classical Studies**
An in-depth study of an aspect of Greco-Roman antiquity. Topics may vary from year to year. (Prerequisite: at least semester 5 standing, or consent of instructor)

**GRST-4001. Directed Readings in Classical Civilization**
Designed for the advanced student who wishes to explore a special area of interest with the aid of a faculty advisor. (May be repeated for credit if content changes.) (Hours by arrangement.)

**GRST-4020. Practicum in Classical Archaeology**
Students will participate in various aspects (e.g. digging, artifact processing and analysis) of the excavation of an ancient Greek or Roman site in Europe. They will also visit and report on several key archaeological sites in the region. (Note: this is a 6-credit-hour course.) (Prerequisites: Admission only by consent of instructor after an interview with the candidate. Experience in Classical Studies courses (numbered GRST-xxxx and/or GRHS-xxxx) is highly recommended, though not always essential. Given the nature of archaeological excavation abroad, the assembly of a team of hardworking, emotionally mature, and mutually compatible individuals is of paramount importance. All other factors being equal, preference will be given to Classical Studies majors over non-majors and to more senior students over more junior.) May be repeated for credit if content changes.

## RELIGION AND CULTURE COURSES

**INCS-2220. Special Topics in Religion and Culture**
An examination of important contemporary religious themes and issues. Since content varies from year to year, students may repeat the course for credit, with prior permission.

**INCS-2310. Christianity: Reformation to the Modern Age**
The break-up of Christendom and the founding of new religious denominations during the Protestant Reformation of the sixteenth century; the spread of European culture through colonialism; the impact of new cultural developments in the political, scientific, and economic realms to the nineteenth century.

## SECOND LANGUAGE EDUCATION COURSES

**INCS-1200. Introduction to Language and Linguistics**
An introduction to the scientific study of language, including language structure, sound systems, semantics, language origins, language families and language classification, (Required of all Modern Languages majors and recommended in the first year of study.)

**INCS-2200. Language, Linguistics and Society**
This course complements INCS-1200. The scientific study of language and its interaction with society: contextualized language use, discourse and text linguistics, social and regional variation, language and the brain, language processing, language acquisition, and writing systems. (Required of all Modern Languages majors. Recommended to take in sequence with INCS-1200)

**INCS-3200. Theories of Language Acquisition**
An introduction to current theories regarding how language is acquired, with a special focus on the acquisition of second and additional languages, and on the factors that play a role in the acquisition process. (Prerequisites: INCS-1200 or INCS-2200, or equivalent or consent of instructor.)

**INCS-3210. Methodologies for Second Language Education**
An introduction to current methods of second language teaching through an examination of curriculum development, lesson planning and classroom techniques. (Prerequisites: INCS-1200 and INCS-2200, or permission of instructor.)

**INCS-4200. Second Language Education Practicum**

SLE students will be required to design a second language education course for a specific clientele, deliver their curriculum and have that curriculum assessed critically. (Prerequisites: INCS-3200 and INCS-3210.)

**INCS-4990. Internship in Intercultural Studies**
The Internship will expose students to the services and activities available for recent immigrants by placing them in agencies where they will shadow mentors accommodating the needs of non-English-speakers. (The course is open to students in the Honours Modern Languages with Second Language Education (Intercultural Stream) at all levels, except the first year.) (6.0 credit courses.)

## GERMAN, ITALIAN AND SPANISH LITERATURE AND CULTURE COURSES

**INCS-1370. Introduction to German, Italian, and Spanish Literature**
A study of the history and culture of European civilization through salient works of German, Italian and Spanish literature (in English translation).

**INCS-2370. German, Italian and Spanish Literary Traditions**
A study of the forms and structures of German, Italian and Spanish literature (in English translation) including a survey of genres, styles and rhetorical figures.

**INCS-3370. Applied Literary Criticism**
A hands-on approach to selected theories used to analyze literary texts and films. Students will read and write literary criticism, with an aim to understanding the underlying questions, assumptions, interpretive possibilities and limitations of each theoretical approach. (Students cannot obtain credit for both INCS-3370 and the former INCS-4370.)

**INCS-4370. Studies in German, Italian and Spanish Literary and Visual Culture**
This course studies connections between the visual arts and literature in selected periods of Western culture from medieval to modern times. Special attention is paid to the social context of the periods in question, as well as stylistic implications. Interdisciplinary forays into adjacent fields such as architecture, music, psychology, and science may also be included. This is an advanced undergraduate course with special focus on critical methodologies and comparative research. Topics may vary from year to year. (Prerequisites: INCS-1370, INCS-2370 or approval of the instructor.)

## CULTURE AND IDEAS COURSES

**INCS-2020. Culture and Ideas: From the Black Death to the Enlightenment**
An interdisciplinary, team-taught survey course focussing on major issues and achievements in European civilization from the late Middle Ages to the era of the Enlightenment, including literary, religious, and philosophical writings as well as art and music.

**INCS-2030. Culture and Ideas: From the French Revolution to the Present**
An interdisciplinary, team-taught survey course focussing on major issues and achievements in Europe and North America in the nineteenth, twentieth, and twenty-first centuries, including development in the visual arts, music, architecture, philosophy, religion, literature and science.

**INCS-3570. Directed Studies Abroad I**

This course will expose students to day-to-day situations, in order for them to complement and integrate traditional university learning with an immersion in real life situations. The intent is to stimulate an empirical attitude towards knowledge gained through experience. The focus of this course will be an in-depth analysis of differences and similarities between Canadian culture and the host culture. (Note: this is a Distance Education course offered in English which is available only to students on exchange through Windsor International at a location where English is not the local language.)

**INCS-3580. Directed Studies Abroad II**
This course is a continuation of Directed Studies Abroad I. It will expose students to day-to-day situations, in order for them to complement and integrate traditional university learning with an immersion in real life situations. The intent is to stimulate an empirical attitude towards knowledge gained through experience. The focus of this course will be an in-depth analysis of differences and similarities between Canadian culture and the host culture. (Note: this is a Distance Education course offered in English which is available only to students on exchange through Windsor International at a location where English is not the local language.)

**INCS-4090. Directed Studies**
Independent study for the advanced student who wishes to explore a specialized area of interest within the program under the supervision of a faculty member. (To be taken only under exceptional circumstances with the permission of the instructor and a program advisor. May be repeated for credit if the content is different. Hours and assignments by arrangement.)

## DIASPORA STUDIES COURSES

**INCS-2350. To Auschwitz and Beyond: Reflections on the Meaning of the Holocaust**
An examination of responses to key issues raised by the Holocaust as reflected in postwar culture both in Canada and abroad. (Also offered as Languages, Literatures and Cultures JWST-2350)

## JEWISH STUDIES COURSES

**JWST-1100. Hebrew for Beginners I**
A brief introduction to the Semitic languages of which Hebrew is a prominent member, including a survey of the main epochs of the Hebrew language such as Biblical Hebrew, the Hebrew of medieval Spain, the renaissance of Hebrew in the 19th century and modern Hebrew. Elements of the language to be covered include the printed alphabet, the roots of Hebrew words, basic vocabulary and the structures of sentences. Assignments will include writing basic words and reading elementary texts. No previous knowledge of Hebrew is required.

**JWST-1200. Introduction to Jewish Civilization**
This course will introduce basic Jewish thought and practices focussing on Jewish religious and cultural traditions from its earliest beginnings through the dramatic events of the last century. The course will examine Jewish perspectives on God, Torah, prayer, the afterlife, the Jewish life cycle, the holiday cycle of the Jewish year and Jewish identity.

**JWST-1700. Introduction to Diaspora Studies: There's No Place Like Home**

This course introduces students to diasporas-scattered populations living in exile from their ancestral homelands. The course focuses on the significance of migration, exile, belonging, and nostalgia (for ancestral homelands) for diasporas throughout the world. Students submit projects (incorporating oral histories, for example) on the diaspora of their choice. (Also offered as DIAS-1700 and POLS-1709.)

**JWST-2200. Jewish Mysticism**
The purpose of this course is to understand Jewish spirituality and mystical experience through various mystical traditions including Spanish Kabbalah, Lurianic Kabbalah, the Sabbatean heresy and Polish Hasidism.

**JWST-2300. Hebrew Bible: Text and Meaning**
Because of the centrality of the Bible to Jewish thought, it has been the subject of many important commentaries by Rabbis over the centuries. These commentaries, known in Hebrew as Midrash, attempt to understand not only the literal meaning of the text but also to understand its deeper meaning in terms of morals and values, mystical insights and allegorical interpretations. Disciplines such as psychology, archaeology, literary analysis and anthropology are used to gain a better understanding of the text.

**JWST-2350. To Auschwitz and Beyond: Reflections on the Meaning of the Holocaust**
An examination of responses to key issues raised by the Holocaust as reflected in postwar culture both in Canada and abroad. (Also offered as INCS-2350.)

**JWST-2700. The Jewish Diaspora: Ancient to Modern**
This course will acquaint students with the Jewish Diaspora over the centuries. The existence of the Jewish people as a dispersed people is central to understanding their diversity, shared identity and aspirations. Various major migrations and individual Jewish communities will be examined.

**JWST-3700. Jews and the Modern World**
This course will examine Judaism through the prism of modern intellectual and social movements which Jews have embraced and of which they often have been leaders. These include liberalism, socialism, capitalism, feminism and Zionism. Jewish contributions to the rise of the social sciences also will be examined.

## LATIN LANGUAGE AND LITERATURE COURSES

**LATN-1200.Introductory Latin I**
Designed for the student with little or no background in Latin. Emphasis on attainment of reading skills prerequisite for Latin courses numbered 2000- and above, and for practical use in theology, philosophy, medieval studies, linguistics, and comparative literature.

**LATN-1201. Introductory Latin II**
Continuation of LATN-1200. (Prerequisite: LATN-1200 or consent of an advisor in Classics.)

**LATN-2200. Intermediate Latin I**
Designed for students who have previously studied Latin. Review of forms, syntax and grammar. Selected passages from the works of Latin authors may be used. (Prerequisite: LATN-1201 or permission of a program advisor.)

**LATN-2201. Intermediate Latin II**

Review of forms, syntax, and grammar. Selected passages from the works of Latin authors. (Prerequisite: LATN-2200 or consent of an advisor in Classics.)

**LATN-4200. Directed Readings in Latin Literature**
Designed for the student who wishes to explore a special area of interest with the aid of a faculty advisor. (May be repeated for credit if content changes.) (Hours by arrangement.)

## GERMAN LANGUAGE OPTION COURSES

Requirements for degree programs in German make reference to the following groups of courses:
German Language: GRMN-1020, GRMN-2020, GRMN-3000, GRMN-3010
German Literature: INCS-1370, INCS-2370, INCS-3370, INCS-4370
German Culture: GRMN-2600, GRMN-2610, GRMN-4900

**GRMN-1020. Intensive German for Beginners**
This intensive language-training course combines the content of two courses into a single term. Students will obtain credit for two courses. Note: 6 hours of class time per week. (Only for students with no prior knowledge of German).)

**GRMN-1030. Present Day German Culture for Engineers**
This course is especially designed for all Engineering students who are interested in contemporary German culture, civilization, and economic framework, also in view of job, placement or co-op opportunities in Germany. The students will be exposed to intercultural issues and their implications. (Open only to Engineering students.)

**GRMN-2020. Intensive Intermediate German**
This intensive language-training course combines the content of two courses into a single term. Students will obtain credit for two courses. Note: 6 hours of class time per week. (Prerequisites: GRMN-1020, or permission of instructor.)

**GRMN-2480. German Cinema**
This course will cover the main periods of German cinema: expressionism of the 1920s, propaganda films of the Nazi era, East and West-German Cold War cinema and films of the post-reunification period. The focus will be on German film language and the historic and cultural traditions.

**GRMN-2600. German Culture and Civilization I**
An interdisciplinary introduction to political, social, and cultural developments in Germanic lands before 1815. (Taught in English. No prerequisities. May be repeated more than once if content changes.)

**GRMN-2610. German Culture and Civilization II**
An interdisciplinary introduction to political, social, and cultural developments in Germanic lands from 1815 onward. (Taught in English. No prerequisites. May be repeated more than once if content changes.)

**GRMN-3000. Advanced German I**
Further study of grammar and syntax. (Prerequisite: GRMN-2020 or permission of Program Advisor.)

**GRMN-3010. Advanced German II**
Continuation of GRMN-3000. (Prerequisite: GRMN-3000, or consent of a program advisor.)

**GRMN-4000. Proficiency in German**
Emphasis is placed on understanding a wide range of demanding and longer texts (press, literature, etc.) Students will enhance their ability to express themselves fluently and spontaneously. Students will use the target language flexibly and effectively for social, academic and professional purposes. Students will learn to communicate fluently in the target language using complex grammar structures as well as complex text production. (Prerequisite: GRMN-3010 or permission of instructor)

**GRMN-4010. Proficiency in Written German**
This course seeks to consolidate and enhance writing and reading skills at an advanced level of proficiency. Topics of study may include: translation techniques, mastery of complex syntactical structures, study of disparate academic, journalistic and literary texts. (Prerequisite: GRMN-3010)

GRMN-4900.Directed Readings in Germanic Studies
(Prerequisite: Consent of a program advisor.) (May be repeated for credit if content changes.)

# ITALIAN LANGUAGE OPTION COURSES

Requirements for degree programs in Italian make reference to the following groups of courses:

Italian Language: ITLN-1020, ITLN-3000, ITLN-3010
Italian Literature: INCS-1370, INCS-2370, INCS-3370, INCS-4370, ITLN-4900
Italian Culture: ITLN-2480; ITLN-2600, ITLN-2610, ITLN-3560

**ITLN-1020. Intensive Italian for Beginners**
This intensive language-training course combined the content of two courses into a single term. Students will obtain credit for two courses. Note: 6 hours of class time per week. (Only for students with no prior knowledge of Italian)

**ITLN-2020. Intensive Intermediate Italian**
This intensive language-training course combines the content of two courses into a single term. Students will obtain credit for two courses. Note: 6 hours of class time per week. (Prerequisites: ITLN-1020, or permission of instructor.)

**ITLN-2480. Italian Cinema**
The course takes the student on a journey through fifty years of Italian history using subtitled films representative of three pivotal periods. The course is taught in English.

**ITLN-2600. Italian Culture and Civilization I**
The cultural traditions of Italy from early times to the end of the Middle Ages. (Taught in English.) (Italian majors will be expected to do assigned work in Italian.)

**ITLN-2610. Italian Culture and Civilization II**
The cultural traditions of Italy from the Renaissance to modern times. (Taught in English.) (Italian majors will be expected to do assigned work in Italian.)

**ITLN-3000. Advanced Italian I**

Emphasis on reading, understanding and writing commentaries on short literary, historical and journalistic texts with the support of reference tools. (Prerequisite: ITLN-2020 or permission of Program Advisor.)

**ITLN-3010. Advanced Italian II**
Continuation of ITLN-3000. Emphasis on oral discussion of cultural and literary texts and written enhancement of idiomatic usage of the language with the support of appropriate tools. (Prerequisite: ITLN-3000 or permission of program advisor.)

**ITLN-3560. Renaissance Ideals: Sculpting the Italian Mind**
This course will focus on the contributions of the Italian renaissance to literature, philosophy, religion, visual arts, political science and the natural sciences. The course will be taught in English.

**ITLN-4000. Proficiency in Italian**
Emphasis is placed on understanding a wide range of demanding and longer texts (press, literature, etc.) Students will enhance their ability to express themselves fluently and spontaneously. Students will use the target language flexibly and effectively for social, academic and professional purposes. Students will learn to communicate fluently in the target language using complex grammar structures as well as complex text production. (Prerequisite: ITLN-3010 or permission of instructor.)

**ITLN-4010. Proficiency in Written Italian**
This course seeks to consolidate and enhance writing and reading skills at an advanced level of proficiency. Topics of study may include: translation techniques, mastery of complex syntactical structures, study of disparate texts (e.g. academic, journalistic, literary).(Pre-requisite: ITLN-3010).

**ITLN-4900. Directed Readings**
Designed for the advanced student who wishes to explore a special area of interest in Italian literature. (May be repeated for credit if content changes.)

## SPANISH LANGUAGE OPTION COURSES

Requirements for degree programs in Spanish make reference to the following groups of courses:
Spanish Language: SPAN-1020, SPAN-3000, SPAN-3010, SPAN-3300
Spanish Literature: INCS-1370, INCS-2370, INCS-3370, INCS-4370
Spanish Culture: SPAN-2600, SPAN-2610

**SPAN-1020. Intensive Spanish for Beginners**
This intensive language-training course combines the content of two courses into a single term. Students will obtain credit for two courses. Note: 6 hours of class time per week. (Only for students with no prior knowledge of Spanish.) (Antirequisites: SPAN-1010.)

**SPAN-2020. Intensive Intermediate Spanish**
This intensive language-training course combines the course content of two courses into a single term. Students will obtain credit for two courses. (6 credit hours; 6 hours of class time per week.) (Prerequisites: SPAN-1010, or SPAN-1020.)

**SPAN-2480. Spanish Cinema**

This course will study the cinema of Spain and/or Latin America. The focus will be on important film directors, such as Saura, Almodovar or Buñuel as well as the main issues covered by these films (e.g. youth culture, perception of women, literature and film, social analysis, etc.). The course will place the films into an historic, social and artistic context. The course is conducted in English with subtitled or dubbed films.

**SPAN-2600. Culture and Civilization of Spain**
Readings and discussion, in English, of topics from the history and culture of Spain.

**SPAN-2610. Culture and Civilization of Spanish America**
Readings and discussion, in English, of topics from the history and culture of Spanish America.

**SPAN-3000. Advanced Spanish I**
Further study of grammar and syntax. Written and oral exercises emphasizing subtle and/or particularly difficult grammar points. (Prerequisite: SPAN-2020 or permission of Program Advisor.)

**SPAN-3010. Advanced Spanish II**
Continuation of SPAN-3000. (Prerequisite: SPAN-3000 or permission of Program Advisor).

**SPAN-3300. Language Training through Literature from Spain**
A study of literary texts from Spain as a means to improve language mastery through advanced review of grammatical structures and enhancement of vocabulary. The course is conducted in Spanish. (Prerequisite: SPAN-3010 or permission of instructor.)

**SPAN-4000. Proficiency in Spanish**
Emphasis is placed on understanding a wide range of demanding and longer texts (press, literature, etc.) Students will enhance their ability to express themselves fluently and spontaneously. Students will use the target language flexibly and effectively for social, academic and professional purposes. Students will learn to communicate fluently in the target language using complex grammar structures as well as complex text production. (Prerequisite SPAN-3010 or permission of instructor)

**SPAN-4010. Proficiency in Written Spanish**
This course seeks to consolidate and enhance writing and reading skills at an advanced level of proficiency. Topics of study may include: translation techniques, mastery of complex syntactical structures, study of disparate academic, journalistic and literary texts. (Prerequisite: SPAN-3010)

**SPAN-4900.Directed Study**
(May be taken more than once if content changes.) (Prerequisites will vary depending on the focus of the course.)

# PHILOSOPHY

## PROGRAM REGULATIONS

Academic Advising: All students majoring in Philosophy or intending to declare a Minor in Philosophy will be assigned an academic advisor. Students should plan their programs in consultation with their advisors prior to course selection each term. Students planning to take a Philosophy course as an option are welcome to consult the instructor.

Either PHIL-1100 or PHIL-1120 is a good introduction to Philosophy in general.

**AREAS OF STUDY**
Most philosophy courses are intended for students majoring in other subjects who desire a well-rounded liberal arts education, as well as for philosophy majors. Students who might want to take more than one philosophy course are advised to check the prerequisites of courses numbered in the 2000s and 3000s. PHIL-1100 or PHIL-1120 are good introductions to philosophy in general.

## PROGRAMS

### General Philosophy

**Degree Requirements**

Total courses: thirty.

(a) twelve Philosophy courses, at least 9 of which must be at the 2000-level or above, including: PHIL-1100;PHIL-2210, PHIL-2730 and PHIL-2760;one of PHIL-4710, PHIL-4720, PHIL-4730; one additional 3000-level or above Philosophy course with '7' as middle digit; one Philosophy course with ‘5’ as the middle digit; one 2000 of PHIL-2600, PHIL-2610, PHIL-2620; four additional Philosophy courses, at least two of which are at the 3000-level or above.
(b) two courses from Social Sciences;
(c) two courses from Languages or Science;
(d) two courses from any area of study, excluding Arts.
(e) GART-1500, GART-1510;
(f) four courses from any area of study, including Philosophy;
(g) six other courses from any area of study, excluding Philosophy.

Courses used to calculate the major average are: courses listed under requirement (a) and any courses taken in the major area(s) of study.

# Honours Philosophy

**Degree Requirements**

Total courses: forty.

(a) twenty Philosophy courses, at least 18 of which must be at the 2000-level or above, including: PHIL-1100; PHIL-2210; one of PHIL-2500 or PHIL-2540; PHIL-2730 and PHIL-2760; one 3000-level Philosophy course with '5' as the middle digit; PHIL-3760 and PHIL-4770; PHIL-4710; PHIL-4720; one additional 3000-level or above Philosophy course with '7' as a middle digit; two of PHIL-2600, PHIL-2610, PHIL-2620, PHIL-3600, or PHIL-3520; PHIL-4910; six additional Philosophy courses, at least three of which are at the 3000-level or above.
(b) two courses from Social Sciences;
(c) two courses from Languages or Science;
(d) two courses from any area of study, excluding Arts.
(e) GART-1500, GART-1510;
(f) four other courses from any area of study, including Philosophy;
(g) eight other courses from any area of study, excluding Philosophy.

Courses used to calculate the major average are: courses listed under requirement (a) and any courses taken in the major area(s) of study.

# Combined Honours Philosophy Programs

A student may combine Philosophy with any other area of study that also permits Combined Honours Programs.

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a) sixteen Philosophy courses, at least 14 of which must be at the 2000-level or above, and including: PHIL-1100; PHIL-2210; one of PHIL-2500 or PHIL-2540;one additional Philosophy course with '5' as the middle digit; PHIL-2730; PHIL-2760; PHIL-4720; PHIL-4710; one additional 3000-level or above Philosophy course with '7' as the middle digit; one of PHIL-2600, PHIL-2610, or PHIL-2620; PHIL-4910; any five additional Philosophy courses, at least two of which are at the 3000-level or above.
(b) Course requirements-Other subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) GART-1500, GART-1510;
(d) two courses from Social Sciences;
(e) two courses from Languages or Science;
(f) two courses from any area of study, excluding Arts.

(g) additional courses from any area of study to a total of forty courses.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

## Minor in Philosophy

Required: six Philosophy courses, including PHIL-1100, with no more than two at the 1000-level, and at least one at the 3000-level or above.

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Philosophy

Major Concentration:
(a) PHIL-1100;
(b) at least one of PHIL-2540, PHIL-2550, or PHIL-2570;
(c) PHIL-2730;
(d) PHIL-2760;
(e) at least one of PHIL-4710, PHIL-4720 or PHIL-4730;
(f) one of PHIL-2600, PHIL-2610, PHIL-2620;
(g) three additional 2000-level or above Philosophy courses;
(h) two additional 3000-level or above Philosophy courses;
(i) PHIL-4910

Minor Concentration: six Philosophy courses, including PHIL-1100 and at least one Philosophy course at the 3000-level or above. No more than two Philosophy courses at the 1000-level.

# PHILOSOPHY COURSES

All courses listed are three hours a week unless otherwise indicated. Not all courses are offered each term or each academic year.

Please note the middle digit of course numbers denotes specific topics or areas of study.

**PHIL-1100.Introduction to Western Philosophy**
An introduction to philosophy through the study of major figures and movements in the Western philosophical tradition. The figures and themes selected for any given year will be chosen by the instructor.

**PHIL-1120. Philosophy and Human Nature**
What is human nature? How do we think of ourselves as human beings? The focus of the course will be theories of human nature that have been put forward in Western philosophy. Some non-Western Philosophical sources may be used.

**PHIL-1290. Contemporary Moral Issues**
A critical examination of philosophical arguments about controversial moral issues. Readings will be chosen by the instructor on issues connected with one or several areas such as: biomedical ethics,

euthanasia, suicide, environmental ethics, the treatment of animals, war and violence, pornography, censorship. Some non-Western Philosophical sources may be used.

**PHIL-1300. Philosophy and Popular Culture**
A philosophical inquiry into one or more of the more important contemporary cultural forms and phenomena. Topics may vary and may include popular music, television, virtual reality, sexual roles and stereotypes, or other topics.

**PHIL 1350. Culture, Health, and Social Justice on Turtle Island**
This course explores the theory, research, and professional expectations regarding cultural competency, safety, and humility with respect to the nursing and healthcare of Indigenous people and communities. Students will investigate how colonialism figures prominently in the health disparities of contemporary Indigenous communities. This course emphasizes cultural competency, safety, and humility as part of an ongoing professional journey.

**PHIL-1600. Reasoning Skills**
An explanation of, and practice in, the basic knowledge, skills and attitudes which are essential components of reasoning well. Topics include: the role of language; evaluating sources (including from the internet); analyzing, evaluating and diagramming arguments; inference strength; writing an extended piece of reasoning. (Antirequisite: PHIL-1620.) (1.5 lecture, 1.5 lab hour per week)

**PHIL-1620. Logic and Argumentation**
Basic deductive logic and argumentation theories and their application to the interpretation, assessment and construction of arguments used in the humanities, social sciences, and sciences as well as in discourse in the public realm. Topics include: deductive, inductive, presumptive reasoning or arguments, elementary sampling, differences between the kinds of support in different fields, elementary rhetoric and dialectic, and common fallacies. (Prerequisite: Open only to students in the IAS program or in the FAHSS Leadership Pathway.) (Antirequisite: PHIL-1600.)

**PHIL-2210.Introduction to Ethics**
A survey of the main contending theoretical positions on such basic questions of ethics as: Are all moral values and norms subjective or objective, relative or absolute? What makes right actions right? What is the good life for human beings?

**PHIL-2220. Introduction to Social and Political Philosophy**
An examination of some of the main contending theories about the nature of society and the state, or of some of the central controversies in social and political theory. (Prerequisite: Semester 3 or above standing; or consent of the instructor). (Also offered as POLS-2220.)

**PHIL-2240. Business Ethics**
An introduction to some central ethical notions (e.g., justice, the common good, moral vs. legal obligation); application of these issues and concepts to cases drawn from the experiences of business men and women (concerned with such issues as corporate responsibility, conflict of interest, honesty in advertising, preferential hiring, corporate responsibility for environmental externalities).

**PHIL-2250. Ethics of Life, Death, and Health Care**
The course will focus on the ethical issues arising from human mortality and vulnerability to sickness. Problems to be explored will vary from year to year and may include: the relation between mortality and the value of life, the ethics of life-extension, the legitimacy of suicide, physician assisted or not, the

ethics of human reproduction, allocating scarce medical resources in an ageing population, and the ethics of genetic engineering.

**PHIL-2260. Law, Punishment and Morality**
An introduction to the philosophical issues related to understanding the nature of law and legal obligation, the relation between law and morality, and the purpose of punishment. The theoretical points and distinctions will be illustrated by their applications to particular current issues. (Prerequisite: semester 3 or above standing, or consent of the instructor.)

**PHIL-2270. Environmental Ethics**
What ethical obligations do we have to the non-human environment? The course examines various answers to that question. Topics may include: animal rights, the moral status of non-human life, the intrinsic value of ecosystems, the importance of wilderness, deep ecology, eco-feminism, economic development, environmentalism, and politics.

**PHIL-2280. Technology, Human Values and the Environment**
An exploration of the philosophically important ethical concepts of human nature, freedom, progress, the good life, moral responsibility, and the environment as these relate to advances in technology. Topics may include: pollution, mass production, the commodification of nature, new technologies (e.g., biotechnology, nanotechnology).

**PHIL 2300. Indigenous Philosophy of the Americas**
An introduction to the philosophical thought associated with the narratives, culture, and traditions of the Indigenous people in North, Central, and South America. Topics include (but are not limited to): creation stories, Indigenous responses to European 'discovery,' legal reasoning concerning indigenous people/communities, subjects of scientific examination, indigenous epistemology, environmental concerns, identity, activism, and the effects of colonialism (such as residential schools, land allotment/reserves, the 60's Scoop, and cultural appropriation.) (Prerequisite: Semester 3 standing.)

**PHIL-2360. Feminist Philosophies**
An examination of key philosophical themes in feminism and philosophical debates among feminists. The themes and subjects of debate addressed may include sexism and oppression; feminist identity; the political significance of language, personal appearance, and pornography; feminist ethics; and feminist theories of knowledge. (Prerequisite: Semester 3 or above standing; or consent of the instructor. Can be taken as an Arts credit) (Also offered as Women's and Gender Studies WGST-2360)

**PHIL-2380. Social Identity, Diversity and Race**
This course explores the philosophical significance of social identity and the value of diversity with particular attention to issues of race and ethnicity. Philosophical issues to be examined may include: the scientific and socio-political nature of race categories; the status and effectiveness of minority rights in liberal democracy; problems arising from the intersection of race and ethnicity with other political dimensions such as gender and class; the status of general philosophical values across diverse cultures. (Prerequisite: semester 3 or above standing.)

**PHIL-2400. Philosophy of Religion**
An examination of the philosophical problems involved with religious belief and language. Can the existence of God be proven? Can the non-existence of God be proven? Can claims to religious knowledge be legitimized? Is there a unique logic of religious language that is cognitively meaningful? Is there any basis for claims about life after death? What is the nature of faith? These are the sorts of questions which are dealt with in this course. (Prerequisite: Semester 3 or above standing.)

**PHIL-2430. Philosophy of Art**
Aesthetics is concerned with problems which arise in the appreciation of objects which are deemed to have aesthetic value. Problems which may be raised in this course include the nature of aesthetic experience and aesthetic objects such as works of art and nature, as well as problems related to aesthetic value and judgment. (Prerequisite: Semester 3 or above standing.)

**PHIL-2500. Metaphysics**
An examination of fundamental questions about the nature of reality. What kinds of things are real; what distinguishes the real from the ideal, or the real from the illusory? Are there abstract entities (e.g., numbers)? The nature of necessity and possibility, essence and existence. (Prerequisite: Semester 3 or above standing; or consent of the instructor.)

**PHIL-2520. Existentialism**
A study of the views of some of the major existentialists. Figures studied may include Kierkegaard, Nietzsche, Sartre, Merleau-Ponty, Camus, and Jaspers. (Prerequisite: Semester 3 or above standing.)

**PHIL-2530. Mind, Action, and Personal Identity**
An examination of: contemporary views of the nature of mind and its relationship to body; whether human action is free, determined, or both; the relationship between a theory of personal identity and the answers to the preceding questions. (Prerequisite: Semester 3 or above standing.)

**PHIL-2540. Theory of Knowledge**
An examination of the nature of knowledge, with topics such as: definitions of knowledge, accounts of its structure, the extent and limits of knowledge, the relationship between experience and knowledge, the bases of rational or justified belief formation. (Prerequisite: Semester 3 or above standing; or consent of the instructor.)

**PHIL-2550. Knowledge, Science, and Society**
The course explores the relationship between what individuals know and their participation in society, including as members of scientific communities. Topics may include: the ways communities rather than individuals can hold knowledge; how cognitive authority depends on a person's membership in, and social position in, society; the role of testimony in knowledge; how the legal system creates knowledge; the roles of gender, race, class, and culture in knowledge; and the ethical implications of knowledge. (Prerequisite: semester 3 or above standing.)

**PHIL-2570. Philosophy of Science**
What is a scientific explanation? A theory? How does observation relate to theory? Do theories describe reality, or are they just conventional tools? The course examines answers to these and similar questions, and the general conceptions of science behind the answers. (Prerequisite: Semester 3 or above standing.)

**PHIL-2600. Fallacies and Biases**
The objective is to develop the ability to discriminate between good and bad reasons found in everyday settings, using tools of argumentation theory. A variety of errors of reasoning such as those involving cognitive biases and/or fallacies are explained, and the skills needed to identify them are introduced. The basic tools for analyzing arguments are presented and put to use. Material for analysis is drawn from social media, newspapers, current periodicals, and other sources of actual arguments. (Prerequisite: Semester 3 or above standing; or consent of the instructor.))

**PHIL-2610. Argumentation**
The objective is to develop the ability to analyze and evaluate extended arguments found in the public media, books and articles, and to construct a well-argued case. (Prerequisite: PHIL-2600 or PHIL-1600 or PHIL-1620 and semester 3 or above standing; or consent of the instructor.)

**PHIL-2620. Symbolic Logic**
The course covers propositional logic as well as an introduction to the basic concepts of predicate logic. Topics include the construction of symbolic representation of natural language sentences, semantic methods for evaluating symbol formulas, and methods of constructing deductions or proofs. (Prerequisite: Semester 3 or above standing, or permission of the instructor. Antirequisite for non-Philosophy majors: COMP-2310, MATH-1020.)

**PHIL-2660. Reasoning about Weird Things**
How to evaluate extraordinary claims, such as claims about psychic phenomena (e.g. ESP), subliminal messages, crop circles, and water divining. The course may include topics such as: the limits of personal experience as a source of evidence, expert opinion, assessment of studies, scientific method. (Prerequisite: Semester 3 or above standing; or consent of instructor.)

**PHIL-2730. Ancient Greek Philosophy**
The course is a survey of major thinkers and themes in Greek philosophy with particular emphasis on Plato and Aristotle, but may include attention to Pre-Socratic and post-Aristotelian thinkers. The course will concentrate on the main developments in Greek, philosophy, including metaphysics, epistemology, politics, and ethics.

**PHIL-2760. Early Modern Philosophy**
The course will examine the development and major problems of rationalist and empiricist philosophy during the historical period of the rise of modern natural science. It will emphasize the metaphysical and epistemological changes introduced into Western philosophy during this period. Thinkers studied will include Descartes and Hume. Other thinkers examined may include one or more of Bacon, Locke, Berkeley, Spinoza, and Leibniz.

**PHIL-2800-PHIL-2890. Special Topics**
Special Topics courses will be offered occasionally, as resources allow, to meet a demonstrated academic need, where that need cannot be satisfied by any of the regular course offerings. Interested students should inquire in the Philosophy office. (Prerequisites: Semester 3 or above standing or permission of an advisor in Philosophy.)(May be repeated for credit if content changes.)

**PHIL-3190. Social Pathologies**
The course examines the emergence of pathological forms of social life that systematically undermine human interaction, distort social communication, and falsify individual and group consciousness. The course may explore the work of major social thinkers such as Rousseau, Hegel, Marx, Lukacs, Weber, Schmidt, Freud, Adorno, Marcuse, Arendt, Habermas and Honneth or investigate one or more specific forms of modern social pathologies such as racism, gender inequality, colonialism, extreme poverty, the destruction of the environment.(Prerequisite: PHIL-2210 or permission of the instructor).(Also offered as POLS-3190.)

**PHIL-3210. Advanced Topics in Ethical Theory**
This course will examine issues in ethical theory at an advanced level. Topics may include detailed and critical examination of ethical theories, rigorous exploration of the differences between ethics and other kinds of normative practices and theories, meta-ethical questions regarding the nature of the good, or

the relation between ethics, politics and other aspects of social life. The authors studied may be wide ranging, depending on the particular focus of the instructor. (Prerequisite PHIL-2210)

**PHIL-3230. Human Rights and Global Justice**
The course will focus on the meaning and nature of human rights and their relationship to global justice. Topics may include: the historical development of human rights doctrines, their relationship to classical citizenship rights, the relationship between universal human rights and culturally distinct life ways, relationship between legal/moral principles, material reality, and different conceptions of global justice, the strengths and limitations of human rights as principles to advance global justice. (Prerequisite: Semester 3 or above standing, or permission of the instructor.)](Also offered as POLS-3620.)

**PHIL-3290. Animals Ethics**
The course examines philosophical views about our relationship to animals and the relation of these views to the evaluation of moral principles and ethical theories, including notions of justice and rights. It may cover such topics as: attitudes towards animals, animal awareness and autonomy, whether moral consideration should be extended to animals, whether animals have rights. (Prerequisites: Semester 3 standing and at least one prior Philosophy course, or permission of the instructor.)

**PHIL-3300. Environmental Philosophy**
This is an advanced philosophical exploration of some of the key intersections between humanity and the environment. The focus will be on articulating, understanding and evaluating important relations between the human and the non-human environment. Issues covered may include: the philosophy of nature, technology and environment, science and environment, metaphysics and environment, ecofeminism, radical ecology, and environmental politics. (Prerequisites: Semester 3 standing and at least one Philosophy course, or permission of the instructor)

**PHIL-3420. Philosophy of Education**
A critical examination of theories about the nature, goals and values of education. The approach of the course may be historical, contemporary or a combination. (Prerequisites: Semester 3 or above standing and at least one prior Philosophy course, or consent of the instructor.)

**PHIL-3520. Philosophy and Language**
This course will introduce students to philosophical conceptions of language. Its focus may range from an historical overview of the philosophy of language, from either analytic or continental perspectives. Thinkers covered may include Ludwig Wittgenstein, A. J. Ayer, Robert Brandom or Hans Georg Gadamer. (Prerequisite: Fifth semester standing).

**PHIL-3550. Post-structuralist Theory**
Philosophers studied in this course may include Derrida, Foucault, Lyotard, Deleuze, and Guattari. (Prerequisite: PHIL-1100 or PHIL-1120, or at least one 2000-level Philosophy course, or consent of the instructor.)

**PHIL-3590. Women, Knowledge and Reality**
An exploration of feminist theories about knowledge and reality that inform and are informed by scholarship in Women's Studies. Students examine how gender might affect identity, reasoning, objectivity, and evidence, and in turn, how such variations might affect feminist political practices. (Prerequisites: Two courses at the 2000-level or above from Women's and Gender Studies and/or Philosophy an at least semester 5 standing.) (Also offered as Women's and Gender Studies WGST-3590.)

**PHIL-3600. Argumentation Theory**

Topics may include: the nature and uses of argument; the evaluation of argument; arguments and argumentation; the relations between argument and rhetoric, logic, and pragmatics; linguistic theories of argument; ethics and epistemology related to argument; the role of argument in philosophy. (Prerequisite: PHIL-2600 or PHIL-2610, or consent of the instructor.)

**PHIL-3700. Reason and Revolution: The Enlightenment.**
The Enlightenment ushers in a new era in modern philosophy whose tenets are the autonomy of reason in the face of prejudice, individual dignity as the foundation for social justice, moral progress through human perfectibility, and the scientific explanation of the world of nature. This course explores the emergence and development of these ideas in the work of prominent representatives of the Scottish, French and German Enlightenment such as Hume, Smith, Reid, Rousseau, Voltaire, Diderot, D'Alembert, Lessing, Kant, Wollstonecraft, and Herder. (At least third semester standing, and one philosophy course with a middle digit of seven, or permission of the instructor.)

**PHIL-3760. Kant**
A study of the critical philosophical writings of Immanuel Kant. Topics may include Kant's theories about: the limits of human knowledge, how knowledge in mathematics and the natural sciences is possible, whether it is possible to have moral knowledge, whether it is possible to have religious knowledge. (Prerequisite: PHIL-2760, or consent of the instructor.)

**PHIL-3780. Nineteenth Century Philosophy: System and Freedom**
Various nineteenth century thinkers may be studied in this course, from either the pragmatist or European traditions, including Hegel, Feuerbach, Marx, Kierkegaard, Nietzsche, but also Dilthey, Schopenhauer, Comte, Mill, Peirce and others. (Prerequisite: PHIL-1100 or PHIL-1120, or at least one 2000-level Philosophy course, or consent of the instructor.)

**PHIL-4000 to PHIL-4100. Senior Seminars**
Senior seminars are the undergraduate sections of M.A. courses. (Normally open only to Philosophy majors in the final year of their program. Consent of the instructor is required. Consult a program advisor during the term preceding planned registration.)

**PHIL-4260. Philosophy of Law**
The objective of this course is to introduce the student to contemporary issues concerning the philosophy of law, to include European and Indigenous law. Particular emphasis will be placed upon the presupposed relation of concepts to society, including European and Indigenous. The course will examine such issues as the difference and relation of legitimacy to legality, the relation of legal analysis to social needs, the relation of morality and ethicality to the content of legal rules and legal reasoning. (Pre-requisite: Final Year of Honour's B.A or by instructor permission) (Cross-listed with PHIL-8260.)

**PHIL-4710. Recent Continental Philosophy**
A study of significant developments in recent French Continental thought. The content of the course will vary according to the Instructor's interests and background. Traditions that might be examined include existential phenomenology, Marxism, deconstruction, and post-structuralism. (Prerequisite: PHIL-1100 or PHIL-1120, at least one 2000-level or above Philosophy course, and semester 5 or above standing.

**PHIL-4720. Analytic or Pragmatist Philosophy**
Advanced study of themes and trends in Analytic or Pragmatist philosophy. Ordinarily, the topic will rotate on a yearly basis between Analytic Philosophy, in which logic, language, and scientific evidence play central roles and Pragmatist Philosophy. (Prerequisite: PHIL-1100, or PHIL-1120, and at least one 2000-level or above Philosophy course, and semester 5 or above standing, or permission of instructor.) (Cross-listed with PHIL-8720.)

**PHIL-4760. Advanced Studies in Ancient or Early Modern Philosophy**
An in-depth investigation of a philosopher, text, or movement from either the Ancient or Early Modern period. Topics may include individual dialogues or texts of figures such as Plato, Aristotle, Seneca, Descartes or Hume. Or movements such as the Greek Sophists, Stoics, or British Empiricists. (Prerequisite: PHIL-2730).

**PHIL-4770. Hegel and German Idealism**
A study of early 19th century philosophy centered on the idealism of G.W.F. Hegel, focusing on such problems as the nature of the dialectic, the notion of absolute spirit, and the Hegelian conception of philosophy. (Prerequisite: PHIL-3760, or consent of the instructor.)

**PHIL-4910. Honours Seminar**
The aim of the seminar is to give students a solid historical background in a given area of philosophy (e.g. ethics, epistemology, metaphysics). A philosophical theme is traced through a number of key figures in the history of philosophy. (Open only to four-year Honours in Philosophy students in their final year.)

# POLITICAL SCIENCE

## PROGRAMS

### General Political Science

**Degree Requirements**

Total courses: thirty.

(a) POLS-1000, POLS-1300 and POLS-1600;
(b) nine additional courses Political Science including at least three at the 3000-level or above. (Note: students interested in switching to Honours Political Science should take SOSC-2500, POLS-2750, and one of POLS-2510 or POLS-2520)
(c) two courses from Arts;
(d) two courses from Languages or Science;
(e) two courses from any area of study, excluding Social Sciences.
(f) GART-1500, GART-1510;
(g) five courses from any area of study, including Political Science;
(h) five courses from any area of study, excluding Political Science.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

Subfields (students are strongly encouraged to take at least one course from each subfield)

Canadian Politics
2000-level: POLS-2010, POLS-2110, POLS-2130, POLS-2640
3000-level: POLS-3090, POLS-3200, POLS-3230, POLS-3260
4000-level: POLS-4110, POLS-4120

Comparative Politics
2000-level: POLS-2320, POLS-2330, POLS-3350, POLS-2410, POLS-2440
3000-level: POLS-4400, POLS-3460, POLS-3650, POLS-3670
4000-level: POLS-4310, POLS-4340

International Relations and Development Studies
1000-level: POLS-1709
2000-level: POLS-2490, POLS-2670, POLS-2680
3000-level: POLS-3540, POLS-3550, POLS-3560, POLS-3600, POLS-3630
4000-level: POLS-4610, POLS-4620, POLS-4640, POLS-4650

Political Theory, Culture and Religion
2000-level: POLS-2510, POLS-2520, POLS-2600, POLS-2610
3000-level: POLS-3519, POLS-3720, POLS-3780, POLS-3790
4000-level: POLS-4510

Public Administration, Law and Policy
2000-level: POLS-2120, POLS-2140, POLS-2200, POLS-2210
3000-level: POLS-3140, POLS-3210, POLS-3240, POLS-3610, POLS-3920, POLS-3990
4000-level: POLS-4210, POLS-4220,and POLS-4920 (taken concurrently)

## Honours Political Science

**Degree Requirements**

Total courses: forty.

(a) POLS-1000, POLS-1300, POLS-1600 and POLS-2750;
(b) one of POLS-2510 or POLS-2520 [should be taken in Semester 3, 4 or 5]
(c) fourteen additional Political Science courses, including at least two at the 3000-level and three at the 4000-level.
(d) two courses from Arts;
(e) two courses from Languages or Science;
(f) two courses from any area of study, excluding Social Sciences.
(g) GART-1500, GART-1510, SOSC-2500;
(h) six courses from any area of study, including Political Science;
(i) six courses from any area of study, excluding Political Science.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

Subfields (students are strongly encouraged to take at least one course from each subfield)

Canadian Politics
POLS-2010, POLS-2110, POLS-2130, POLS-2640
POLS-3090, POLS-3200, POLS-3230, POLS-3260
POLS-4110, POLS-4120

Comparative Politics
POLS-2320, POLS-2330, POLS-3350, POLS-2410, POLS-2440
POLS-4400, POLS-3460, POLS-3650, POLS-3670
POLS-4310, POLS-4340

International Relations and Development Studies
POLS-1709
POLS-2490, POLS-2670, POLS-2680
POLS-3540, POLS-3550, POLS-3560, POLS-3600, POLS-3630
POLS-4610, POLS-4620, POLS-4640, POLS-4650

Political Theory, Culture and Religion
POLS-2510, POLS-2520, POLS-2600, POLS-2610
POLS-3519, POLS-3720, POLS-3780, POLS-3790
POLS-4510

Public Administration, Law and Policy
POLS-2120, POLS-2140, POLS-2200, POLS-2210

POLS-3140, POLS-3210, POLS-3240, POLS-3610, POLS-3990
POLS-4210, POLS-4220, POLS-4920 and POLS-3920 (taken concurrently)

## Honours Political Science (with Thesis)

**Degree Requirements**

Total courses: forty.

(a) POLS-1000, POLS-1300, POLS-1600, POLS-2700, and POLS-2750, POLS-4970 and POLS-4980;
(b) one of POLS-2510 or POLS-2520 [should be taken in Semester 3, 4 or 5]
(c) eleven additional Political Science courses, including at least two at the 3000-level and one other at the 4000-level.
(d) two courses from Arts;
(e) two courses from Languages or Science;
(f) two courses from any area of study, excluding Social Sciences.
(g) GART-1500, GART-1510, SOSC-2500;
(h) six courses from any area of study, including Political Science;
(i) six courses from any area of study, excluding Political Science.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

Students maintaining cumulative and major averages of 80% upon beginning semester 7 will complete an undergraduate thesis under the supervision of a faculty member in the department during semesters 7 and 8 of the program through successful completion of the courses POLS-4970 and POLS-4980.

## Honours Political Science with French Specialization

**Degree Requirements**

Total courses: forty.

(a) University of Windsor [14 courses]:
(i) POLS-1000, POLS-1300, POLS-1600 and POLS-2750;
(ii) two of POLS-2035, POLS-2045 or POLS-2055 [French];
(iii) one of POLS-2510 or POLS-2520 [to be taken in Semester 3,4 or 5]
(iv) seven additional Political Science courses, including at least two at the 3000-level and three at the 4000-level.

(b) University of Ottawa [5 courses]:
POL2507. Introduction à la pensée politique
POL3514. Vie politique en Asie
POL3525. Pouvoir municipal au Canada
POL3526. Les femmes et la politique
POL3533. Politique et medias
POL3540. Vie politique aux États-Unis
POL3542. Vie politique en Europe occidentale
POL3544. Vie politique en Afrique

Or other approved course at the 2000-level or above

OR Five Political Science Courses in French taken on exchange or a letter of permission at a French-speaking university with the advanced approval of the department.

(c) two courses from Arts;
(d) two courses from Languages or Science;
(e) two courses from any area of study, excluding Social Sciences.
(f) GART-1500, GART-1510, SOSC-2500;
(g) FREN-1210, FREN-1220, FREN-2210, FREN-2220 and FREN-2700;
(h) one of FREN-2530, FREN-2600 or FREN-2830;
(i) three courses from any area of study, including Political Science;
(j) three courses from any area of study, excluding Political Science.

Courses used to calculate the major average are: course listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

**Suggested Program Sequencing**

Year 1 [Semester 1]
GART-1500. Effective Writing I
FREN-1210. French Language Training I [French]
POLS-1000. Introduction to Canadian Government and Politics
POLS-1300. Comparative Politics or POLS-1600. World Politics
One additional course

Year 1 [Semester 2]
GART-1510. Effective Writing II
FREN-1220. French Language Training II [French]
POLS-1300. Comparative Politics or POLS-1600. World Politics
Two additional courses

Year 2 [Semester 3]
SOSC-2500. Basic Quantitative Methods in the Social Sciences
FREN-2210. French Language Training III [French]
POLS-2055. Contemporary Canadian Political Issues [French]
POLS-2035. Quebec Politics and Society [French]
One additional course

Year 2 [Semester 4]
POLS-2750. Introduction to Research Methods
FREN-2220. French Language Training IV [French]
POLS-XXX. Political Science course (Note: POLS-2510 or POLS-2520 should be taken in Sem. 3, 4 or 5)
POLS-2045. Issues in Quebec Politics [French]
One additional course

Year 3 [Semester 5]
One of FREN-2530, FREN-2600 or FREN-2830 [French]
FREN-2700. Intro to Cultural Heritage of French Canada [French]
POLS-XXX. Political Science course (Note: POLS-2510 or POLS-2520 should be taken in Sem. 3, 4 or 5)

Two additional courses

Year 3 [Semester 6 –University of Ottawa] Five of:
POL2507. Introduction à la pensée politique [French]
POL3514. Vie politique en Asie [French]
POL3525. Pouvoir municipal au Canada [French]
POL3526. Les femmes et la politique [French]
POL3533. Politique et medias [French]
POL3540. Vie politique aux États-Unis [French]
POL3542. Vie politique en Europe occidentale [French]
POL3544. Vie politique en Afrique [French]
Or other approved course at the 2000-level or above [French]

Year 4 [Semester 7]
POLS-XXX. Political Science course [3000-level]
POLS-XXX. Political Science course [3000-level]
Three additional courses

Year 4 [Semester 8]
POLS-XXX. Political Science course [4000-level]
POLS-XXX. Political Science course [4000-level]
POLS-XXX. Political Science course [4000-level]
Two additional courses

## Honours Political Science with French Specialization and Thesis

**Degree requirements**

Total courses: forty (40)

(a) University of Windsor [14 courses]:
(i) POLS-1000, POLS-1300, POLS-1600 and POLS-2750;
(ii) two of POLS-2035, POLS-2045 or POLS-2055 [French];
(iii) one of POLS-2510 or POLS-2520 [to be taken in Semester 3,4 or 5]
(iv) POLS-2700, POLS-4970 and POLS-4980
(v) four additional Political Science courses, including at least two at the 3000-level and one other at the 4000-level.
(b) University of Ottawa [5 courses]:
POL2507. Introduction à la pensée politique
POL3514. Vie politique en Asie POL3525. Pouvoir municipal au Canada
POL3526. Les femmes et la politique POL3533. Politique et medias
POL3540. Vie politique aux États-Unis POL3542. Vie politique en Europe occidentale
POL3544. Vie politique en Afrique Or other approved course at the 2000-level or above
Or Five Political Science Courses in French taken on exchange or a letter of permission at a French-speaking university with the advanced approval of the department.
(c) two courses from Arts;
(d) two courses from Languages or Science;
(e) two courses from any area of study, excluding Social Sciences.
(f) GART-1500, GART-1510, SOSC-2500;
(g) FREN-1210, FREN-1220, FREN-2210, FREN-2220 and FREN-270;

(h) one of FREN-2530, FREN-2600 or FREN-2830
(i) three courses from any area of study, including Political Science
(j) three courses from any area of study, excluding Political Science.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

Students maintaining cumulative and major averages of 80% upon beginning semester 7 will complete an undergraduate thesis under the supervision of a faculty member in the department during semesters 7 and 8 of the program through successful completion of the courses POLS-4970 and POLS-4980.

## Honours Law and Politics

**Degree Requirements**

Total courses: forty (40)

(a) POLS-1000, POLS-1300, POLS-1600 and POLS-2750;
(b) one of POLS-2510 or POLS-2520 [should be taken in Semester 3, 4 or 5];
(c) POLS-2140 and POLS-3140;
(d) one of POLS-2680, POLS-3600, POLS-3620/PHIL-3230, or POLS-3630
(e) three of POLS-2010, POLS-2120, POLS-2200, POLS-2210, POLS-3090, POLS-3210, POLS-3230, POLS-3240, and POLS-3260;
(f) nine additional Political Science courses, including at least three at the 4000-level;
(g) two courses from Arts;
(h) two courses from Languages or Science;
(i) two courses from any area of study, excluding Social Sciences;
(j) GART-1500, GART-1510, SOSC-2500, PHIL-1600, and PHIL-2610;
(k) one of GART-2090 or PHIL-2210;
(l) two of PHIL-2260, HIST-2870, SACR-2620, WGST-3100, and WORK-2000;
(m) three courses from any area of study, including Political Science;
(n) three courses from any area of study, excluding Political Science.

Courses used to calculate the major average are: course listed under requirements (a) to (f), and any courses taken in the major area(s) of study.

**Recommended Course Sequencing**

Year 1 [Semester 1]
GART-1500. Effective Writing I
POLS-1000. Introduction to Canadian Government and Politics
POLS-1300. Comparative Politics or POLS-1600. World Politics
Two additional courses

Year 1 [Semester 2]
GART-1510. Effective Writing II
POLS-1300. Comparative Politics or POLS-1600. World Politics
POLS-XXXX. Political Science course
Two additional courses

Year 2 [Semester 3]
SOSC-2500. Basic Quantitative Methods in the Social Sciences
POLS-XXXX. Political Science course [Note: POLS-2510 or POLS-2520 should be taken in Sem. 3, 4 or 5]
POLS-XXXX. Political Science course
PHIL-1600. Reasoning Skills
One additional course

Year 2 [Semester 4]
POLS-2750. Introduction to Research Methods
POLS-XXXX. Political Science course [Note: POLS-2510 or POLS-2520 should be taken in Sem. 3, 4 or 5]
POLS-XXXX. Political Science course
PHIL-2610. Informal Logic: Argumentation [prerequisite: PHIL-1600]
One additional course

Year 3 [Semester 5]
POLS-XXXX. Political Science course [Note: POLS-2510 or POLS-2520 should be taken in Sem. 3, 4 or 5]
POLS-XXXX. Political Science course
POLS-XXXX. Political Science course
One additional course

Year 3 [Semester 6]
POLS-XXXX. Political Science course
POLS-XXXX. Political Science course
Three additional courses

Year 4 [Semester 7]
POLS-3XXX. Political Science course
POLS-3XXX. Political Science course
Three additional courses

Year 4 [Semester 8]
POLS-4XXX. Political Science course
POLS-4XXX. Political Science course
POLS-4XXX. Political Science course
Two additional courses

## Honours Law and Politics (with Thesis)

**Degree requirements**

Total courses: forty

(a) POLS-1000, POLS-1300, POLS-1600 and POLS-2750;
(b) one of POLS-2510 or POLS-2520 [should be taken in Semester 3, 4 or 5];
(c) POLS-2140 and POLS-3140;
(d) one of POLS-2680, POLS-3600, POLS-3620/PHIL-3230, or POLS-3630
(e) three of POLS-2010, POLS-2120, POLS-2200, POLS-2210, POLS-3090, POLS-3210, POLS-3230, POLS-3240, and POLS-3260;
(f) nine additional Political Science courses, including POLS-4970, POLS-4980 and one other at the 4000-level;

(g) two courses from Arts;
(h) two courses from Languages or Science;
(i) two courses from any area of study, excluding Social Sciences;
(j) GART-1500, GART-1510, SOSC-2500, PHIL-1600, and PHIL-2610;
(k) one of GART-2090 or PHIL-2210;
(l) two of PHIL-2260, HIST-2870, SACR-2620, WGST-3100, and WORK-2000;
(m) three courses from any area of study, including Political Science;
(n) three courses from any area of study, excluding Political Science.

Courses used to calculate the major average are: courses listed under requirements (a) to (f), and any courses taken in the major area(s) of study.

Description of thesis option (if applicable): Students maintaining cumulative and major averages of 80% upon beginning semester 7 will complete an undergraduate thesis under the supervision of a faculty member in the department during semesters 7 and 8 of the program through successful completion of the courses POLS-4970 and POLS-4980.

## Honours International Relations and Development Studies

**Degree Requirements**

Total courses: forty.

(a) POLS-1000, POLS-1300, POLS-1600, POLS-2640 or 2670, POLS-2750, POLS-3540 or POLS-3550, POLS-3600, POLS-4610, POLS-4620;
(b) HIST-1230, HIST-1240;
(c) One of POLS-2510 or POLS-2520
(d) Three of POLS-2300, POLS-2320, POLS-2330, POLS-2350, POLS-2410, POLS-2440, POLS-2450, POLS-2490, POLS-2600, POLS-2610, POLS-2640 or POLS-2670 (if not taken under requirements for (a)), POLS-2680;
(e) Two of POLS-3350, POLS-3460, POLS-3540 or POLS-3550 (if not taken under requirements for (a)), POLS-3560, POLS-3610, POLS-3620/PHIL-3230, POLS-3630, POLS-3650, POLS-3670, POLS-3720;
(f) One of POLS-4310, POLS-4340, POLS-4410, POLS-4420, POLS-4430, POLS-4640, POLS-4650, POLS-4950, POLS-4960;
(g) ECON-1100 or ECON-2000, ECON-1110 or ECON-2010(students pursuing an Economics Minor for requirement (i) may take two additional elective courses under requirement (j) below);
(h) GART-1500, GART-1510, SOSC-2500;
(i) Minor in one of: Arabic Studies; Business Administration; Communication, Media, and Film; Economics; Entrepreneurship; French Studies; Geography; History; Jewish Studies; Latin American Studies; Modern Languages; Philosophy; Sociology; Women's and Gender Studies; Indigenous Studies; Race and Ethnicity Studies. (Minors consist of 6 courses, but note that some courses may require prerequisites that are not part of the Minor; students are strongly encouraged to seek academic guidance from the academic advisor in the appropriate department);
(j) Eleven courses from any area of study, at least five of which must be outside Political Science

Courses used to calculate the major average are: courses listed under requirements (a) to (f) and any courses taken in the major area(s) of study.

# Honours International Relations and Development Studies (with Thesis)

**Degree requirements**

Total courses: forty.

(a) POLS-1000, POLS-1300, POLS-1600, POLS-2640 or 2670, POLS-2750, POLS-3540 or POLS-3550, POLS-3600, POLS-4610, POLS-4620, POLS-4970, POLS-4980;
(b) HIST-1230, HIST-1240;
(c) One of POLS-2510, or POLS-2520;
(d) Three of POLS-2300, POLS-2320, POLS-2330, POLS-2350, POLS-2410, POLS-2440, POLS-2450, POLS-2490, POLS-2600, POLS-2610, POLS-2640 or POLS-2670 (if not taken under requirements for (a)), POLS-2680;
(e) Two of POLS-3350, POLS-3460, POLS-3540 or POLS-3550 (if not taken under requirements for (a)), POLS-3560, POLS-3610, POLS-3620/PHIL-3230, POLS-3630, POLS-3650, POLS-3670, POLS-3720, POLS-4310, POLS-4340, POLS-4410, POLS-4420, POLS-4430, POLS-4640, POLS-4650, POLS-4950, POLS-4960;
(f) ECON-1100 or ECON-2000, ECON-1110 or ECON-2010 (students pursuing an Economics Minor for requirement (h) may take two additional elective courses under requirement (i) below);
(g) GART-1500, GART-1510, SOSC-2500;
(h) Minor in one of: Arabic Studies; Business Administration; Communication, Media, and Film; Economics; Entrepreneurship; French Studies; Geography; History; Jewish Studies; Latin American Studies; Modern Languages; Philosophy; Sociology; Women's and Gender Studies; Indigenous Studies; Race and Ethnicity Studies. (Minors consist of 6 courses, but note that some courses may require prerequisites that are not part of the Minor; students are strongly encouraged to seek academic guidance from the academic advisor in the appropriate department);
(i) Ten courses from any area of study, at least five of which must be outside Political Science

Courses used to calculate the major average are: courses listed under requirements (a) to (e), and any courses taken in the major area(s) of study.

Students maintaining cumulative and major averages of 80% upon beginning semester 7 will complete an undergraduate thesis under the supervision of a faculty member in the department during semesters 7 and 8 of the program through successful completion of the courses POLS-4970 and POLS-4980.

# Combined Honours Political Science Programs

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a) POLS-1000, POLS-1300, POLS-1600, and POLS-2750; one of POLS-2510 or POLS-2520 [should be taken in Semester 3, 4 or 5]; and ten additional courses, including at least three at the 4000-level.
(b) Course requirements - Other Subject; courses used to calculate the major average in the other subject area, as prescibed by that area of study.
(c) GART-1500, GART-1510, SOSC-2500;
(d) two courses from Arts;
(e) two courses from Languages or Science;
(f) two courses from any area of study, excluding Social Sciences.
(g) additional courses from any area of study to a total of forty courses.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

Subfields (students are strongly encouraged to take at least one course from each subfield)

Canadian Politics
POLS-2010, POLS-2110, POLS-2130, POLS-2640
POLS-3090, POLS-3200, POLS-3230, POLS-3260
POLS-4110, POLS-4120

Comparative Politics
POLS-2320, POLS-2330, POLS-3350, POLS-2410, POLS-2440
POLS-4400, POLS-3460, POLS-3650, POLS-3670
POLS-4310, POLS-4340

International Relations and Development Studies
POLS-1709
POLS-2490, POLS-2670, POLS-2680
POLS-3540, POLS-3550, POLS-3560, POLS-3600, POLS-3630
POLS-4610, POLS-4620, POLS-4640, POLS-4650

Political Theory, Culture and Religion
POLS-2510, POLS-2520, POLS-2600, POLS-2610
POLS-3519, POLS-3720, POLS-3780, POLS-3790
POLS-4510

Public Administration, Law and Policy
POLS-2120, POLS-2140, POLS-2200, POLS-2210
POLS-3140, POLS-3210, POLS-3240, POLS-3610, POLS-3990
POLS-4210, POLS-4220, POLS-4920 and POLS-4920 (taken concurrently)

## Combined Honours Political Science Programs with Thesis in Political Science

**Degree requirements**

Total courses: forty.

(a) POLS-1000, POLS-1300, POLS-1600, POLS-2700, POLS-2750, POLS-4970 and POLS-4980; one of POLS-2510 or POLS-2520 [should be taken in Semester 3, 4 or 5]; and seven additional courses, including at least one other at the 4000-level.
(b) Course requirements - Other Subject; courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) GART-1500, GART-1510, SOSC-2500;
(d) two courses from Arts;
(e) two courses from Languages or Science;
(f) two courses from any area of study, excluding Social Sciences.
(g) additional courses from any area of study to a total of forty courses.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

Students maintaining cumulative and major averages of 80% upon beginning semester 7 will complete an undergraduate thesis under the supervision of a faculty member in the department during semesters 7 and 8 of the program through successful completion of the courses POLS-4970 and POLS-4980.

## Honours Business Administration and Political Science (with/without thesis)

This is a joint offering between the Department of Political Science and the Odette School of Business. See Odette School of Business for details.

## Honours Business Administration and Political Science with Human Resources Specialization) (with/without thesis)

This is a joint offering between the Department of Political Science and the Odette School of Business. See Odette School of Business for details.

## Concurrent General Bachelor of Arts (Political Science)/Bachelor of Education

Direct admissions from high school only.

This is a joint offering between Political Science and the Faculty of Education. See Faculty of Education for program requirements.

## General Political Science for Hebei Law and Politics College Graduates - Degree Completion Pathway

**Admission Requirements**

(a) Academic standard:
Students shall complete the respective courses and earn the required credits at HPLC according to each specific program. Students with grade point average of 80% are eligible to be admitted to the University of Windsor Political Science program.

(b) Language skills
Students must provide certificate evidencing proficiency in English by one of the options below:
TOEFL: a minimum of 560 on paper based, or 83 iBT with 20 for writing, 220 computer-based test with a T.W.E. 4.5 on the computer-based test
IELTS: a minimum of 6.5 for undergraduate programs
ELIP: 75% in level 3 in English Language Improvement Program administered by University of Windsor

**Degree Requirements**

Total courses: 20 courses

(a) POLS-1000, POLS-1300 and POLS-1600;
(b) seven additional courses, including at least three at the 3000-level or above. (Note: students interested in switching to Honours Political Science should take SOSC-2500, POLS-2750, and one of POLS-2510 or POLS-2520)
(c) GART-1500, GART-1510;
(d) two courses from any area of study, including Political Science;
(e) two courses from any area of study, excluding Political Science.
(f) one courses from Arts;
(g) one courses from Languages or Science;
(h) two courses from any area of study, excluding Social Sciences.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

**Recommended Course Sequencing**

First Semester
GART-1500
POLS-1000
POLS-1300
Two additional courses

Second Semester
GART-1510
POLS-1600
One additional course from requirement (b)
Two additional courses

Third Semester
Three major requirements
One option requirement
One other requirement

Fourth Semester
Three major requirements
Two additional courses

# Honours Political Science for Hebei Law and Politics College Graduates - Degree Completion Pathway

**Degree Requirements:**

Total courses: 30 courses

(a) POLS-1000, POLS-1300, POLS-1600 and POLS-2750;
(b) one of POLS-2510 or POLS-2520 [should be taken in Semester 3, 4 or 5]
(c) eleven additional courses, including at least two at the 3000-level and three at the 4000-level.
(d) GART-1500, GART-1510;
(e) three courses from any area of study, including Political Science;
(f) three courses from any area of study, excluding Political Science.
(g) two courses from Arts;
(h) two courses from Languages or Science;
(i) two courses from any area of study, excluding Social Sciences.

Courses used to calculate the major average are: courses listed under requirements (a) to (c), and any courses taken in the major area(s) of study.

**Recommended Course Sequencing**

First Semester
GART-1500
POLS-1000
POLS-1300
Two additional courses

Second Semester
GART-1510
POLS-1600
One additional course from requirement (b)
Two additional courses

Third Semester
POLS-2750
One additional course from requirement (b)
Two additional courses

Fourth Semester
POLS-2510 or POLS-2520
Two additional courses from requirement (b)
Two additional courses

Fifth Semester
One 4000 level major requirement
Two additional courses from requirement (b)
Two additional courses

Sixth Semester
Two 4000 level major requirements
Two additional courses from requirement (b)
One additional course

## Certificate in Border Management and International Trade

The Certificate Program in Border Management and International Trade bridges the traditional disciplines and creates a distinctive learning environment that aims to address emerging trends in the global economy. Border management refers both to the execution of customs, security and immigration functions by government agencies and to the administration of customs and other trade compliance, cross-border supply chains security and cross-border movement of personnel by private sector firms. Career paths in Border Management and International Trade include service in border related government agencies; international trade professionals such as customs brokers/managers and freight forwarders; logistics analysts and managers, storage and distribution managers, supply chain managers and supply chain security specialists; and international sales and marketing managers. The skills acquired in this program will also help owners and managers of small and medium sized firms expand their markets across international borders.

In addition to the University of Windsor's certificate, the program leads to professional certification by the Forum for International Trade Training (FITT) including a Level I Certificate (4 courses), Level II Certificate (8 courses) and the Certified International Trade Professional (8 courses plus one year of experience.) For details on FITT certification go to http://www.fitt.ca/home

New students (including mature students and professionals) apply via Ontario Universities' Application Centre (OUAC).

For more information, please, contact: CROSSBORDER@uwindsor.ca

**Requirements**

Total courses: 8

(a) CBMI-3000, CBMI-3100, CBMI-3150, CBMI-3200, CBMI-3250, CBMI-3300, CBMI-3350, CBMI-3400.

Other Requirements: Students must demonstrate level of competency aligned with course/program learning outcomes on a pass/fail grade in accordance with relevant rubrics.

## Certificate in Law and Politics

**Admission Requirements**
Admission requirements are the same as those for the Honours Political Science program.

**Requirements**

Total courses: Ten

a) POLS-1000, POLS-1600, and PHIL-1600 or PHIL-1620;

b) POLS-2140 and POLS-3140;
c) One of POLS-3630 or POLS-3620;
d) Four of ENGL-1001, PHIL 2210, PHIL-2260, SACR-2600, SACR-2620, HIST-2870, WGST-3100, WORK-2000, POLS-2000, POLS-2120, POLS-2200, POLS-2210, POLS-3000, POLS-3230, POLS-4000, POLS-4210, POLS-4220, INCS-2350, INCS-2360.

## Certificate in North American Studies

**Admission Requirements**
For domestic students: Minimum admission requirements for undergraduate degrees.

For International/Exchange students: Successful completion of at least one year of undergraduate study at an accredited degree-granting institution and clear competence in English for academic purposes. Positive recommendation for international students from the home university (if currently enrolled elsewhere).

**Requirements**

Total courses: ten

(a) POLS-1000, POLS-2320 , POLS-3350, POLS-4400, POLS-3550;
(b) Two of POLS-2640; POLS-2010; POLS-3610; POLS-4340; POLS-4650;
(c) Two of HIST-2430; HIST-2440; HIST-2470; HIST-2620; HIST-3490; HIST-3620; HIST-3630
(d) One of SACR-2280; SACR-3330; SACR-3390

## Certificate in Public Administration

**Admission Requirements**
Admission requirements are the same as those for the Honours Political Science program.

**Requirements**

Total courses: ten.

(a) POLS-1000, POLS-2200, POLS-2210:
(b) ECON-1100 and ECON-1110;
(c) five of POLS 2000; POLS 2120; POLS 2130; POLS 2140; POLS 2320; POLS 2750; POLS 3000; POLS 3090; POLS 3140; POLS 3200; POLS 3210; POLS 3230; POLS 3260; POLS 3920, POLS 4000; POLS 4110; POLS 4210; POLS 4220; POLS 4310, POLS 4920.

## Minor in Political Science

**Requirements**
(a) POLS-1000;
(b) one of POLS-1300 or POLS-1600;
(c) four Political Science courses at the 2000 level or above.

To be awarded a Minor in Political Science: Students must obtain an overall minimum average of 60% of the Political Science courses taken to fulfil the Minor.

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS)- Political Science

Major Concentration: 12 courses including

Maximum of two 1000-level courses in Political Science
(a) Must take either POLS-2510 or POLS-2520
(b) At least two 3000-level courses in Political Science
(c) At least three 4000-level course in Political Science

*Students are encouraged to take POLS-1000 and closely review prerequisites for other Political Science courses to ensure appropriate planning of their program of study.

Minor Concentration: 6 courses including,
(a) Maximum of two 1000-level courses in Political Science
(b) Must take either POLS-2510 or POLS-2520
(c) At least one 3000-level or 4000-level course in Political Science

*Students are encouraged to take POLS-1000 and closely review prerequisites for other Political Science courses to ensure appropriate planning of their program of study.

# POLITICAL SCIENCE COURSES

Political Science POLS-1000, POLS-1300, and POLS-1600 are required of all general and four-year Honours students. It is recommended that these be taken in the first year or as corequisite with 2000-level courses. Four-year Honours students are advised where possible to complete SOSC-2500 and POLS-2750 during their second year. Non-majors wishing to enrol in particular courses may do so except where specific prerequisites are stated. Not all courses will necessarily be offered each year. All courses are three hours a week unless otherwise indicated.

## POLITICAL SCIENCE COURSES

**POLS-1000. Introduction to Canadian Government and Politics**
An introduction to the politics and government of Canada. The course will focus on political culture, the constitution, federalism, the executive, parliament, public service, courts, political parties, interest groups, and elections. (3 lecture hours or 2 lecture hours, 1 tutorial hour a week.)

**POLS-1300. Comparative Politics in a Changing World**
Introduces students to issues such as democracy, authoritarianism, nationalism, political culture, and how political power is organized. The course focuses on the democratic states of the West, but also examines non-democratic states such as China and the transitional democracies of Eastern Europe. (3 lecture hours or 2 lecture hours, 1 tutorial hour a week.)

**POLS-1600. Introduction to International Relations**
An examination of competing perspectives on international relations and of such critical themes as power, security, war, imperialism, nationalism, interdependence, development and underdevelopment,

human rights, environmental concerns, and the quest for a new world order. (3 lecture hours or 2 lecture hours, 1 tutorial hour a week.)

**POLS-1709. Introduction to Diaspora Studies: There's No Place Like Home**
This course introduces students to diasporas-scattered populations living in exile from their ancestral homelands. The course focuses on the significance of migration, exile, belonging, and nostalgia (for ancestral homelands) for diasporas throughout the world. Students submit projects (incorporating oral histories, for example) on the diaspora of their choice. (Also offered as Diaspora Studies DIAS-1700 and Languages, Literatures and Cultures JWST-1700.)

**POLS 2000. Indigenous Policy and Constitutional Relationships**
This course introduces students to Canadian Indigenous policy and the legal Constitutional relationship between Indigenous Peoples and the Crown in a modern context. To guide the discussions, students will engage research and scholarship that critically examines the policy history and its impact in Canada. To encourage critical thinking, the course will encourage students to examine different legal policy eras and areas relating to policy theory. Students will also be encouraged to reflect on their own ideas while examining policy implications.

**POLS-2010. Current Issues in Canadian Politics**
An examination of one or more current issues in Canadian politics, for example, energy and resources, the environment, native peoples, aging, women's rights, urban problems, and health care. (Prerequisite: one of POLS-1000 or POLS-1300.)

**POLS-2015. From University to Work**
This course draws on resources from across the university, community partners, online platforms, and in academic literature, to provide students with opportunities for career development. Students will gain strategies for job search, resume preparation, networking, online profiles, career planning, and interviews. Students will create and conduct informational interviews and debate critical issues in the labour market for university students and graduates.

**POLS-2035. Quebec Politics and Society [French]**
This course, which is taught in French, introduces students to political life in the province of Quebec, with a focus on the structure and functions of governing institutions, political culture and ideology, and the origins of key political traditions and practices. Topics may include the origins and evolution of Québécois nationalism, the unique position of Quebec in Canadian federalism, provincial policy initiatives to protect and extend the French language in the public sphere, and external relations with Canada and the international community.

**POLS-2045. Issues in Quebec Politics [French]**
This course, which is taught in French, examines major historical and contemporary political issues in the province of Quebec. Topics may include the patriation of the Canadian constitution, the Quiet Revolution, the FLQ crisis, referenda on Quebec sovereignty, and current public policy issues such as immigration and the environment.

**POLS-2055. Contemporary Canadian Political Issues [French]**
This course, which is taught in French, examines contemporary issues in Canadian politics. Topics may include, for example, constitutional change, Aboriginal peoples, demographic shifts, the environment, health care and immigration.
**POLS-2110. Women and Politics**

An introduction to the principal themes in the study of women in Canadian politics. Topics may include: feminist theory, women in Canadian political institutions, the status of women in the Canadian economy, and gender equality rights in the Charter. (Also offered as Women's and Gender Studies WGST-2110).

**POLS-2120. Environmental Policy and Politics**
The course examines the domestic and international context of environmental policy-making in Canada. Topics examined may include global warming, Great Lakes pollution, and endangered species.

**POLS-2130. Public Opinion, Mass Media and Canadian Democracy**
An evaluation of the relationship between public opinion and democratic politics, how opinions, beliefs and attitudes are shaped by the family, educational system, peer groups, and in particular, mass media. Particular attention will be devoted to the role of the mass media in influencing public opinion and public policy.

**POLS-2140. Legal Process in Canada**
An introduction to the legal system in Canada, including the sources of Canadian law, the general concepts of constitutional and administrative law, the court structure, and the study and practice of law. (Prerequisite: one of POLS-1000, POLS-1300, or POLS-2120)

**POLS-2200.Introduction to Public Administration**
This course introduces students to the political science sub-field of public administration. Building on classical theories of organization, it examines the institutions of government, the dynamics of public sector management, and the relationship between elected officials and administrators in the political system. (Prerequisite: one of POLS-1000 or POLS-2120, consent of instructor.)

**POLS-2210. Canadian Public Administration and Policy**
An introduction to the processes of public policy formation in Canada. Includes an analysis of political/bureaucratic relationships, decision making theory, and the role of interest groups in the context of selected contemporary policy issues. (Prerequisite: POLS-2200 or consent of instructor.)

**POLS-2220. Introduction to Social and Political Philosophy**
An examination of some of the main contending theories about the nature of society and the state, or of some of the central controversies in social and political theory. (Prerequisite: Semester 3 or above standing; or consent of the instructor). (Also offered as PHIL-2220.)

**POLS-2300. Space, Place, and Scale: Foundations of Human Geography**
An introduction to foundational concepts and approaches in the study of human geography, emphasizing the way social, political, economic, and environmental systems shape and are shaped by patterns of geographic and spatial organization.

**POLS-2320. Government and Politics of the United States**
The organization and structure of national government in the United States, with emphasis upon congressional/executive relationships, political parties, and the electoral process.

**POLS-2330. Politics of the Developing World**
An examination of the politics of developing areas, with a focus on economic and political development, ethnic conflict and the role of overseas development assistance in building government institutions. In given years, emphasis may be on Africa, Asia or Latin America and the Caribbean.

**POLS-2350. Government and Politics in the Middle East**
The course provides an overview of the politics of the contemporary Middle East. Particular attention will be paid to state and regime formation, the legitimacy of Middle Eastern governments, state society interaction, the nature of the opposition, and prospects for democratization and improvements to human rights.

**POLS-2410. Contemporary African Politics**
Characteristic domestic and international problems of African states south of the Sahara, including resource scarcity, ethnic diversity, political stability, and relations with the Great Powers.

**POLS-2440. Government and Politics in Europe**
Examines contemporary issues such as democratic development, nationalism, and regionalism, immigration and racism, the status of women, social welfare programs, and the consolidation and expansion of the European Union.

**POLS-2450. Contemporary Issues in International Relations**
This class will focus on some of the key contemporary issues in international relations. Students are expected to have some background knowledge of world politics, particularly developments in the last few decades. Issues to be examined may include economic globalization and its effects, the future of the state system, capitalism (and its challengers) as a model of economic production, development assistance, the US role in global politics, Iran's nuclear program, and climate change. [The pre-requisite for the class is POLS-1600 (Introduction to International Relations].

**POLS-2480. The Political Economy of Mass Media**
This course will explore the role of media as a political force in democratic societies. Corporate media's role in politics and governance is the starting point for looking at what role media play in North American political culture. Communication policy, the role of public relations and advertising, and the exercise of power among the media. political realm and the general public are examined.

**POLS-2490. Political Economy of Agriculture and Food**
Critical examination of shifts in the political economy of agriculture and food, focusing on political, economic, social, and environmental changes occurring in and affecting agro-food production and consumption systems.

**POLS-2510. Classical Political Thought**
An introduction to the history of political thought from the ancient Greeks to the end of the Middle Ages. Topics may include human nature, justice, natural law, and the relationship between Church and State. (Prerequisites: POLS-1000 and one of POLS-1300 or POLS-1600.)

**POLS-2520. Modern Political Thought**
Toward the new science of politics from Machiavelli to Rousseau and the French Revolution.

**POLS-2550. The Politics of Music**
This course will explore the relationship between music and politics. Historical perspectives and critical popular culture theory will inform a look at the rise of politically themed music, how the music industry deals with political themes in music, music and social movements, and music as hate politics, music and patriotism.

**POLS-2600. Politics, History, and Asian Religions**

An introduction to Hinduism, Sikhism, Jainism, Buddhism, Taoism, Confucianism, and Shinto, with attention to their role in history and politics.

**POLS-2610. Politics, History, and Western Religions**
An introduction to Judaism, Zoroastrianism, Christianity, Islam, and BaHai, with attention to their role in history and politics.

**POLS-2640. Introduction to Canadian Foreign Policy**
An overview of the formulation and trends of Canadian foreign policy from World War I to the present, together with an examination of the domestic and external determinants of Canadian foreign policy and of the foreign policy making process. (Prerequisite: POLS-1000, or POLS-1600, or consent of instructor.)

**POLS-2670. Strategic Studies**
An examination of the theories, tools, and concepts that explain war and how international violence can be used for political ends. The focus will be primarily on the modern state system, especially on the post-WWII environment. Among topics to be addressed are theories of war, deterrence, arms control, the "democratic peace" thesis, and proliferation of weapons of mass destruction. (Prerequisite: POLS-1600 or consent of the instructor.)

**POLS-2680. International Organizations**
An introduction to the problems and possibilities of international co-operation and global governance among states and non-state actors. The course will provide a survey of various international organizations. These may include the United Nations, NATO, the European Union, and NAFTA. The role of non-governmental organizations in world politics is also examined. (Prerequisite: POLS-1600 or consent of instructor.)

**POLS-2700. Information Searching and Analysis**
This course is designed to help students become better at analyzing and critiquing information from a variety of sources. We will take a critical look at internet searching and learn to use those resources in more intelligent ways. The focus will be on researching a topic through both the internet and more traditional sources Students will learn how to assess the information contained in websites and how to assess a variety of things which appear as information.

**POLS-2750. Introduction to Research Methods**
Introduces students to quantitative and qualitative social research. Looks at how surveys and focus groups are used and abused for political and commercial purposes. Examines what field and archival research can teach us about human behaviour and social, political, and economic trends. (Prerequisite: SOSC-2500.)

**POLS-2880. Selected Topics: Current Political Issues**
Selected topics based on current political issues. Topics may vary from year to year. (May be repeated for credit if content changes.)

**POLS-3000. Indigenous Treaties and Land Claims**
This course introduces students to Indigenous agreements surrounding both relationships and land, while connecting to a modern context. Building on the Indigenous Policies course, students will be introduced to the history of treaty-making in Canada and the evolution to the modern processes while critically examining the shifting relationship between Indigenous Peoples and the Crown. The course examines the competing interests and strategies for conflict resolution in the context of both historic and contemporary

treaties. Students will also be encouraged to apply these findings to Canada and the Northern communities in particular. (Prerequisite: One 2000-level Political Science course.)

**POLS-3090. Canadian Provincial Government**
A comparative study of provincial governments and politics in Canada including an examination of the powers exercised by provinces, the institutions of provincial government and the behaviour of provincial electorates and politicians. In given terms, Ontario, Quebec, the Atlantic or the Western provinces may be given particular attention. (Prerequisite: POLS-1000 or consent of instructor.)

**POLS-3140. Constitutional Law and Politics in Canada**
The nature and purpose of constitution and major issues in Canadian constitutional politics. Topics may include judicial review, the development of human rights law in Canada, and the impact of the Charter of Rights on Canadian politics and government. (Prerequisite: POLS-2140 or consent of instructor.)

**POLS-3190. Social Pathologies**
The course examines the emergence of pathological forms of social life that systematically undermine human interaction, distort social communication, and falsify individual and group consciousness. The course may explore the work of major social thinkers such as Rousseau, Hegel, Marx, Lukacs, Weber, Schmidt, Freud, Adorno, Marcuse, Arendt, Habermas and Honneth or investigate one or more specific forms of modern social pathologies such as racism, gender inequality, colonialism, extreme poverty, the destruction of the environment.(Prerequisite: PHIL-2210 or permission of the instructor).(Also offered as PHIL-3190.)

**POLS-3200. Political Parties and Elections**
An analysis of the development and functions of parties and of the social, psychological, and political influences on voting in Canada.

**POLS-3210. The Legislative Process**
An introduction to representative democracy, parliamentary behaviour, and legislative process. May include role-playing exercises and a simulation of the Federal House of Commons.

**POLS-3230. Government and Business**
An introduction to the intricate relationship of government to business. Included are: government services to business; business and policy development; and regulation and/or de-regulation and regulatory agencies. (Prerequisite: POLS-1000 or consent of instructor.)

**POLS-3240. Public Infrastructure**
This course examines the role of the public sector in the ownership and operation of major capital facilities for transportation, water, sanitation, electric power, health care and education. Topics include alternative funding mechanisms, environmental impacts and regulations, public consultation and the influence of political interest groups, and the role of infrastructure in the economy. The course also provides an introduction to analytical methods used to support infrastructure decision-making.

**POLS-3260. Local Government**
An introduction to the politics and administration of local government. Topics include local political structure, relationships between municipalities and other levels of government, public policy-making, and current challenges facing local officials. (Prerequisite: POLS-1000)

**POLS-3300. Psychoactive Substance Use and Social Policy**
This course provides a critical exploration of social factors affecting our understanding of psychoactive substances (e.g., alcohol, tobacco, cannabis, opiates, cocaine, psylocibin, club drugs, etc.), their use, relevant social policy and how these have changed over time. Course delivery may vary according to instructor preference. (Prerequisite: Semester 5 standing or above, or permission of instructor). (Antirequiste: SACR-3710) (Also offered as SOSC-3300).

**POLS-3350. Political Geography**
A systematic examination of the relationship between politics, power, and geography, with focus on the political meanings, uses, and representations of geographic space, and the significance of geography for understanding the organization and exercise of political power at local, regional, and global scales. (prerequisites: POLS-2300).

**POLS-3460. Asian Government and Politics**
Comparative analysis of institutions and political processes of Southeast Asia, South Asia, China, or Japan.

**POLS-3519. Topics in Political Thought**
The study of selected topics in political thought and theory. Students are recommended to take POLS-2510 or POLS-2520 before taking this course.

**POLS-3540. Political Problems of Economic Development**
The course takes a comprehensive approach to the study of economic development, drawing connections between theory (including development paradigms) and practice. In given years, the focus may be on South-East Asia, Central Asia, Africa, China, Eastern Europe, or Latin America. (Prerequisite: POLS-1600 or consent of instructor.)

**POLS-3550. Political Economy of International Trade**
An examination of the most prevalent dilemmas facing the global trading system. The main focus is on the World Trade Organization and its global agreements on goods, agriculture, services and intellectual property. Additional topics include regional trade blocs, international trade in money, foreign direct investment, and environmental and labour issues. (Prerequisite: POLS-1600 or consent of instructor.)

**POLS-3560. Theories of International Political Economy**
An examination of the major theoretical perspectives in the field of international political economy. This course will cover both classical and modern theories, including mercantilism, liberalism, Marxism, feminism and post-modernism. (Prerequisite: POLS-1600 or consent of Instructor.)

**POLS-3600. International Conflict and Its Resolution**
The nature of conflict and how it is managed in the international community; explicit and tacit bargaining strategies and techniques of conflict resolution. (Prerequisite: POLS-1600 or consent of instructor.)

**POLS-3610. U.S. Foreign Policy**
The United States policy-making process and the substance of policy in relation to the former communist world, developing countries, and allies such as Canada and Western Europe.

**POLS-3620. Human Rights and Global Justice**
The course will focus on the meaning and nature of human rights and their relationship to global justice. Topics may include: the historical development of human rights doctrines, their relationship to classical

citizenship rights, the relationship between universal human rights and culturally distinct life ways, relationship between legal/moral principles, material reality, and different conceptions of global justice, the strengths and limitations of human rights as principles to advance global justice. (Prerequisite: Semester 3 or above standing, or permission of the instructor.)](Also offered as PHIL-3230.)

**POLS-3630. Principles of International Law**
An introduction to the role of international law in international relations, this course will consider the role of justice in the international system and will examine the basic principles of modern international law, including sources, subjects, and procedures. (Prerequisite: POLS-1600 or consent of instructor.)

**POLS-3650. The Middle East in International Relations**
The nature and causes of the various conflicts in the region, the role of outside powers and international organizations, and the prospects for conflict resolution. (Prerequisite: POLS-1600 or consent of instructor.)

**POLS-3670. The Politics of the European Union**
Examines the development and operation of the European Union. Key issues on the agenda of the European Union are examined, including: the introduction of the single currency; the development of a common foreign and security policy; and the possible enlargement of the European Union. The extent to which the European Union challenges existing state structures is examined throughout the course.

**POLS-3720. Religious Fundamentalism and Politics**
A study of the modern concept of religious fundamentalism, with case studies of the interface of fundamentalism and politics in North America, Europe, Africa and Asia.

**POLS-3780. Promotional Culture and Democracy**
This course focuses on the role promotional culture plays in democratic processes. Moving beyond classical conceptions of propaganda, promotional culture incorporates a range of tactics and strategies used to persuade citizens or sell to consumers. While political and issue advertising play increasingly large roles, the interplay between journalism and promotional culture will also be a nexus of concern for the course. (Prerequisite: POLS-1000)

**POLS-3790. Politics and Culture**
An examination of political themes as reflected in different forms of popular culture, including cinema and the media. Topics may include: war and cinema, and how commercial interests are portrayed in mass media. While the course may focus on different forms of cultural expression, the emphasis will be on understanding and evaluating how politically relevant themes are influenced and shaped for the mass public.

**POLS-3920. Public Service Management Internship Seminar**
A critical examination of selected theories and concepts applicable to research and management practices in the public sector. (Admission by consent of a program advisor.) (Must be taken concurrently with POLS-4920.)

**POLS-3990. Practicum in Government and Politics**
Practical work in the office of an elected or appointed official, with oral and written reports to the supervising faculty member. (To be taken only with permission of instructor and a program advisor in Political Science.)

**POLS-4000. Indigenous Nation-Building: Traditional Governance in a Modern Era**

Indigenous governance and development strategies in a modern context. To guide the discussions, students will be introduced to the research and work of the Harvard Project on American Indian Economic Development and concepts that support Indigenous Nation-building. To encourage critical thinking, the course will examine where these theories and strategies work well and where they may not and why. Students will also be encouraged to apply these findings to Canada and the Northern communities in particular.

**POLS-4110. Canadian Politics: Participation and Processes**
A review of current literature on topics that may include parties, elections, voting behaviour, pressure groups, representation, new social movements, public opinion, and ideologies. (Restricted to Semester 7 and 8 Political Science majors.)

**POLS-4120. Canadian Federalism**
A review of current literature and development on such topics as federalism, intergovernmental relations, and the role of Quebec. (Restricted to Semester 7 and 8 Political Science majors.)

**POLS-4210. Seminar in Canadian Public Policy**
A detailed analysis of the Canadian public policy process. (Restricted to Semester 7 and 8 Political Science majors and Semester 7 and 8 International Relations majors.)

**POLS-4220. Seminar in Public Policy Analysis**
A survey of the evaluative side of public policy including formulation, adoption, program operations and evaluation techniques. (Restricted to Semester 7 and 8 Political Science majors.)

**POLS-4310. Seminar in Comparative Politics**
A comparative examination of national political systems emphasizing areas such as political culture, political parties, elites, and interest groups. In given terms, the focus may be on industrialized or developing countries. (Restricted to Semester 7 and 8 Political Science majors and Semester 7 and 8 International Relations majors.)

**POLS-4340. Seminar in Politics of the United States**
An analysis of selected topics in United States politics and government. May include an examination of foreign perspectives on U.S. politics, Canadian-U.S. relations, parties and elections, civil liberties and civil rights, or other important topics in United States politics. (Restricted to Semester 7 and 8 Political Science majors.)

**POLS-4400. Remaking North America: Geographic Perspectives on US-Canada Politics**
The political geography of the United States and Canada, in regional and global context, focusing on the political, cultural, and economic factors and processes shaping the two countries' internal political character, external relations, and bilateral relationship. Topics covered may include regional political cultures in the US and Canada, political and economic integration under NAFTA, American and Canadian electoral geographies, comparative analysis of immigration policy, and the meaning of the US/Canada border in the context of globalization. (Restricted to Semester 7 and 8 Political Science majors and Semester 7 and 8 International Relations majors. Students are recommended to take POLS-2300 before taking this course).

**POLS-4410. The New Scramble for African Resources**
This course examines the evolving political and economic relationships between countries in Sub-Saharan Africa and the rest of the world. As Africa moves from a "forgotten" continent to a "rising" one in the eyes of foreign policy analysts and the global business community, this course re-examines

Africa's role in international relations and international security. Through the lens of the "new scramble for Africa", the course will examine contemporary issues such as land, oil and minerals before focusing specifically on case studies of Africa's changing relations with the world. (Prerequisites: POLS-1600, POLS-2410 or consent of instructor. Restricted to Semester 7 and 8 Political Science majors and Semester 7 and 8 International Relations majors.)

**POLS-4420. Politics and Security in Russia and Eurasia**
This course examines the politics of and security issues facing the Russian Federation, the five Central Asian Republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan, and the Caucasian Republics of Georgia, Armenia and Azerbaijan. For the purposes of this course, the role and influence of Turkey, Iran, China and the United States on the politics and security of these Eurasian states will also be considered. The approach taken in this course is inter-disciplinary, drawing heavily from the fields of political science, history, and economics. The students will be introduced to political, economic and social issues affecting the region and taught how to research these issues through the lens of historical analysis and political economy. (Restricted to Semester 7 and 8 Political Science majors and Semester 7 and 8 International Relations majors.)

**POLS 4430. Collective Action and Contentious Politics**
This course explores the conditions and processes shaping protests, riots, revolutions, and other forms of contentious politics. The course examines major theories about revolutions and social movements and considers competing explanations for the emergence of collective action. Particular attention is paid to the conditions under which people do or do not rebel and various aspects of the strategic interaction between social movements and states, and the determinants of movement outcomes. The students will read theoretical works and review several cases of revolutions and social movements in both democratic and nondemocratic state settings, thinking through parallels and differences among them. (Restricted to Semester 7 and 8 Political Science majors and Semester 7 and 8 International Relations majors.)

**POLS-4510. Seminar in Contemporary Political Theory**
An examination of selected topics in political theory, with special emphasis on the literature of the twentieth century. (Restricted to Semester 7 and 8 Political Science majors and Semester 7 and 8 International Relations majors.)

**POLS-4610. Seminar in Theories of International Relations**
A survey of competing perspectives and approaches employed in the contemporary study of international relations. (Restricted to Semester 7 and 8 International Relations majors)

**POLS-4620. Interdisciplinary Approaches to Research in International Relations**
A research oriented seminar that will encourage the use of interdisciplinary perspectives in the examination of selected problems in international relations.(Restricted to Semester 7 and 8 International Relations majors.)

**POLS-4640. International Political Economy**
An overview of the major theoretical perspectives and issues in international political economy. Issues addressed may include: international trade, foreign investment and multinational corporations, international monetary institutions, and crisis and change in the international system. (Restricted to Semester 7 and 8 Political Science majors and Semester 7 and 8 International Relations majors.)

**POLS-4650. Seminar in Globalization**
A critical overview of major theories, debates, and case studies related to the politics of globalization. Specific topics addressed may include changes in the nature of state sovereignty, the creation and regulation of a global economy, and cultural change and resistance. (Restricted to Semester 7 and 8 Political Science majors and Semester 7 and 8 International Relations majors. Students are recommended to take POLS-2300 before taking this course).

**POLS-4880. Selected Topics in Political Science**
[Topics include: China and India; Information Searching and Analysis; Third World International Relations] Topics of current interest which may vary from year to year. (May be repeated for credit with the permission of a program advisor in Political Science.)(Restricted to Semester 7 and 8 Political Science majors and Semester 7 and 8 International Relations majors.)

**POLS-4920. Public Service Management Internship Practicum**
Supervised work experience in a public service management environment. (Admission only by consent of program advisor.) (Offered on a Pass/Non-pass basis only.) (Must be taken concurrently with POLS-3920

**POLS-4950. Advanced Topics in Canadian Foreign Policy**
This seminar will focus on issues that are driving the contemporary Canadian foreign policy agenda. Members of the seminar will read and discuss recent research on topics including Canada's defence and security policy, trade and aid policies, environmental record, as well as more recent foreign policy initiatives. Students are expected to learn through active participation in the class. Students are also expected to have some background knowledge of both Canadian history and Canadian government and politics. The course is restricted to Semester 7 and 8 Political Science majors and Semester 7 and 8 International Relations majors. Students must have taken POLS-1600 (Introduction to International Relations) before taking this course. While not a pre-requisite, it is also recommended that students take POLS-2640 (Introduction to Canadian Foreign Policy) before this class, although the instructor will permit students into the course without it.

**POLS-4960. Advanced Topics in International Security**
This seminar will focus on issues that are driving the contemporary fields of strategic and security studies. Members of the seminar will read and discuss recent research on topics including Canadian and American defence and security policy, proliferation, the arms trade, energy security, and changes in military strategy. Students are expected to learn through active participation in the class. Students are also expected to have some background knowledge of global politics and some understanding of recent conflict. The course is restricted to Semester 7 and 8 Political Science majors and Semester 7 and 8 International Relations majors. [Students must have taken POLS-1600 (Introduction to International Relations) before taking this class. While not a pre-requisite, it is also recommended that students take POLS-2670 (Strategic Studies) before this class, although the instructor will permit students into the course without it.]

**POLS-4970. Political Science Thesis 1: Research Design**
This course provides students instruction and guidance in identifying, designing, and planning an original, independent research project, resulting in the development of a research proposal under the supervision of the course instructor and a faculty supervisor. The course includes both regular individual meetings with the faculty supervisor and seminar meetings with the course instructor to discuss issues related to research planning and design, including but not limited to developing a research question and methodology, constructing a literature review, conducting research ethically, and collecting, organizing, and analyzing data. (Prerequisites: POLS-2750 and Semester 7 or 8 standing in a Political Science or

International Relations program; a cumulative average of at least 80%; a major average of at least 80%; and consent of the course instructor.)

**POLS-4980. Political Science Thesis 2: Writing and Presentation**
This course builds on the research design students develop in POLS-4970. Students complete an undergraduate thesis under individual faculty supervision, and present the results in written and oral formats. (Prerequisite: POLS-4970 and consent of the course instructor.)

**POLS-4990. Directed Reading in an Approved Special Field**
Intended for students with special interest in areas not covered in sufficient depth by other courses. (To be taken only with permission of instructor and a program advisor in Political Science.)
(May be repeated for credit if content changes.)

# BORDER MANAGEMENT AND INTERNATIONAL TRADE COURSES

**CBMI-2000. Introduction to Customs Compliance**
This course equips the learner with an overview of evolving customs procedures and regulations applicable to the Canada Customs Act, Customs Tariff Act and Export/Import Permits Act and the necessary skills to inquire into, and stay abreast of, current developments and regulations with respect to import, export and reporting customs clearances. Transactions and accounts based customs procedures are introduced and Canadian procedures are compared with those of other countries. The course provides learners with a basic understanding of goods classification under the Harmonized System Code and knowledge of how to complete the CBSA customs documents while considering multiple perspectives: broker, client, government and other Government of Canada agencies that regulate international trade.

**CBMI-3000. The Global Business Environment and Intercultural Aspects of Integrative Trade**
The aim of this course is to provide each learner with an overview of the role of border agencies and the principles of border management. This course raises participants' awareness of the intricacies involved in the communication process with various government agencies, border officials, and business partners and equips participants with specific techniques for effective communication in a variety of business situations. Attentiveness to the ethical dimension of business in a global setting is cultivated within each learner and decision-making models for resolving ethical dilemmas are utilized. The integrative trade approach is introduced within a cross-border and international trade environment and intercultural aspects of such trade are considered. In particular, learners focus on recognizing, understanding, and respecting differences in trading practices due to cultural influences. (This is a four-week course. 9 lecture hours/week) (Graded on a pass/fail basis - percentage grade optional.)

**CBMI-3100. International Trade Law, Policy and the Political Environment**
This course focuses on how to use the border, by discussing practical implications of cross-border trade from various stakeholders' perspectives, including government, business professionals, and entrepreneurs. This course provides learners with a contextual understanding of policy and the political environment in international trade while exploring practical implications for border users. Topics explored include existing legal mechanisms that govern international trade, including corporate law, tax law, and trade compliance practice s. Emphasis is placed on understanding the risks associated with integrative trade and developing contingency strategies to protect organizations. The course engages learners on an individual basis to develop and share their diverse perspectives. Learners will benefit from an array of guest speakers from the Government of Canada, stressing the importance of the tools, access, and support needed to reach and succeed in global markets. (This is a four-week course. 9 lecture hours/week) (Graded on a pass/fail basis - percentage grade optional.)

**CBMI-3150. Supply Chain and Border Management**
In this course, participants will gain an in-depth understanding of customs procedures and services offered by freight forwarders and customs brokers. This course aims to help learners manage the relationships associated with multiple directional flows of goods and services in a complex, global system. Learners increase their understanding of existing, and evolving, rules and regulations that govern international trade to ensure compliance for the international import/export of goods and services. Learners also develop technical and systems knowledge pertaining to transportation modes, distribution, and logistics. (This is a four-week course. 9 lecture hours/week) (Graded on a pass/fail basis - percentage grade optional.)

**CBMI-3200. International Business Development, Operations and Planning**
In this course, learners gain essential knowledge and skills to expand a business internationally. Key considerations and activities for international business are explored alongside cross-border opportunities and challenges. Correspondingly, learners develop core competencies in business planning, understanding the roles of government agencies, managing strategic alliances, working with multinational workforces, and identifying different sources of funding. Relationships between funding initiatives, government policy, and an organization's objectives are examined. Course participants utilize tools to develop growth-focused business and entrepreneurial strategies that reflect a dynamic understanding of rules and regulations that govern international trade – equipping the manager/entrepreneur with the ability to tackle international business growth in accordance with trade compliance for effective and seamless flow of cross-border goods and services. (This is a four-week course. 9 lecture hours/week) (Graded on a pass/fail basis - percentage grade optional.)

**CBMI-3250. International Investment and Growth Strategy**
This course equips learners with the tools to identify and evaluate market entry options against a company's objectives and abilities. Participants learn how to perform a company strategic-needs assessment and determine potential barriers to market entry. Barriers such as regulatory, legal, political, environmental, and cultural vary by case; in turn, a custom, multi-faceted market entry strategy needs to be designed for each case, inclusive of these considerations. The role of free trade agreements and foreign investment promotion are explored to enhance competition across a range of sectors. Participants learn how to identify potential international partners to help bring a company into foreign markets. Finally, participants learn how to negotiate global partnership agreements, and monitor their compliance, to ensure mutual benefit between parties. (This is a four-week course. 9 lecture hours/week) (Graded on a pass/fail basis - percentage grade optional.)

**CBMI-3300. International Trade Compliance**
This course equips learners with various tools to plan, and carry out, trade research effectively and efficiently. Research addresses evolving rules and regulations that govern international trade to poise the learner with the necessary skills to inquire into, and stay abreast of, current developments and regulation. To ensure compliance related to the import/export activities of goods and services and, at the same time promote an authentic international business objective, participants learn to use market intelligence to identify the most promising foreign markets and international business opportunities. (This is a four-week course. 9 lecture hours/week) (Graded on a pass/fail basis - percentage grade optional.)

**CBMI-3350. International Risk Management and Trade Finance**
This course covers the nature and scope of international trade finance. In particular, facilitating trade payment flows across a network of relationships is addressed to ensure effective trade activities. The course topics include the provision of information for a global trade transaction, commercial and country risks that may be encountered during import-export operations, and risk management and mitigation how to manage and mitigate these risks. Risk-mitigation techniques are discussed in terms of legal implications and appropriate practices and the use of these techniques. Participants develop a financial plan for a company's short-, medium- and long-term needs, including essential data considerations for cash flow analysis. (This is a four-week course. 9 lecture hours/week) (Graded on a pass/fail basis - percentage grade optional.)

**CBMI-3400. International Marketing and Regulatory Environment**
This course identifies the main principles of international marketing and introduces learners to market intelligence, promotional strategies, and e-marketing in order to trade and sell products and/or services globally. Participants learn to recognize the influence of culture, politics, law, and regulatory considerations in international markets alongside building and maintaining international trade relationships with all levels of government. Participants learn why companies must adapt their products and/or services for international markets; in turn, participants prepare a promotional strategy tailored to this objective and the aforementioned considerations in an authentic context. One of the intentions of the course is for participants to develop an international marketing plan designed to assist reaching international marketing and sales goals while considering the domestic and international political contexts that the business operates in. (This is a four-week course. 9 lecture hours/week) (Graded on a pass/fail basis - percentage grade optional.)

# PSYCHOLOGY

## PROGRAMS

### General Psychology

**Degree Requirements**

Total courses: thirty.

(a) ten courses, including PSYC-1150 and PSYC-1160, and at least two 3000-level courses.
(b) two courses from Arts;
(c) two courses from Languages or Science;
(d) two courses from any area of study, excluding Social Sciences.
(e) GART-1500, GART-1510;
(f) SOSC-2500;
(g) five courses from any area of study, including Psychology;
(h) six courses from any area of study, excluding Psychology.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
First Year: GART-1500, GART-1510, PSYC-1150, PSYC-1160.
Second Year: SOSC-2500, four psychology courses.
Third Year: two 3000-level psychology courses, two additional psychology courses.

### General Child Psychology

**Degree Requirements**

Total courses: thirty

(a) ten courses including PSYC-1150, PSYC-1160, PSYC-2230; at least four courses from the following list: PSYC-2240, PSYC-3220, PSYC-3230, PSYC-3240, PSYC-3270; three additional courses
(b) two courses from Arts;
(c) two courses from Languages or Science;
(d) two courses from any area of study, excluding Social Sciences.
(e) GART-1500, GART-1510;
(f) SOSC-2500;
(g) five courses from any area of study, including Psychology;
(h) six courses from any area of study, excluding Psychology.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
First Year: GART-1500, GART-1510, PSYC-1150, PSYC-1160.
Second Year: SOSC-2500, PSYC-2230, one of: PSYC-2240, PSYC-3220, PSYC-3230, PSYC-3240, PSYC-3270; two additional psychology courses.
Third Year: three of: PSYC-2240, PSYC-3220, PSYC-3230, PSYC-3240, PSYC-3270; one additional psychology course.

## Honours Psychology

This program is intended for students who wish to study the discipline of psychology over a four-year period, including those who might wish to study at the graduate level in professions or disciplines other than psychology.

**Degree Requirements**

Total courses: forty.

(a) eighteen courses, including PSYC-1150, PSYC-1160, PSYC-2300, PSYC-3200, PSYC-3350 or PSYC-3530 or PSYC-3580. The total number of courses must include at least four 3000-level courses and two 4000-level courses.
(b) two courses from Arts;
(c) two courses from Languages or Science;
(d) two courses from any area of study, excluding Social Sciences.
(e) GART-1500, GART-1510;
(f) SOSC-2500;
(g) five courses from any area of study, including Psychology;
(h) eight courses from any area of study, excluding Psychology.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
First Year: GART-1500, GART-1510, PSYC-1150, PSYC-1160.
Second Year: SOSC-2500, PSYC-2300, three additional psychology courses.
Third Year: PSYC-3200, one of: PSYC-3350 or PSYC-3530 or PSYC-3580; two additional 3000-level psychology courses, two additional psychology courses.
Fourth Year: two 4000-level courses, four additional psychology courses.

## Honours Psychology with Thesis

This program is oriented primarily toward students with a serious interest in psychological research who intend to study at the graduate level in psychology. Students taking this program should be able to do independent research (thesis) work, and have competence in statistics and research methods. In the fourth year, the program requires completion within a two-term period (Fall and Winter terms only) of a thesis. The thesis is an independent research study, completed in conjunction with a research advisor. Entry to the fourth year thesis course, PSYC-4960, requires a cumulative course average of at least 77% and a Psychology major course average of at least 80%.

**Degree Requirements**

Total courses: forty.

(a) eighteen courses, including PSYC-1150, PSYC-1160, PSYC-2300, PSYC-3130, PSYC-3200, PSYC-3310, PSYC-3350 or PSYC-3530 or PSYC-3580, PSYC-4960 and PSYC-4970. The total number of courses must include at least four 3000-level courses and four 4000-level courses
(b) two courses from Arts;
(c) two courses from Languages or Science;
(d) two courses from any area of study, excluding Social Sciences.
(e) GART-1500, GART-1510;
(f) SOSC-2500;
(g) five courses from any area of study, including Psychology;
(h) eight courses from any area of study, excluding Psychology.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
First Year: GART-1500, GART-1510, PSYC-1150,PSYC-1160.
Second Year: SOSC-2500, PSYC-2300, three additional psychology courses.
Third Year: PSYC-3130, PSYC-3200, PSYC-3310, one of: PSYC-3350 or PSYC-3530 or PSYC-3580; two additional psychology courses.
Fourth Year: PSYC-4960 and PSYC-4970, two 4000-level courses, two additional psychology courses.

## Honours Developmental Psychology

This program is intended for students who wish to study the discipline of life span developmental psychology (child, adolescent, and/or adult development) over a four-year period, including those who might wish to study at the graduate level in professions or disciplines other than psychology.

**Degree Requirements**

Total courses: forty.

(a) eighteen courses, including PSYC-1150, PSYC-1160, PSYC-2300, PSYC-3200, PSYC-3350 or PSYC-3530 or PSYC-3580, PSYC-4270, and at least two 2000-level courses, two 3000-level courses, and one 4000-level courses from the following list: PSYC-2230, PSYC-2240, PSYC-2250, PSYC-3220, PSYC-3230, PSYC-3240, PSYC-3270, PSYC-4210, PSYC-4220, PSYC-4230, PSYC-4240, PSYC-4250, PSYC-4280.
(b) two courses from Arts;
(c) two courses from Languages or Science;
(d) two courses from any area of study, excluding Social Sciences.
(e) GART-1500, GART-1510;
(f) SOSC-2500;
(g) five courses from any area of study, including Psychology;
(h) eight courses from any area of study, excluding Psychology.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
First Year: GART-1500, GART-1510, PSYC-1150, PSYC-1160.
Second Year: SOSC-2500, PSYC-2300, two of: PSYC-2230, PSYC-2240, PSYC-2250; one additional psychology course.
Third Year: PSYC-3200, one of: PSYC-3350 or PSYC-3530 or PSYC-3580; two of: PSYC-3220, PSYC-3230, PSYC-3240, PSYC-3270; two additional psychology courses.
Fourth Year: PSYC-4270, two of: PSYC-4210, PSYC-4220, PSYC-4230, PSYC-4240, PSYC-4250, PSYC-4280; three additional psychology courses.

## Honours Developmental Psychology with Thesis

This program is oriented primarily toward students with a serious interest in psychological research who intend to study at the graduate level in psychology. Students taking this program should be able to do independent research (thesis) work, and have competence in statistics and research methods. In the fourth year, the program requires completion within a two-term period (Fall and Winter terms only) of a thesis. The thesis is an independent research study, completed in conjunction with a research advisor. Entry to the fourth year thesis course, PSYC-4960, requires a cumulative course average of at least 77% and a Psychology major course average of at least 80%.

**Degree Requirements**

Total courses: forty.

(a) eighteen courses, including PSYC-1150, PSYC-1160, PSYC-2300, PSYC-3130, PSYC-3200, PSYC-3310, PSYC-3350 or PSYC-3530 or PSYC-3580, PSYC-4270, PSYC-4960 and PSYC-4970; and at least two 2000-level courses, two 3000-level courses, and one 4000-level courses from the following list: PSYC-2230, PSYC-2240, PSYC-2250, PSYC-3220, PSYC-3230, PSYC-3240, PSYC-3270, PSYC-4210, PSYC-4220, PSYC-4230, PSYC-4240, PSYC-4250, PSYC-4280.
(b) two courses from Arts;
(c) two courses from Languages or Science;
(d) two courses from any area of study, excluding Social Sciences.
(e) GART-1500, GART-1510;
(f) SOSC-2500;
(g) five courses from any area of study, including Psychology;
(h) eight courses from any area of study, excluding Psychology.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
First Year: GART-1500, GART-1510, PSYC-1150, PSYC-1160.
Second Year: SOSC-2500, PSYC-2300, two of: PSYC-2230, PSYC-2240, PSYC-2250; one additional psychology course.
Third Year: PSYC-3130, PSYC-3200, PSYC-3310, one of: PSYC-3350 or PSYC-3530 or PSYC-3580; two of: PSYC-3220, PSYC-3230, PSYC-3240, PSYC-3270.
Fourth Year: PSYC-4270, PSYC-4960, PSYC-4970, two of: PSYC-4210, PSYC-4220, PSYC-4230, PSYC-4240, PSYC-4250, PSYC-4280; one additional psychology course.

# BSc Honours Program in Behaviour, Cognition and Neuroscience (with/without thesis)

This is a joint program between the Department of Psychology and the Department of Integrative Biology. See the Department of Integrative Biology for program requirements.

# Combined Honours Psychology Programs

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a)fourteen courses, including PSYC-1150, PSYC-1160, PSYC-2300, PSYC-3200, PSYC-3350 or PSYC-3530 or PSYC-3580, PSYC-4270 and at least two 2000-level courses, two 3000-level courses, and one 4000-level course from the following list; PSYC-2230, PSYC-2240, PSYC-2250, PSYC-3220, PSYC-3230, PSYC-3240, PSYC-3270, PSYC-4210, PSYC-4220, PSYC-4230, PSYC-4240, PSYC-4250, PSYC-4280.
(b) Course Requirements – Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) GART-1500, GART-1510;
(d) SOSC-2500;
(e)two courses from Arts;
(f) two courses from Languages or Science;
(g) two courses from any area of study, excluding Social Sciences.
(h) additional courses from any area of study to a total of forty courses.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
First Year: GART-1500, GART-1510, PSYC-1150, PSYC-1160.
Second Year: SOSC-2500, PSYC-2300, two additional psychology courses.
Third Year: PSYC-3200, one of: PSYC-3350 or PSYC-3530 or PSYC-3580; two additional 3000-level psychology courses.
Fourth Year: two 4000-level psychology courses, three additional psychology courses.

# Combined Honours Programs in Psychology with Thesis

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43

once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a) fourteen courses, including PSYC-1150, PSYC-1160, PSYC-2300, PSYC-3200, PSYC-3310; plus PSYC-3130 or an equivalent statistics course from another area of study; plus one of PSYC-3350, PSYC-3530 or PSYC-3580; and PSYC-4960 and PSYC-4970. The total number of Psychology courses must include at least four 3000-level courses. Entry to the fourth year thesis course, PSYC-4960, requires a cumulative course averages of at least 77% and a Psychology major course average of at least 80%.
(b) Course requirements – Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
€ GART-1500, GART-1510;
(d) SOSC-2500;
€ two courses from Arts;
(f) two courses from Languages or Science;
(g) two courses from any area of study, excluding Social Sciences.
(h) additional courses from any area of study to a total of forty courses.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
First Year: GART-1500, GART-1510, PSYC-1150, PSYC-1160.
Second Year: SOSC-2500, PSYC-2300, two additional psychology courses.
Third Year: PSYC-3130 or equivalent, PSYC-3200, PSYC-3310, one of: PSYC-3350 or PSYC-3530 or PSYC-3580.
Fourth Year: PSYC-4960, PSYC-4970, five additional psychology courses.

## Combined Honours Programs in Developmental Psychology

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a) fourteen courses, including PSYC-1150, PSYC-1160, PSYC-2300, PSYC-3200, PSYC-3350 or PSYC-3530 or PSYC-3580, PSYC-4270, and six of: PSYC-2230, PSYC-2240, PSYC-2250, PSYC-3220, PSYC-3230, PSYC-3240, PSYC-3270, PSYC-4210, PSYC-4220, PSYC-4230, PSYC-4240, PSYC-4250, PSYC-4280. The total number of Psychology courses must include at least four 3000-level courses and two 4000-level courses.
(b) Course requirements – Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.

(c) GART-1500, GART-1510;
(d) SOSC-2500;
(e) two courses from Arts;
(f) two courses from Languages or Science;
(g) two courses from any area of study, excluding Social Sciences.
(h) additional courses from any area of study to a total of forty courses.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
First Year: GART-1500, GART-1510, PSYC-1150, PSYC-1160.
Second Year: SOSC-2500, PSYC-2300, two of: PSYC-2230, PSYC-2240, PSYC-2250.
Third Year: PSYC-3200, one of: PSYC-3350 or PSYC-3530 or PSYC-3580; two of: PSYC-3220, PSYC-3230, PSYC-3240, PSYC-3270.
Fourth Year: PSYC-4270, one of: PSYC-4210, PSYC-4220, PSYC-4230, PSYC-4240, PSYC-4250, PSYC-4280; one of: PSYC-2230, PSYC-2240, PSYC-2250, PSYC-3220, PSYC-3230, PSYC-3240, PSYC-3270, PSYC-4210, PSYC-4220, PSYC-4230, PSYC-4240, PSYC-4250, PSYC-4280; two additional psychology courses.

## Combined Honours Programs in Developmental Psychology with Thesis

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a)fourteen courses, including PSYC-1150, PSYC-1160, PSYC-2300, PSYC-3130 or an equivalent statistics course from another area of study, PSYC-3200, PSYC-3310, PSYC-3350 or PSYC-3530 or PSYC-3580, PSYC-4270, PSYC-4960, PSYC-4970, and four of: PSYC-2230, PSYC-2240, PSYC-2250, PSYC-3220, PSYC-3230, PSYC-3240, PSYC-3270, PSYC-4210, PSYC-4220, PSYC-4230, PSYC-4240, PSYC-4250, PSYC-4280. The total number of Psychology courses must include at least four 3000-level courses. Entry to the fourth-year thesis course, PSYC-4960, requires a cumulative course average of at least 77% and a Psychology major course average of at least 80%.
(b) Course requirements – Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
€ GART-1500, GART-1510;
(d) SOSC-2500;
€ two courses from Arts;
(f) two courses from Languages or Science;
(g) two courses from any area of study, excluding Social Sciences.
(h) additional courses from any area of study to a total of forty courses.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
First Year: GART-1500, GART-1510, PSYC-1150, PSYC-1160.
Second Year: SOSC-2500, PSYC-2300, two of: PSYC-2230, PSYC-2240, PSYC-2250.
Third Year: PSYC-3130 or equivalent, PSYC-3200, PSYC-3310, one of: PSYC-3350 or PSYC-3530 or PSYC-3580; one of: PSYC-3220, PSYC-3230, PSYC-3240, PSYC-3270.
Fourth Year: PSYC-4270, PSYC-4960, PSYC-4970, one of: PSYC-2230, PSYC-2240, PSYC-2250, PSYC-3220, PSYC-3230, PSYC-3240, PSYC-3270, PSYC-4210, PSYC-4220, PSYC-4230, PSYC-4240, PSYC-4250, PSYC-4280.

## Concurrent General Bachelor of Arts (Psychology)/Bachelor of Education/Diploma in Early Childhood Education

Direct admissions from high school only.

This is a joint offering between Psychology and the Faculty of Education. See Faculty of Education for program requirements.

## General Psychology for Ontario College Child and Youth Care (formerly Child and Youth Worker) Program Graduates – Degree Completion Pathway

Students are strongly advised to enrol in this program in the Summer semester so they can complete at least two of the required Year 1 courses before the Fall semester.

Students are strongly advised to consult with a Psychology academic advisor before registering for courses in this program.

**Degree Requirements**

Total courses: fifteen, plus a minimum of an Ontario College of Applied Arts and Technology Child and Youth Care (formerly Child and Youth Worker) diploma with the following stipulation:
In cases where a student previously completed a university course or courses, the course(s) will not be used to fulfill the 15 course degree requirements if they were used by the College of Applied Arts and Technology to grant advanced standing in the diploma or certificate program. In such cases, the Psychology Undergraduate Program Chair (or designate) will identify a substitute course requirement.

(a) seven courses, including PSYC-1150, two 3000-level courses; and four 2000, 3000 or 4000-level courses (excluding PSYC-2230).
(b) two courses from Arts, Languages or Science;
€ one course from any area of study, excluding Social Sciences.
(d) SOSC-2500;
€ four courses from any area of study, including Psychology (excluding PSYC-1160, PSYC-2230).

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
Third Year: PSYC-1150, SOSC-2500, three 2000, 3000 or 4000-level psychology courses, two courses from Arts, Languages or Science; one course from any area of study, excluding Social Sciences; two courses from any area of study, including Psychology (excluding PSYC-1160, PSYC-2230).
Fourth Year: one 2000, 3000 or 4000 level psychology course, two 3000-level psychology courses; two courses from any area of study, including Psychology (excluding PSYC-1160, PSYC-2230).

## General Child Psychology for Ontario College Child and Youth Care (formerly Child and Youth Worker) Program Graduates – Degree Completion Pathway

Students are strongly advised to enrol in this program in the Summer semester so they can complete at least two of the required Year 1 courses before the Fall semester.

Students are strongly advised to consult with a Psychology academic advisor before registering for courses in this program.

**Degree Requirements**

Total courses: fifteen, plus a minimum of an Ontario College of Applied Arts and Technology Child and Youth Care (formerly Child and Youth Worker) diploma with the following stipulation:
In cases where a student previously completed a university course or courses, the course(s) will not be used to fulfill the 15 course degree requirements if they were used by the College of Applied Arts and Technology to grant advanced standing in the diploma or certificate program. In such cases, the Psychology Undergraduate Program Chair (or designate) will identify a substitute course requirement.

(a) seven courses, including PSYC-1150, PSYC-2240, PSYC-3240, PSYC-3270, three 2000, 3000 or 4000 level courses (excluding PSYC-2230).
(b) two courses from Arts, Languages or Science;
€ one course from any area of study, excluding Social Sciences.
(d) SOSC-2500;
€ four courses from any area of study, including Psychology (excluding PSYC-1160, PSYC-2230).

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
Third Year: PSYC-1150, PSYC-2240, SOSC-2500, three 2000, 3000 or 4000-level psychology courses, two courses from Arts, Languages or Science, one course from any area of study, excluding Social Sciences, one course from any area of study, including Psychology (excluding PSYC-1160, PSYC-2230).
Fourth Year: PSYC-3240, PSYC-3270, three courses from any area of study, including Psychology (excluding PSYC-1160, PSYC-2230).

## Honours Psychology for Ontario College Child and Youth Care (formerly Child and Youth Worker) Program Graduates – Degree Completion Pathway

Students are strongly advised to enrol in this program in the Summer semester so they can complete at least two of the required Year 1 courses before the Fall semester.

Students are strongly advised to consult with a Psychology academic advisor before registering for courses in this program.

**Degree Requirements**

Total courses: twenty, plus a minimum of an Ontario College of Applied Arts and Technology Child and Youth Care (formerly Child and Youth Worker) diploma with the following stipulation:
In cases where a student previously completed a university course or courses, the course(s) will not be used to fulfill the 20 course degree requirements if they were used by the College of Applied Arts and Technology to grant advanced standing in the diploma or certificate program. In such cases, the Psychology Undergraduate Program Chair (or designate) will identify a substitute course requirement.

(a) eleven courses, including PSYC-1150, PSYC-2300, PSYC-3200, one of: PSYC-3350, PSYC-3530, PSYC-3580; two 3000-level courses, three 4000-level courses, two additional 2000, 3000 or 4000-level courses (excluding PSYC-2230).
(b) two courses from Arts, Languages or Science;
€ one course from any area of study, excluding Social Sciences.
(d) SOSC-2500;
€ five courses from any area of study, including Psychology (excluding: PSYC-1160, PSYC-2230).

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
Third Year: SOSC-2500, PSYC-1150, PSYC-2300, two 2000, 3000 or 4000-level psychology courses (excluding PSYC-2230), two courses from Arts, Languages or Science, one course from any area of study, excluding Social Sciences, two courses from any area of study, including Psychology (excluding: PSYC-1160, PSYC-2230).
Fourth Year: PSYC-3200, one of PSYC-3350, PSYC-3530 or PSYC-3580; two 3000-level psychology courses, three 4000-level psychology courses, three courses from any area of study, including Psychology (excluding: PSYC-1160, PSYC-2230).

## Honours Psychology with Thesis for Ontario College Child and Youth Care (formerly Child and Youth Worker) Program Graduates-Degree Completion Pathway

Students are strongly advised to enrol in this program in the Summer semester so they can complete at least two of the required Year 1 courses before the Fall semester.

Students are strongly advised to consult with a Psychology academic advisor before registering for courses in this program.

**Degree Requirements:**

Total courses: twenty, plus a minimum of an Ontario College of Applied Arts and Technology Child and Youth Care (formerly Child and Youth Worker) diploma with the following stipulation:

In cases where a student previously completed a university course or courses, the course(s) will not be used to fulfill the 20 course degree requirements if they were used by the College of Applied Arts and Technology to grant advanced standing in the diploma or certificate program. In such cases, the Psychology Undergraduate Program Chair (or designate) will identify a substitute course requirement.

(a) eleven courses including PSYC-1150, PSYC-2300, PSYC-3130, PSYC-3200, PSYC-3310, one of: PSYC-3350, PSYC-3530, PSYC-3580; PSYC-4960, PSYC-4970, one 4000-level course, two 2000-, 3000- or 4000-level courses (excluding PSYC-2230). Entry to the fourth year thesis course, PSYC-4960, requires a cumulative course average of at least 77% and a Psychology major course average of at least 80%.
(b) two courses from Arts, Languages or Science;
(c) one course from any area of study, excluding Social Sciences
(d) SOSC-2500;
(e) five courses from any area of study, including Psychology (excluding: PSYC-1160, PSYC-2230).

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
Third Year: SOSC-2500, PSYC-1150, PSYC-2300, PSYC-3200, PSYC-3310, one of: PSYC-3350, PSYC-3530, PSYC-3580, two courses from Arts, Languages or Science, one course from any area of study, excluding Social Sciences, one course from any area of study, including Psychology (excluding PSYC-1160, PSYC-2230).
Fourth Year: PSYC-3130, PSYC-4960, PSYC-4970, one 4000-level psychology course, two 2000, 3000 or 4000 level psychology courses (excluding PSYC-2230), four courses from any area of study, including Psychology (excluding: PSYC-1160, PSYC-2230).

## Honours Developmental Psychology for Ontario College Child and Youth Care (formerly Child and Youth Worker) Program Graduates – Degree Completion Pathway

Students are strongly advised to enrol in this program in the Summer semester so they can complete at least two of the required Year 1 courses before the Fall semester.

Students are strongly advised to consult with a Psychology academic advisor before registering for courses in this program.

**Degree Requirements**

Total courses: twenty, plus a minimum of an Ontario College of Applied Arts and Technology Child and Youth Care (formerly Child and Youth Worker) diploma with the following stipulation:
In cases where a student previously completed a university course or courses, the course(s) will not be used to fulfill the 20 course degree requirements if they were used by the College of Applied Arts and Technology to grant advanced standing in the diploma or certificate program. In such cases, the Psychology Undergraduate Program Chair (or designate) will identify a substitute course requirement.

(a) eleven courses including PSYC-1150, one of: PSYC-2240 or PSYC-2250; PSYC-2300, PSYC-3200, one of: PSYC-3350, PSYC-3530, PSYC-3580; two of: PSYC-4210, PSYC-4220, PSYC-4230, PSYC-4240, PSYC-4250, PSYC-4280; two 3000-level courses, one 4000-level course, one 2000-, 3000-, or 4000-level course (excluding PSYC-2230).

(b) two courses from Arts, Languages or Science;
€ one course from any area of study, excluding Social Sciences.
(d) SOSC-2500;
€ five courses from any area of study, including Psychology (excluding: PSYC-1160, PSYC-2230).

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
Third Year: SOSC-2500, PSYC-1150, one of: PSYC-2240 or PSYC-2250; PSYC-2300, PSYC-3200, one of: PSYC-3350, PSYC-3530, PSYC-3580, one 2000-, 3000-, or 4000-level psychology course (excluding PSYC-2230), two courses from Languages or Science, one course from any area of study, including Psychology (excluding PSYC-1160, PSYC-2230).
Fourth Year: two of: PSYC-4210, PSYC-4220, PSYC-4230, PSYC-4240, PSYC-4250, PSYC-4280, one additional 4000-level course, two 3000-level psychology courses, one course from any area of study, excluding Social Sciences (excluding KINE-3980), four courses from any area of study, including Psychology (excluding: PSYC-1160, PSYC-2230).

## Honours Developmental Psychology with Thesis for Ontario College Child and Youth Care (formerly Child and Youth Worker) Program Graduates – Degree Completion Pathway

Students are strongly advised to enrol in this program in the Summer semester so they can complete at least two of the required Year 1 courses before the Fall semester.

Students are strongly advised to consult with a Psychology academic advisor before registering for courses in this program.

**Degree Requirements**

Total courses: twenty, plus a minimum of an Ontario College of Applied Arts and Technology Child and Youth Care (formerly Child and Youth Worker) diploma with the following stipulation:
In cases where a student previously completed a university course or courses, the course(s) will not be used to fulfill the 20 course degree requirements if they were used by the College of Applied Arts and Technology to grant advanced standing in the diploma or certificate program. In such cases, the Psychology Undergraduate Program Chair (or designate) will identify a substitute course requirement.

(a) eleven courses including PSYC-1150, one of: PSYC-2240 or PSYC-2250; PSYC-2300, PSYC-3130, PSYC-3200, one of: PSYC-3350, PSYC-3530, PSYC-3580; PSYC-3310, two of: PSYC-4210, PSYC-4220, PSYC-4230, PSYC-4240, PSYC-4250, PSYC-4280; PSYC-4960, PSYC-4970; Entry to the fourth year thesis course, PSYC-4960, requires a cumulative course average of at least 77% and a Psychology major course average of at least 80%.
(b) two courses from Arts, Languages or Science;
(c) one course from any area of study, excluding Social Sciences.
(d) SOSC-2500;
(efive courses from any area of study, including Psychology (excluding: PSYC-1160, PSYC-2230).

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
Third Year: SOSC-2500, PSYC-1150, one of: PSYC-2240 or PSYC-2250; PSYC-2300, PSYC-3200, one of: PSYC-3350, PSYC-3530, PSYC-3580; PSYC-3310, two courses from Arts, Languages or Science, one course from any area of study, excluding Social Sciences.
Fourth Year: PSYC-3130, PSYC-4960, PSYC-4970, two of: PSYC-4210, PSYC-4220, PSYC-4230, PSYC-4240, PSYC-4250, PSYC-4280, five courses from any area of study, including Psychology (excluding: PSYC-1160, PSYC-2230).

## Bachelor of Arts in Psychology (Honours) with Autism and Behavioural Sciences (ABS) Post-Graduate Certificate program from Fanshawe College, Lambton College or St. Clair College

Students interested in this degree Completion Pathway will apply to Fanshawe College, Lambton College, or St. Clair College for admission into the Autism and Behavioural Sciences Post-Graduate Certificate program after having successfully completed 30 semester courses towards their Honours Bachelor of Arts in Psychology. Admission to the Autism and Behavioural Sciences Post-Graduate Certificate program is at the discretion of the College. Students who have successfully completed the Autism and Behavioural Sciences Post-Graduate Certificate at Fanshawe College, Lambton College, or St. Clair College with a minimum 70% cumulative average are eligible to transfer 10 semester courses from the Post-Graduate Certificate program toward their Honours BA. A minimum course average of 60% is required for transfer credit to be granted. Students who receive the 10 semester transfer credit will be eligible to apply to graduate from their Honours BA in Psychology or Honours BA in Developmental Psychology, provided they meet the standing required for graduation from the program.

**Degree Requirements**

Total courses: thirty.

(a)10 psychology courses, including PSYC-1150, PSYC-1160, PSYC-2300, PSYC-3200.
(b) two courses from Arts;
€ two courses from Languages or Science;
(d) two courses from any area of study, excluding Social Sciences.
€ GART-1500, GART-1510;
(f) SOSC-2500;
(g) five courses from any area of study, including Psychology;
(h) six courses from any area of study, excluding Psychology.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

Only University of Windsor courses will count towards the calculation of a student's major average. Transfer credits are not assigned a grade.

NOTE: Students who have completed the General BA in Psychology and subsequently decide to complete the Autism and Behavioural Science Post-Graduate Certificate at St. Clair College or Lambton College, may apply to the University for 10 semester transfer credits towards the Honours BA in Psychology as outlined above. Students who receive the 10 semester transfer credit will be eligible to

apply to graduate with an Honours BA in Psychology, provided they meet degree requirements listed above and they meet the standing required for graduation from the program.

## Bachelor of Arts in Developmental Psychology (Honours) with Autism and Behavioural Sciences (ABS) Post-Graduate Certificate program from Fanshawe College, Lambton College or St. Clair College

Students interested in this degree Completion Pathway will apply to Fanshawe College, Lambton College, or St. Clair College for admission into the Autism and Behavioural Sciences Post-Graduate Certificate program after having successfully completed 30 semester courses towards their their Honours Bachelor of Arts in Developmental Psychology. Admission to the Autism and Behavioural Sciences Post-Graduate Certificate program is at the discretion of the College. Students who have successfully completed the Autism and Behavioural Sciences Post-Graduate Certificate at Fanshawe College, Lambton College, or St. Clair College with a minimum 70% cumulative average are eligible to transfer 10 semester courses from the Post-Graduate Certificate program toward their Honours BA. A minimum course average of 60% is required for transfer credit to be granted. Students who receive the 10 semester transfer credit will be eligible to apply to graduate from their Honours BA in Psychology or Honours BA in Developmental Psychology, provided they meet the standing required for graduation from the program.

**Degree Requirements:**

Total courses: thirty

(a) 10 courses, including PSYC-1150, PSYC-1160, PSYC-2300, PSYC-3200, and at least two 2000-level courses and two 3000-level courses from the following list: PSYC-2230, PSYC-2240, PSYC-2250, PSYC-3220, PSYC-3230, PSYC-3240, PSYC-3270.
(b) two courses from Arts;
€ two courses from Languages or Science;
(d) two courses from any area of study, excluding Social Sciences.
€ GART-1500, GART-1510;
(f) SOSC-2500;
(g) five courses from any area of study, including Psychology;
(h) six courses from any area of study, excluding Psychology.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

Only University of Windsor courses will count towards the calculation of a student's major average. Transfer credits are not assigned a grade.

## BA Honours in Disability Studies

This is a joint offering between Psychology and Social Work. See Social Work for program requirements.

## Combined Honours BA in Disability Studies

This is a joint offering between Psychology and Social Work. See Social Work for program requirements.

## Combined Honours BA in Disability Studies and Psychology

This is a joint offering between Psychology and Social Work. See Social Work for program requirements.

## Honours Bachelor of Social Work and Disability Studies

This is a joint offering between Psychology and Social Work. See Social Work for program requirements.

## BA Honours Bachelor of Arts in Disability Studies for Ontario College Child and Youth Care (formerly Child and Youth Worker) - Degree Completion Pathway

This is a joint offering between Psychology and Social Work. See Social Work for program requirements.

## Honours Bachelor of Arts in Disability Studies for College of Applied Arts and Technology Graduates - Degree Completion Pathway

This is a joint offering between Psychology and Social Work. See Social Work for program requirements.

## Bachelor of Commerce (Honours Business Administration and Psychology) (with/without thesis)

This is a joint offering between Psychology and the Odette School of Business. See the Odette School of Business for program requirements.

## Bachelor of Commerce (Honours Business Administration and Psychology) with Specialization in Human Resources Management and Industrial Organizational Psychology (with/without thesis)

This is a joint offering between Psychology and the Odette School of Business. See the Odette School of Business for program requirements.

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Psychology (Thesis) and Psychology

Major Concentration - Psychology (With Thesis): PSYC-1150; PSYC-1160; PSYC-2300;PSYC-3130; PSYC-3200; PSYC-3310; PSYC-4960; PSYC-4970*; one of PSYC-3350, PSYC-3530, PSYC-3580; three additional Psychology courses.*PSYC-4960 and PSYC-4970 will take the place of ARSC-4990. Entry to the fourth

year thesis course, PSYC-4960, requires a cumulative course average of at least 77% and a major course average of at least 80%. An additional course from FAHSS or Science will need to be completed.

Major Concentration - Psychology (Without Thesis): PSYC-1150; PSYC-1160; PSYC-2300; PSYC-3200; one of PSYC-3350, PSYC-3530, PSYC-3580; five additional 2000-, 3000- or 4000-level Psychology courses and two additional 3000- or 4000-level Psychology courses.

Minor Concentration: PSYC-1150; PSYC-1160; two 2000-level courses; one 3000-level course; one 4000-level course.

**Recommended Course Sequence for the Minor Concentration**
First Year: PSYC-1150, PSYC-1160.
Second Year: two 2000-level psychology courses.
Third Year: one 3000-level psychology course.
Fourth Year: one 4000-level psychology course.

## Minor in Child Psychology

Requirements: Six courses in Psychology, including PSYC-1150, PSYC-1160, and four of PSYC-2230, PSYC-2240, PSYC-3220, PSYC-3230, PSYC-3240, PSYC-3270, PSYC-4210, PSYC-4220, PSYC-4230, PSYC-4240, PSYC-4250, and PSYC-4270.

## Minor in Disability Studies

This is a joint offering between Psychology and Social Work. See Social Work for program requirements.

## Minor in Psychology

Requirements: Six courses in Psychology, including PSYC-1150, PSYC-1160, and four courses at the 2000 level or above.

# PSYCHOLOGY COURSES

Not all courses will be offered each year. All courses are three hours a week unless otherwise indicated.

Priority for registration in 3000- and 4000-level courses may be given to students with General Psychology Majors, Psychology Honours, Developmental Psychology Honours, or Combined Honours.

Note: With the exception of PSYC-1070, PSYC-1150 and PSYC-1160 are prerequisites for all other courses in Psychology. Some courses require additional prerequisites.

**PSYC-1070. Positive Psychology**
An introduction to theory and research pertaining to the study of positive psychology, the psychology of human strengths and coping resources. Selected topics include: happiness, living a meaningful and gratifying life, resilience, hardiness, emotional intelligence, optimism, hope, creativity and moral motivation.

**PSYC-1150. Introduction to Psychology as a Behavioural Science**

Introduction to selected areas in psychology including learning, perception, physiological psychology, emotion, and motivation.

**PSYC-1160. Introduction to Psychology as a Social Science**
Introduction to selected areas in psychology including developmental, social, personality, and clinical.

**PSYC-2180. Everyday Conflicts and Their Resolution**
Students design and practice techniques for resolving everyday conflicts with friends and co-workers effectively and respectfully, and without damaging interpersonal relationships. Students learn to focus on the problem, not the person; identify and respond to hidden agendas and subvert personal attacks. Pre-requisite: Semester 3 or above standing or permission of the instructor. (Also offered as SJST-2180, WORK-2180)

**PSYC-2200. Introduction to Adjustment and Personality**
A survey of major approaches to the study of personality with a particular focus on the processes involved in adjustment.

**PSYC-2230. Developmental Psychology: The Child**
The study of normal child development from conception to puberty, including physical, cognitive, and social development within the child's family, school, and cultural contexts. Specific topics include temperament, language development, intelligence testing, personality development, and parenting styles.

**PSYC-2240. Developmental Psychology: Adolescence**
The study of normal adolescent development from puberty to early adulthood. Topics include physical changes at puberty, cognitive and social development, and the impact of adolescent development within various contexts, including families, peer groups, and schools.

**PSYC-2250. Developmental Psychology: Adulthood and Aging**
The study of adult development including stages in adulthood, problems of aging, and issues related to death and dying.

**PSYC-2280. Psychological Disorders**
This course is a survey of psychopathology, with a focus on the structure and application of the Diagnostic and Statistical Manual (DSM) of Mental Disorders. Content to be covered will include historical and contemporary theory and research regarding the etiology and progression of pathology, including biological, psychological and socio-cultural understandings. Attention will also be given to critiques of classification schemes and diagnosis. Finally, implications for the treatment of specific disorders will be addressed. (Prerequisite: PSYC-1150 and PSYC-1160.)

**PSYC-2300. Social Science Research Methods**
Introduction to experimental and non-experimental research methods and designs commonly used in psychology and other social sciences (e.g., experiments, quasi-experiments, survey research, observational studies, content analysis). Includes conducting research exercises/projects dealing with social, personality, developmental, and/or educational issues, writing research reports, and consideration of research ethics. (2 lecture, 2 laboratory hours per week; limited enrolment.) (Antirequisites: KINE-2700.)

**PSYC-2360. Introduction to Social Psychology**

An introduction to the theories, methods, findings, and problems associated with the study of the individual in the social context. Topics include social cognition; interpersonal behaviour (attraction, aggression, altruism); social attitudes, prejudice, and discrimination; social influence and group processes (conformity, leadership, intergroup relations).(Prerequisites: PSYC-1150 and PSYC-1160.)

**PSYC-2400. Psychology of Sex and Gender**
Review of philosophical, historical, theoretical, and research literature in the psychology of sex and gender. Topics include male/female stereotypes; similarities/differences based on research data; and current social issues.

**PSYC-2560. Introduction to the Brain and Human Behaviour**
Reviews basic research relating brain and behaviour with a focus on human functioning. Includes the study of neuronal and synaptic activity and results from current research and case histories which link human behaviour to basic neuroanatomical and biochemical brain systems.

**PSYC-3100. Tutorial**
Individual projects in specific areas of psychology. (May be repeated once for credit.) (Prerequisites: PSYC-1150, PSYC-1160, and four additional courses in Psychology.)

**PSYC-3130. Advanced Statistics**
Required for students anticipating honours thesis projects in their fourth year. One-way, two-way, and higher order ANOVA, repeated measures ANOVA, multiple comparisons, correlation and univariate regression, introduction to multivariate regression and the general linear model, with an emphasis on computer data analysis. (Prerequisite: SOSC-2500.) (Credit can only be obtained for one of PSYC-3130 or SACR-3080.) (2 lecture hours, 1 laboratory hour a week.)

**PSYC-3200. Tests and Measurement**
An introduction to basic concepts of psychological testing, with a focus on test development, measurement, and test evaluation. Standard tests used to assess personality, achievement, and aptitudes will be surveyed. (Prerequisite: SOSC-2500.)

**PSYC-3220. Child Psychopathology**
An overview of theory and research related to the assessment, diagnosis, and treatment of childhood and adolescent disorders. Risk factors, vulnerability to stress, and protective factors will be addressed in relation to adjustment disorders, conduct disorder, depression, and anxiety in children and adolescents. (Prerequisite: PSYC-2230 or PSYC-2240.)

**PSYC-3230. Developmental Disabilities**
An overview of theory and research related to the biological foundation of childhood and adolescent developmental disabilities. Mental retardation, sensory and motor impairments, learning disabilities, and disorders with physical manifestations are included in the topics covered. (Prerequisite: PSYC-2230 or PSYC-2240.)

**PSYC-3240. Educational Psychology**
Psychology of the learning process and the variables that affect learning such as intelligence, motivation, attitudes, interpersonal relations, and cultural background. (Prerequisite: PSYC-2230 or PSYC-2240.)

**PSYC-3270. Psychological Perspectives on Parenting**
Contemporary theories and practices of parenting throughout the life cycle, with an emphasis on the psychological aspects of the family system. (Prerequisite: PSYC-2230 or PSYC-2240.)

**PSYC-3300. Personality Theory and Research**
Survey of personality theories and relevant research. Theories may include psychoanalytic, trait, behavioural, humanistic, cognitive, and biological. Some research topics relevant to personality theory will be outlined and illustrated with reference to selected content areas of personality.

**PSYC-3310. Conducting Research in Psychology**
Required for students anticipating honours thesis projects in their fourth year. Topics include: how to generate research ideas, philosophy and place of research in psychology, utilizing research advisors and supervision, using library resources, writing research reports, ethical issues in student research, planning effective research designs, dealing with participant recruitment and data collection, locating research measures, making data analysis decisions, using statistical packages such as SPSS, disseminating research ideas and findings. (Prerequisites: Prerequisite: 70% or greater in both PSYC-2300 and PSYC-3200; and consent of instructor or the Undergraduate Program Chair.)

**PSYC-3330. Introduction to Clinical Psychology**
This course surveys topics and issues in the field of clinical psychology, including biopsychosocial theories of functioning and dysfunction. Emphasis is placed on major approaches to assessment and treatment (e.g., humanistic, cognitive-behavioral, psychodynamic). The course also will cover the scientific basis for clinical psychology, as well as historical, ethical, professional, cultural and legal issues. Sub-specialties and contemporary issues are also addressed. (Prerequisite: PSYC-2280 or PSYC-3220)

**PSYC-3340. Applied Social Psychology**
The application of social psychology to solving social issues. Topics include improving job satisfaction and organizational life, promoting community health, meeting social welfare needs, dealing with environmental problems, improving educational systems, and addressing the issues of social justice and equality. The course may involve a fieldwork component. (Prerequisite: PSYC-2360.)

**PSYC-3350. Human Sensation and Perception**
The study of underlying mechanisms and processes of human sensation and perception, methods of measuring human sensory abilities, and the perceptual processes for integrating and interpreting such information. (Prerequisite: PSYC-2300) (2 lecture, 2 laboratory hours per week.)

**PSYC-3370. Human Cognitive Neuroscience**
Issues relevant to the brain and human behaviour. Recent research selected from areas of developmental, cognitive, and clinical neuropsychology. Introduction to cognitive neuroscience modelling. (Prerequisites: PSYC-1150, PSYC-1160, either PSYC-2560 or BIOL-2040 and three additional courses in Psychology.)

**PSYC-3390. Health Psychology**
Application of psychology to the areas of health promotion, prevention and treatment, and improvement of health-care delivery. Theory, research, and practice in health psychology and behavioural medicine will be examined. Specific areas of emphasis may include stress, illness, and coping; patient-practitioner interaction; adjustment to chronic illness; reproductive health issues; and cross-cultural conceptions of illness and healing. (Prerequisite: PSYC-2360 or Nursing students with at least semester 2 standing or consent of instructor.)

**PSYC-3420. Culture and Psychology**
This course examines psychological theory and research on the commonalities and variations in human behaviour within and across cultures. Topics may include individualism and collectivism, perspectives on the self, communication and interpersonal relations, intergroup relations, organizational behaviour, and the consequences of cross-cultural contact. (Prerequisite: PSYC-2360.)

**PSYC-3500. Practical Strategies for Social Change: Intervening to Prevent Sexual Violence**
This course introduces students to sexual violence as a social problem; why it matters, the forms it takes, and how it can be changed. The importance of personal and community responsibility for social change is emphasized. This course also provides students with the background knowledge that is needed to successfully teach sexual violence prevention workshops for their peers. Restricted to students who have attained a cumulative GPA of 66% or higher at the time of application. (Prerequisite: Semester 4 standing or above and permission of the instructor by online application at bystanderinitiative.ca) (Also offered as SACR-3500, SJST-3500, SOSC-3500, SWRK-3500, and WGST-3500.)

**PSYC-3530. Learning and Behaviour**
Basic principles and theories of classical and operant conditioning and their application to human behaviour. (Prerequisite:PSYC-2300.) (2 lecture, 2 laboratory hours per week.)

**PSYC-3550. Comparative Psychology**
Introduction to animal behaviour from the viewpoint of its role in the natural life of the individual and the species. A synthesis of contributions by comparative psychologists, ethologists, ecologists, and zoologists. (Prerequisites: PSYC-1150, PSYC-1160, and four additional courses in Psychology.)

**PSYC-3580. Cognitive Processes**
A review of current contributions to the understanding of attentional, memory, problem solving, and reasoning processes. (Prerequisite: PSYC-2300) (3 lecture, 1 laboratory hours per week.)

**PSYC-3700. Industrial-Organizational Psychology**
The study of employees, workplaces, and organizations. Topics include job analysis and competency models, recruitment, selection, and decision making, performance management, training, group and team processes in organizations, employee attitudes, affect, and behaviour, motivation, leadership, productive and counterproductive work behaviour. (Prerequisites: PSYC-1150 and PSYC-1160; or Labour Studies students with at least Semester 4 standing; or consent of instructor.) (Also offered as WORK-3700.)

**PSYC-4000. Selected Topics in Psychology**
Seminar on a selected topic in psychology. Content will vary with instructor. (Prerequisites: PSYC-1150, PSYC-1160, four additional courses in Psychology, including courses as specified by the instructor.) (May be repeated for credit if content changes.)

**PSYC-4150. History and Systems of Psychology**
The emergence and development of psychology as a science. A review and evaluation of major systems of psychology, such as structuralism, functionalism, behaviourism, Gestalt psychology, and psychoanalysis. Emphasis will be placed on the contributions of the systems to contemporary theoretical conceptions and trends. (Prerequisites: PSYC-1150, PSYC-1160, and four additional courses in Psychology.)

**PSYC-4210. The Psychology of the Family**
An analysis of theory and research examining the impact of family context on individual development throughout the life cycle. (Prerequisites: PSYC-2230; restricted to 4th year Psychology/Developmental Psychology majors).

**PSYC-4220. Advanced Developmental Psychology: Emotional Development**
This seminar examines issues related to emotional development from infancy through adult years. The experience, expression, and regulation of emotion will be discussed from various historical and academic perspectives. (Prerequisite: PSYC-2230 or PSYC-2240.)

**PSYC-4230. Advanced Developmental Psychology: Cognitive Development**
An examination of current theories, research methods, and findings in the area of cognitive development. (Prerequisite: PSYC-2230 or PSYC-2240.)

**PSYC-4240. Advanced Developmental Psychology: Social Development**
This seminar examines established and newly-emerging theories of development and their impact on social development research. Emphasis is placed on describing social developmental outcomes (e.g., gender, emotion, morality), and the influence of biological factors (e.g., temperament) and socialization agents (e.g., parents, media) on such outcomes. (Prerequisite: PSYC-2230 or PSYC-2240.)

**PSYC-4250. Seminar in Developmental Psychology**
Focus on a particular topic within the area of developmental psychology. Topics will vary from term to term. (May be repeated for credit.) (Prerequisites: PSYC-1150, PSYC-1160, PSYC-2230 and three additional courses in Psychology.)

**PSYC-4270. Methods of Behavioural Change**
Survey of theories and methods of behavioural change, including behavioural assessment and analysis, relaxation training, graduated exposure, contingency management, and cognitive restructuring. (Prerequisite: PSYC-3350 or PSYC-3530 or PSYC-3580.)

**PSYC-4280. Practicum in Developmental Psychology**
Supervised practicum in learning-based behaviour change strategies. Students will practice behavioural assessment and systematic remediation of clinical problems through application of operant techniques in community placements. (A 6.00 credit hour course.)((Restricted to 4th year Developmental Psychology majors with cumulative and major averages of at least 70%.) (Prerequisites: PSYC-4270, an application and interview, and consent of instructor.) (Antirequisite: PSYC-4290.) (1.5 lecture hours and 8 practicum hours per week.)

**PSYC-4290. Practicum in Psychology**
Supervised practicum in a university or community setting. Students will consolidate and enhance their knowledge about psychology and skills in connection with a specific project, activity, or task. The practicum experience may include the opportunity to be involved in some aspect of community change, peer counselling, or research, among other possibilities. (A 6.00 credit hour course.)(Prerequisites: application and interview, consent of instructor; restricted to 4th year Psychology majors with cumulative and major averages of at least 70%.) (Antirequisite: PSYC-4280.) (3 lecture hours and 8 practicum hours per week.)

**PSYC-4300. Clinical and Counselling Psychology**
The principles and techniques underlying clinical interviewing and modern psychotherapeutic methods. Emphasis will be placed upon the application of clinical interviewing and modern psychotherapeutic methods, as well as the application of clinical methods in clinics, hospitals, schools, mental health settings, and community agencies. (Prerequisites: PSYC-3330.)

**PSYC-4320. Community Psychology**
An examination of societal and environmental influences on the community and individual community members, the development of the community mental health movement, and current issues in theory, research, and practices in community psychology. Emphasis will be placed on prevention, crisis intervention, and effecting social change. An overview of community-based professional and volunteer services will be presented. Community responses to issues such as homelessness, suicide, and violence against women will be considered. (Prerequisite: PSYC-2360.)

**PSYC-4330. Seminar in Law and Psychology**
Issues in the interaction between law and psychology; discussion of the use/misuse/nonuse of behavioural sciences in the law; emphasis on how psychology can best be applied to family, criminal, and civil law. (Prerequisites: PSYC-1150, PSYC-1160, and four additional courses in Psychology.)

**PSYC-4360. Seminar in Psychopathology**
Focus on a particular topic within the area of abnormal behaviours. Topics will vary from term to term. (Prerequisites: PSYC-3330 and PSYC-2280)

**PSYC-4400. Seminar in the Psychology of Women**
An examination of the feminist critique of mainstream psychology research of the last century, of feminist approaches to research and theorizing, and applications of feminist psychology to the study of a number of topics in the psychology of women (e.g., mental health, violence against women, sexuality). (Prerequisite: PSYC-2400 or consent of instructor.)

**PSYC-4410. Special Topics in Health Psychology**
This specialized course is designed for students who wish to pursue their interests in health psychology in greater depth. The course will focus on a particular topic within the area of health psychology, and topics will vary from term to term, depending on the emphasis of the instructor. Possible special topics

could include Women's Health, Personality and Health, and the Social Psychology of Health. (Prerequisite: PSYC-3390.)(May be repeated for credit if content changes.)

**PSYC-4450. Stereotyping, Prejudice, and Discrimination**
Psychological theory and research on stereotyping, prejudice, and discrimination; their formation and function; the role of individual and sociocultural factors in their development and maintenance; individual responses and psychological interventions. (Prerequisite: PSYC-2360.)

**PSYC-4500. Practicum in Social Change**
Supervised practicum in a university setting. Students consolidate and enhance their knowledge of sexual assault and bystander intervention. Students co-facilitate the Bringing in the Bystander® In Person Prevention program for one or more small groups of students on campus. The practicum experience equips students to deliver educational content on sensitive issues. (Prerequisite: Final mark of 75% or higher in SOSC-3500/PSYC-3500/SJST-3500/SWRK-3500/SACR-3500/WGST-3500 and permission of the instructor by online application at bystanderinitiative.ca.) (Also offered as SACR-4500, SJST-4500, SOSC-4500, SWRK-4500, and WGST-4500.)

**PSYC-4570. Comparative Cognition**
Evidence of general and specialized cognitive processes in human and non-human organisms will be investigated. Topics to be covered include perception, attention, and memory, concept formation, ecological and evolutionary bases of cognitive processes. Current research on these and other topics will be reviewed and discussed in a seminar format. (Prerequisite: Any two of the following undergraduate courses or their equivalents from other universities: PSYC-3530, PSYC-3580 or PSYC-3350.) (Also offered as BIOL-8470; Cross-listed with PSYC-8570.)

**PSYC-4750. Popular Literature in Psychology**
A forum for critical examination and analysis of popular literature written by psychologists or others functioning in the role of counselor or lay expert. The main goal is to identify both traditional and novel criteria for assessing the validity of popular literature and its contribution to knowledge. (Prerequisites: PSYC-1150, PSYC-1160, and four additional courses in Psychology.)

**PSYC-4960. Thesis: Seminar**
Experience in conducting psychological research is viewed as necessary for graduate work in psychology. This course is designed to provide such experience through planning, developing, and writing a research proposal under individual faculty supervision. Group sessions on research ethics, procedures, writing, and data analysis. (Prerequisites: PSYC-2300; PSYC-3130 or equivalent; PSYC-3310; PSYC-3200; a cumulative average of at least 77%; a Psychology major average of at least 80%; and consent of instructor or Undergraduate Program Chair.) (Prerequisites for B.Sc. Honours Behaviour, Cognition and Neuroscience students: PSYC-2300; PSYC-3130 or equivalent; PSYC-3350, PSYC-3530, and PSYC-3580; an average of 80% or higher in Psychology courses; and consent of instructor or Undergraduate Program Chair.) Students must meet all requirements to be eligible for admission to the course.

**PSYC-4970.Thesis: Research**
Students will conduct and write an undergraduate thesis under individual faculty supervision. (The thesis is developed and begun while taking PSYC-4960). (Prerequisite: PSYC-4960.)

# SOCIAL WORK

## PROGRAMS

### Honours Bachelor of Social Work

**Degree Requirements**

Total courses: 40

(a) SWRK-1170, SWRK-1180, SWRK-2040, SWRK-2100, SWRK-3360, SWRK-3370, SWRK-3380, SWRK-3390, SWRK-3440, SWRK-3710, SWRK-4230, SWRK-4300, SWRK-4310, SWRK-4730 (9 credit hours), SWRK-4750 (12 credit hours).
(b) GART-1500, GART-1510;
(c) SOSC-2500;
(d) Two courses from Science;
(e) A minimum of six courses from one of the disciplines or programs of study listed below: Communication Studies, Media, and Film, Labour Studies, Psychology, Sociology, Anthropology, History, Women's and Gender Studies, Political Science, Family and Social Relations, Diaspora Studies, and Disability Studies.
(f) 9 courses from any area of study including Social Work courses.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Program Sequencing**
Year 1: GART-1500, GART-1510, SWRK-1170, SWRK-1180, two science courses, two introductory courses from a social science discipline and two introductory courses from any area of study.
Year 2: SOSC-2500, SWRK-2040, SWRK-2100, and four courses at the 2000-4000 level from a social science discipline, plus three courses from any area of study.
Year 3: SWRK-3360, SWRK-3370, SWRK-3380, SWRK-3390, SWRK-3440, SWRK-3710, plus four courses from any area of study including Social Work.
Year 4: SWRK-4230, SWRK-4300, SWRK-4310, SWRK-4730, SWRK-4750.

Phasing out of previous curriculum: Program advisors will determine appropriate exceptions for students who are completing their program under the previous curriculum and who fall out of sequence.

### Honours Bachelor of Social Work and Disability Studies

This is a joint offering between Social Work and Psychology.

**Degree Requirements**

Total courses: 40

(a) Social Work: SWRK-1170, SWRK-1180, SWRK-2040, SWRK-3360, SWRK-3370, SWRK-3380, SWRK-3390, SWRK-3440, SWRK-3710, SWRK-4230, SWRK-4300, SWRK-4730 (9.0 credit hours), SWRK-4310, SWRK-4750 (12 credit hours).
* Every effort will be made to ensure that Field Education I and II will allow the Combined Social Work and Disability Studies student to utilize their knowledge from both areas of study in the experiential learning process.
(b) Disability Studies:
  (i) four discipline foundation courses: PSYC-1150, PSYC-1160, DISB/SJST-1000, SWRK-2100;
  (ii) three Disability Studies or Disability Studies-Emphasis courses;
  (iii) three human development courses: PSYC-2230, PSYC-2240, PSYC-2250
  (iv) three Disability Studies courses: DISB-2010, DISB-3020, DISB-4010.
(c) GART-1500, GART-1510;
(d) two Science courses;
(e) SOSC-2500;
(f) three courses from any area of study, excluding social work and disability studies.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

**Recommended Course Sequencing:**
Year 1: GART-1500, GART-1510, SWRK-1170, SWRK-1180, PSYC-1150, PSYC-1160, DISB/SJST-1000, one science course and two courses from any area of study.
Year 2: SWRK-2100, SWRK-2040, SOSC-2500, PSYC-2230, PSYC-2240, one science course, 3 Disability Studies Emphasis courses and one course from any area of study.
Year 3: SWRK-3360, SWRK-3370, SWRK-3380, SWRK-3390, SWRK-3440, SWRK-3710, PSYC-2250, DISB-2010, DISB-3020, DISB-4010.
Year 4: SWRK-4230, SWRK-4300, SWRK-4730 (9.0 credit hours), SWRK-4310, SWRK-4750 (12 credit hours).

## Honours Bachelor of Social Work and Women's Studies

This is a joint offering between Social Work and Women’s and Gender Studies.

**Degree Requirements**

Total courses: 40

(a) Social Work: SWRK-1170, SWRK-1180, SWRK-2040, SWRK-3360, SWRK-3370, SWRK-3380, SWRK-3390, SWRK-3440, SWRK-3710, SWRK-4230, SWRK-4300, SWRK-4310, SWRK-4730 (9 credit hours), and SWRK-4750 (12 credit hours).
(b) Women' Studies:
  (i) WGST-1000, WGST-2200, WGST-2500, WGST-3060;
  (ii) WGST-2510 or HIST-2510;
  (iii) WGST-2100 or SACR-2100;
  (iv) one of WGST-3590, PHIL-3590, WGST-3050;
  (v) two of WGST/POLS-2110, WGST/WORK-2600, WGST-3100, WGST/SACR-3530, or WGST/HIST-3400;
  (vi) SWRK/WGST-3550; one of SWRK/WGST-3470 WGST-3300 OR WGST-3850*;
  (vii) three additional Women's and Gender Studies courses.
(c) GART-1500, GART-1510;

(d) SOSC-2500;
(e) One science course;
(f) Three courses from any area of study, excluding Social Work and Women's and Gender Studies. (It is recommended that these courses be from related disciplines)

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study..

*WGST-3850 may count as equivalent only when offered as a Walls to Bridges course under section code "75".

**Program Sequencing**
Year 1: (Ten courses) GART-1500, GART-1510, SWRK-1170, SWRK-1180, WGST-1000, WGST-2100 (or SACR-2100), WGST-XXXX (one Women's and Gender Studies course), one science course,; and two courses from any area of study, excluding Social Work and Women's and Gender Studies.
Year 2: (Ten Courses) SOSC-2500, SWRK-2040, WGST-2510 (or HIST-2510), WGST-2200, WGST-2500; two of WGST/POLS-2110, WGST/WORK-2600, WGST-3100, WGST/SACR-3530 or WGST/HIST-3400; two Women's and Gender Studies courses, and one course from any area of study, excluding Social Work and Women's and Gender Studies.
Year 3: (Ten courses) SWRK-3360, SWRK-3370, SWRK-3380, SWRK-3390, SWRK-3440, SWRK-3710, WGST-3590 (or PHIL-3590 or WGST-3050), WGST-3060, SWRK/WGST-3550; and one of SWRK/WGST-3470 or WGST-3300 or WGST-3850*;
Year 4: SWRK-4230, SWRK-4300, SWRK-4310, SWRK-4730 (9 credit hours), SWRK-4750 (12 credit hours).

## Honours Bachelor of Social Work for University Graduates

**Degree Requirements**

Total courses: 20

(a) SWRK-2040, SWRK-2100, SWRK-3360, SWRK-3370, SWRK-3380, SWRK-3390, SWRK-3440, SWRK-3710, SWRK-4230, SWRK-4300, SWRK-4310, SWRK-4730 (9 credit hours), SWRK-4750 (12 credit hours).
(b) SOSC-2500 or equivalent;
(c) One course from any area of study

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

Students who have previously taken SOSC-2500 or equivalent may substitute a social science course at the 2000-4000 or a 3000-4000 level social work course.

Phasing out of previous curriculum: Program advisors will determine appropriate exceptions for students who are completing their program under the previous curriculum and who fall out of sequence.

**Program Sequencing**
Year 1: SOSC-2500, SWRK-2040, SWRK-2100, SWRK-3360, SWRK-3370, SWRK-3380, SWRK-3390, SWRK-3440, SWRK-3710, one course from any area of study.

Year 2: SWRK-4230, SWRK-4300, SWRK-4310, SWRK-4730 (9.0 credit hours), SWRK-4750 (12 credit hours).

## Honours Bachelor of Social Work for Ontario Child and Youth Care Program Graduates

Students are strongly advised to consult with a Social Work academic advisor before registering for courses in this program.

**Degree Requirements**

Total courses: 20, plus a minimum of an Ontario College of Applied Arts and Technology Child and Youth Care diploma with the following stipulation: In cases where a student previously completed a university course or courses, the course(s) will not be used to fulfill the 20 course degree requirements if they were used by the College of Applied Arts and Technology to grant advanced standing in the diploma or certificate program. In such cases, the Social Work Undergraduate Program Coordinator (or designate) will identify a substitute course requirement.

(a) SWRK-2040, SWRK-2100, SWRK-3360, SWRK-3370, SWRK-3380, SWRK-3390, SWRK-3440, SWRK-3710, SWRK-4230, SWRK-4300, SWRK-4310, SWRK-4730 (9 credit hours), SWRK-4750 (12 credit hours).
(b) SOSC-2500 or equivalent;
(c) One course from any area of study

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

Students who have previously taken SOSC-2500 or equivalent may substitute a social science course at the 2000-4000 level or a 3000-4000 level social work course.

Phasing out of previous curriculum: Program advisors will determine appropriate exceptions for students who are completing their program under the previous curriculum and who fall out of sequence.

**Program Sequencing**
Year 1: SOSC-2500, SWRK-2040, SWRK-2100, SWRK-3360, SWRK-3370, SWRK-3380, SWRK-3390, SWRK-3440, SWRK-3710, one course from any area of study.
Year 2: SWRK-4230, SWRK-4300, SWRK-4310, SWRK-4730 (9 credit hours), SWRK-4750 (12 credit hours).

## BA Honours in Disability Studies

This is a joint offering between Social Work and Psychology.

**Degree Requirements**

Total courses: 40 courses

(a) six discipline foundation courses: PSYC-1150, PSYC-1160, SWRK-1170, SWRK-1180, DISB/SJST-1000, SWRK-2100;
(b) four Disability Studies or Disability Studies-Emphasis courses

(c) one social science research methods course: PSYC-2300;
(d) three human development courses: PSYC-2230, PSYC-2240, PSYC-2250;
(e) six Disability Studies courses: DISB-2010, DISB-3020, DISB-4010, DISB-4020, DISB-4650 (6.00 credit course);
(f) two courses from Arts;
(g) two courses from Languages or Science;
(h) two additional courses from Arts, Languages, Social Sciences or Science.
(i) GART-1500, GART-1510;
(j) SOSC-2500;
(k) 11 courses from any area of study.

Courses used to calculate the major average are: courses listed under requirements (a) to (e), and any courses taken in the major area(s) of study..

**Recommended Course Sequence**
Year 1: PSYC-1150, PSYC-1160, SWRK-1170, SWRK-1180, DISB/SJST-1000, GART-1500, GART-1510, one Arts course, one Languages or Science course; one Arts, Languages, Social Sciences or Science course;
Year 2: SWRK-2100, PSYC-2300, PSYC-2230, PSYC-2240, SOSC-2500, one Arts course, one Languages or Science course, one Arts, Languages, Social Sciences or Science course; two courses from any area of study;
Year 3: DISB-2010, DISB-3020, two Disability Studies-Emphasis courses, PSYC-2250, five courses from any area of study;
Year 4: DISB-4010, DISB-4020, DISB-4650 (6.00 credit course), two Disability Studies-Emphasis courses; four courses from any area of study.

## Combined Honours BA in Disability Studies and Psychology

This is a joint offering between Social Work and Psychology.

**Degree Requirements**

Total courses: 40

(a) Disability Studies:
  (i) four discipline foundation courses: SWRK-1170, SWRK-1180, DISB/SJST-1000, SWRK-2100;
  (ii) four Disability Studies or Disability Studies-Emphasis courses;
  (iii) six Disability Studies courses: DISB-2010, DISB-3020, DISB-4010, DISB-4020, DISB-4650 (6.00 credit course);
(b) Psychology: PSYC-1150, PSYC-1160, PSYC-2230, PSYC-2240, PSYC-2250, PSYC-2300, and PSYC-3200 and one of PSYC-3350, PSYC-3530 or PSYC-3580.
  *The total number of Psychology courses must include at least four 3000-level courses and two 4000-level courses.
(c) two courses from Arts;
(d) two courses from Languages or Science;
(e) two courses from any area of study, excluding Social Sciences.
(f) GART-1500, GART-1510;
(g) SOSC-2500;
(h) three courses from any area of study.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study..

**Recommended Course Sequencing:**
Year 1: PSYC-1150, PSYC-1160, SWRK-1170, SWRK-1180, DISB/SJST-1000, GART-1500, GART-1510,one Arts course, one Languages or Science course; one course from any area of study;
Year 2: SWRK-2100, PSYC-2300, PSYC-2230, PSYC-2240, SOSC-2500, one Languages or Science course, one Disability Studies Emphasis course; one course from any area of study, one Arts course, one course from Arts, Languages, Social Sciences or Science;
Year 3: DISB-2010, DISB-3020, PSYC-2250, PSYC-3200, one of PSYC-3350, PSYC-3530 or PSYC-3580, one Disability Studies-Emphasis course, two open psychology courses, one course from any area of study, one course from Arts, Languages, Social Sciences or Science;
Year 4: DISB-4010, DISB-4020, DISB-4650 (6.00 credit course), two Disability Studies-Emphasis courses; four open psychology courses.

## Combined Honours BA in Disability Studies

This is a joint offering between Social Work and Psychology.

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty
(a) Disability Studies: sixteen courses, including DISB/SJST-1000, PSYC-1150, PSYC-1160, SWRK-1170, SWRK-1180, PSYC-2300, PSYC-2230, PSYC-2240, PSYC-2250, SWRK-2100, DISB-2010, DISB-3020, DISB-4010, DISB-4020, DISB-4650 (double credit).
(b) Course requirements-Other subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) GART-1500, GART-1510;
(d) SOSC-2500
(e) two courses from Arts or Languages;
(f) two courses from Languages or Science;
(g) two additional courses from any area of study, excluding Social Sciences.
(h) additional courses from any area of study to a total of forty (as required).

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study..

**Recommended Course Sequencing:**
Year 1: PSYC-1150, PSYC-1160, SWRK-1170, SWRK-1180, DISB/SJST-1000, GART-1500, GART-1510;
Year 2: SWRK-2100, PSYC-2300, PSYC-2230, PSYC-2240, SOSC-2500;
Year 3: DISB-2010, DISB-3020, PSYC-2250;
Year 4: DISB-4010, DISB-4020, DISB-4650 (6.00 credit course).

# BA Honours Bachelor of Arts in Disability Studies for Ontario College Child and Youth Care Program Graduates - Degree Completion Pathway

This is a joint offering between Social Work and Psychology.

Students are strongly advised to enrol in this program in the Summer semester so they can complete at least two of the required Year 1 courses before the Fall semester.

Students are strongly advised to consult with a Disability Studies academic advisor before registering for courses.

**Degree Requirements**

Total courses: 20 courses, plus a minimum of an Ontario College of Applied Arts and Technology Child and Youth Care diploma with the following stipulation:
In cases where a student previously completed a university course or courses, the course(s) will not be used to fulfill the 20 course degree requirements if they were used by the College of Applied Arts and Technology to grant advanced standing in the diploma or certificate program. In such cases, the Disability Studies Program Coordinator (or designate) will identify substitute course requirement(s).

(a) four discipline foundation courses: PSYC-1150, SWRK-1170, SWRK-1180, DISB/SJST-1000;
(b) one social science research methods course: PSYC-2300;
(c) two human development courses: PSYC-2240, PSYC-2250;
(d) six Disability Studies courses: DISB-2010, DISB-3020, DISB-4010, DISB-4020, DISB-4650 (6 credit course);
(e) one Disability Studies or Disability Studies-Emphasis course (2000 level or higher) and one Disability Studies or Disability Studies-Emphasis course (any level).
(f) two Arts, Languages or Science courses, excluding Disability Studies or Disability Studies-Emphasis courses.
(g) SOSC-2500;
(h) two courses from any area of study, including Psychology (excluding PSYC-1160 and PSYC-2230), Social Work, or Disability Studies.

Courses used to calculate the major average are: courses listed under requirements (a) to (e), and any courses taken in the major area(s) of study.

**Recommended Course Sequencing:**
Year 1, Fall Semester: PSYC-1150, SWRK-1170, DISB/SJST-1000, DISB-2010, SOSC-2500;
Year 1, Winter Semester: SWRK-1180, PSYC-2240, PSYC-2300, DISB-3020, and one additional course;
Year 2, Fall Semester: PSYC-2240, DISB-4010, and three additional courses;
Year 2, Winter Semester: PSYC-2250, DISB-4020, DISB-4650 (6 credit course) and one additional course.

# Honours Bachelor of Arts in Disability Studies for College of Applied Arts and Technology Graduates - Degree Completion Pathway

This is a joint offering between Social Work and Psychology.

**Degree Requirements**

Total courses: 30 courses, plus a College of Applied Arts and Technology diploma in a Child and Youth Care (formerly Child and Youth Worker), Developmental Services Worker, Early Childhood Education, Educational Support and Social Service Worker program. Graduates of related Education, Community and Social Services programs may be admitted with Disability Studies Program Coordinator (or their designate) approval with the following stipulations:

- No more than nine courses can be at the 1000 level.
- In cases where a student previously completed a university course or courses, the course(s) will not be used to fulfill the 30 course degree requirements if they were used by the College of Applied Arts and Technology to grant advanced standing in the diploma or certificate program. In such cases, the Disability Studies Program Coordinator (or their designate) will identify a substitute course requirement.

(a) five discipline foundation courses: PSYC-1150, PSYC-1160, SWRK-1170, SWRK-1180, DISB/SJST-1000;
(b) one human diversity course: SWRK-2100;
(c) one social science research methods course: PSYC-2300;
(d) three human development courses: PSYC-2230, PSYC-2240, and PSYC-2250;
(e) six Disability Studies courses: DISB-2010, DISB-3020 , DISB-4010, DISB-4020, DISB-4650 (6 credit course);
(f) four Disability Studies or Disability Studies-Emphasis courses.
(g) two courses from Arts;
(h) two courses from Languages or Science;
(i) SOSC-2500;
(j) five courses from any area of study.

Courses used to calculate the major average are: courses listed under requirements (a) to (f), and any courses taken in the major area(s) of study.

**Recommended Course Sequencing**
Year 1: PSYC-1150, PSYC-1160, SWRK-1170, SWRK-1180, DISB/SJST-1000, SWRK-2100, SOSC-2500, one course from Arts, one course from Languages or Science; one course from any area of study;
Year 2: PSYC-2230, PSYC-2240, PSYC-2250, PSYC-2300, DISB-2010, DISB-3020, two Disability Studies or Disability Studies-Emphasis courses, two courses from any area of study;
N.B.: Students who did not complete SOSC-2500, DISB/SJST-1000, SWRK-2100, and PSYC-2300 prior to acceptance into the Disability Studies program are strongly encouraged to complete these courses by the end of the first semester of their Second Year.
Year 3: DISB-4010, DISB-4020, DISB-4650 (6 credit course), two Disability Studies or Disability Studies-Emphasis courses, one course from Arts, one course from Languages or Science, two courses from any area of study.

## Minor in Disability Studies

This is a joint offering between Social Work and Psychology.

Requirements: Six Disability Studies courses including DISB-1000, DISB-2010, DISB-3020, plus one Disability Studies and/or Disability Studies Emphasis course at the 1000 level or above and two Disability Studies and/or Disability Studies Emphasis courses at the 2000 level or above.

## Minor in Diaspora Studies

Requirements: Six courses: INCS-2360, POLS-1709 and four of the following: ENGL-2210, ENGL-3210, ENGL-2220, ENGL-3220, PHIL-2550, CMAF-2450, CMAF-4620, HIST-3610, HIST-3620, PSYC-2360, PSYC-3420, PSYC-4450, SWRK-2100, SACR-2400, SACR-3330.

# SOCIAL WORK COURSES

## DIASPORA COURSE

**DIAS-1700. Introduction to Diaspora Studies: There's No Place Like Home**
This course introduces students to diasporas-scattered populations living in exile from their ancestral homelands. The course focuses on the significance of migration, exile, belonging, and nostalgia (for ancestral homelands) for diasporas throughout the world. Students submit projects (incorporating oral histories, for example) on the diaspora of their choice. (Also offered as Political Science POLS-1709 and Languages, Literatures and Cultures JWST-1700)

## DISABILITY STUDIES COURSES

**DISABILITY STUDIES EMPHASIS COURSES**
Program requirements in Disability Studies make reference to Disability Studies-Emphasis courses. These currently include: Anthropology/Zoology: ANZO-1600; Diaspora Studies: INCS-2360; General Arts: GART-2040, GART-2090; Kinesiology: KINE-1000; KINE-4000; KINE-4040, KINE-4100; KINE-4610; Nursing: NURS-3510; NURS-3910; Organizational Learning and Teaching Courses: EDUC-4000; Philosophy: PHIL-1290; PHIL-2250; PHIL-2270; PHIL-2280; PHIL-3190; Psychology: PSYC-1070; PSYC-2280; PSYC-2400; PSYC-2560; PSYC-3220; PSYC-3230; PSYC-3240; PYSC-3390; PSYC-4300; PSYC-4320; PSYC-4450; Social Justice Studies: SJST-2100, SJST-2700, SJST-3000; Social Work: SWRK-2040, SWRK-3460; SWRK-3470; SWRK-3580; Sociology: SACR-1100; SACR-2100; SACR-2280; SACR-2400; SACR-2900; SACR-3050; SACR-3150; SACR-3270; SACR-3520; SACR-4510; Women's and Gender Studies: WGST-2100; WGST-2200; WGST-3900.

Various areas of study from time to time may offer courses dealing specifically with disability studies under specific course titles or general titles such as "Special Topics," "Directed Readings," or "Seminars." These courses may be taken with permission of the Disability Studies Program Coordinator.

**DISB-1000. Social Justice in Action**
Students investigate the local and global origins of a contemporary social problem through the eyes of social justice activists. Students will assess the strengths and limitations of strategies and theoretical frameworks for social change and use this knowledge to create social action messages that raise public awareness, influence government or corporate policy, or positively change attitudes and behaviours. (3 lecture hours per week.) (Also offered as SJST-1000.)

**DISB-2010. Disability Studies: Theory and Culture**

This course explores the multiple meanings of disability and emphasizes the lived experience and knowledge generated by people with disabilities. It critically examines how Western economic, medical, moral, and social norms produce social exclusion and marginalization. It introduces students to key Disability Studies theorists, theories, and social justice models that resist ableism by addressing issues of access, accommodation, cultural representation, and identity. This course uses an intersectional framework to consider how variances in race, ethnicity, gender-identity, sexuality, class, citizenship, and culture impact both individual and collective experiences of disability. It considers how Disability Studies differs from other disciplinary approaches to disability, understands disability as a social construct, and positions disability as difference rather than deficit.(Prerequisite: SJST/DISB-1000.)

**DISB-3020. Historical Approaches to People with Disabilities**
This course will select national and international milestones highlighting people, events, and legislation that have affected disability rights. It will include historical discussions about significant dates related to the eugenics movement, the civil rights movement, the self-help movement, deinstitutionalization, demedicalization, and consumerism. Emphasis will be placed upon Canadian history with comparison with historical developments in other countries. This course will expose current issues, controversies, and trends in disability and teach students how to interpret historical documents, court cases, media reports, and other materials. It will use case studies to analyze the ideological, socioeconomic, and political history of disability. (Prerequisite: DISB-2010)

**DISB-4010. Community Approaches, Advocacy and Empowerment**
Students will critically review traditional approaches to professional practice with people with disabilities, with special attention to the role of the professional. Using case studies, students will explore professional intervention strategies that promote full participation and equality for people with disabilities. Other themes include self-determination and choice, supporting disability rights and self-advocacy organizations, and building alliances. Recognizing how important family is to many people with disabilities, this course will also explore the implications of the views and experiences of family members. Stressing the need for empowerment, this course introduces students to social change movements as led by people in search of full citizenship who have disabilities. The implications for empowerment, created by the advent of new technologies, is also explored. (Prerequisite for Social Work/Disability Studies BSW students: DISB 2010. Prerequisite for all other students: DISB-3020.)

**DISB-4020. Service Delivery Systems and Independent Living**
This course helps the student understand how to put the social model of disability into practice. It will encourage students to analyze power, inequality and influence and then to build strategies for actions. It will promote a team-oriented approach by using case studies to examine the issues of access and related policies and practices that support or impede inclusion. Theoretical and practical approaches draw from the perspective that people supported by human services need opportunities to lead dignified lives with the means to exercise greater personal choice, control and independence. The Independent Living model and organization exposes students to multiple issues that involve the actions of consumer leaders, activists and managers in designing, organizing and changing services and support models for people with disabilities. This course considers how people with disabilities access societal and community resources, engage socially, and take part in policy development and implementation. (Prerequisite: DISB-4010)

**DISB-4610. Community Practice**
This four course equivalent sequence is a field placement, designed to enable students to apply and integrate the various theoretical perspectives and themes explored in the Disability Studies program. Students will work with people with disabilities in community agencies and programs and develop respectful and empowering professional skills. Students will also have the. opportunity to gain

knowledge of an issue or area of specific interest. Students will acquire knowledge of the needs and issues relevant to at least one disability group. (Prerequisite: DISB-2010, DISB-3020: Semester 7 standing in Disability Studies Program) (Co-requisites: DISB-4010, DISB-4020).

**DISB-4650. Community Orientation to Disability Issues**
This two course equivalent sequence is a field placement, designed to enable students to apply and integrate the various theoretical perspectives and themes explored in the Disability Studies program through implementation of a community based project. Students will work with people with disabilities in community agencies and programs and develop respectful and empowering professional skills. Students will also have the opportunity to gain knowledge of an issue or area of specific interest. This will necessitate the development of an individual or group project of interest and importance to the organization involved.(Prerequisite: DISB-2010, DISB-3020: Semester 7 standing in Disability Studies Program)(Co-requisites: DISB-4010, DISB-4020).(Anti-requisite: DISB-4610) (Winter 2012: Offered as Pass/Non-Pass.)

# SOCIAL WORK COURSES

Social Work courses SWRK-1170, SWRK-1180, SWRK-2040 and SWRK-2100 are open to all students in the University. Acceptance to the professional years (Years 3 and 4) of the B.S.W. program is required for registration in all other required 3000 and 4000 level courses. All Social Work elective courses in the professional program at the 3000 and 4000 level are restricted to senior level (i.e., beyond term 4) students in Social Work or cognate disciplines or require the permission of the instructor. Social Work majors will be given priority when registering for these courses.

All courses are three hours a week unless otherwise indicated.

**Note: The term “Social Work major” includes combined majors in Social Work and another program.

Social Work electives can be taken interchangeably by Year 3 and Year 4 students, except where prerequisites have been identified.
Not all courses listed will necessarily be offered each year.

**SWRK-1170. Meeting Human Needs through Social Welfare**
This course examines the historical, philosophical and political aspects of the development and delivery of the Canadian Social Welfare System. Special attention will be focussed on ways to identify and assess the needs of, and services to, vulnerable populations within the context of social and cultural diversity.

**SWRK-1180. Meeting Human Needs through Social Work**
This course examines the ways in which social workers in generalist practice intervene to meet the needs of clients within the Canadian social welfare system. Attention will be paid to the development of an understanding of generalist social work practice within an ecological and systems perspective. This course provides an introduction to social work processes. Attention will be given to the needs of vulnerable and marginalized populations within traditional and alternative social work perspectives such as ecological, systems, strengths, feminist, and anti-oppressive practice. Students will gain an understanding of personal, professional, agency, and societal needs and values and how they influence social work practice. Students will be introduced to the generalist social work practice perspective within a problem-solving process that includes focused assessment, intervention, termination, and evaluation of practice. Ethical and professional issues such as confidentiality and accountability will be introduced.

**SWRK-2000. Statistics for Social Workers**
This online course is an introduction to statistics. Topics include measurement of variables, testing hypotheses, descriptive statistics, normal distribution, sampling, significance levels, and indicating appropriate quantitative analytical methods. Emphasis is given to how statistics can aid the social work practitioner. This course can also meet the statistics requirement for admission to the master's program. (Semester 3 standing)

**SWRK-2040. Issues and Perspectives in Social Welfare**
Examines various ideologies that underpin the social welfare system and their impact on citizens, clients, communities, organizations, and society as a whole. The impact of these diverse perspectives on the different roles of social workers are examined with particular emphasis on value conflicts and how these conflicts shape and affect policies and programs. Further, the role and development of professional ethics relative to social service delivery through social welfare systems are explored.(Prerequisites: SWRK-1170 and SWRK-1180 or permission of instructor.)

**SWRK-2100. Social Work and Diversity**
This course examines oppression and anti-oppressive social work practice from a broad ecological framework as they relate to social inequality and life circumstances. Various forms of oppression such as racism, ableism, anti-semitism, heterosexism, and sexism are analyzed at the individual, cultural, and institutional level while applying the professional values and ethics of social work practice. The experiences, needs, and responses of populations that have been historically excluded, marginalized, and disadvantaged are examined. Students develop analytical and self-reflective skills as they relate to social work practice which fosters inclusion, participation, advocacy, and social justice. (Prerequisites: SWRK-1170 and SWRK-1180 or permission of instructor.)

**SWRK-3120. Selected Topics in Social Work**
Selected topics according to faculty and student interests may be offered. Topics may include issues related to social work practice, social welfare, or fields of practice. (May be repeated for credit if the course content differs.) (Open to senior students. Social Work Majors and Combined Majors in Social Work will be given registration priority.)

**SWRK-3340. Social Work with Children**
This course is designed to provide students with knowledge and understanding of social work practice with children. The focus is upon the development of a framework of knowledge for making practice decisions involving the child client. The design, implementation, and evaluation of alternative social work intervention strategies are included. The special set of techniques utilized in social work practice with children will be highlighted. (Open only to senior students. Social Work Majors and Combined Majors in Social Work will be given registration priority.)

**SWRK-3360. Theory and Practice of Social Work with Individuals**
This course examines the knowledge base, principles and techniques of social work generalist practice and the use of social work values in the context of offering help focusing on individuals (micro-level). Included are the use of interpersonal relationships as a medium for helping and the use of theories of human interaction within various systems as a base for problem assessment. Emphasis will be on practice with individuals in their social context. (Must be taken prior to field education courses)

**SWRK-3370. Theory and Practice of Social Work with Small Groups**
This course builds upon the generalist practice model of social work presented in SWRK-3360. It extends generalist social work concepts to small groups as client systems. Focus will be on analysis and application of generalist knowledge, values and skills for assessment and intervention with small groups. (Must be taken prior to field education courses) (Must be taken concurrently with SWRK-3360).

**SWRK-3380. Theory and Practice of Social Work with Families**
This course builds upon the generalist model of social work practice. It extends generalist social work concepts to families as multi-client systems. Focus will be on analysis and application of generalist knowledge, values and skills for assessment and intervention with families. (Prerequisites SWRK-3360 and SWRK-3370) (Must be taken prior to or concurrently with SWRK-3710.)

**SWRK-3390. Theory and Practice of Social Work with Communities and Organizations**
This course applies the generalist social work practice model at the macro level. It focuses on planning, implementing, and evaluating interventions with communities and human service organizations. Special emphasis will be placed on addressing the needs and issues of diverse, at-risk, and oppressed populations. (Prerequisite: SWRK-3360 and SWRK-3370.) (Must be taken prior to or concurrently with SWRK-3710.)

**SWRK-3440. Research I: Foundations of Social Work Research**
This course will prepare students to critically analyze generalist social work practice research. Foundation principles of rational and empirical inquiry will be examined across the continuum of qualitative and quantitative research designs that can be appropriately used in various practice contexts. It aims to enable the practical interpretation of research used integratively in practice with diverse clients, particularly those at risk of being marginalized or oppressed. (Prerequisite: 3rd or 4th year Social Work Major or Combined Major in Social Work, or permission of instructor.)

**SWRK-3460. Risk and Resilience: Perspectives on Human Development**
Examines human development in the social environment from a strengths-based perspective. Using a biopsychosocial orientation, emphasis is placed on identifying risk and protective factors that affect coping and adaptation to stressful life events. Focuses on how social systems (families, groups, organizations, institutions, and communities) promote or deter such efforts. Implications for multilevel interventions are discussed and evaluated. (Open to senior students. Social Work Majors and Combined Majors in Social Work will be given registration priority.)

**SWRK-3470. Social Work and Violence**
Examines aspects of violence in society, particularly against marginalized groups. The primary focus is on generalist social work intervention related to violence. (Open to senior students. Required course for Social Work/Women's and Gender Studies students; elective for BSW students. Pre-requisite: One Women's and Gender Studies (WGST-) course or permission of the instructor. (Also offered as WGST-3470.)

**SWRK-3480. Professional Issues in Social Work**
This course examines topics of current relevance for the profession of social work. Professional issues such as social control, suitability, ethical dilemmas, work-place issues of power, oppression and marginalization will be considered. The Social Work Code of Ethics will be used as the "lens" to explore case examples of situations that present professionals with ethical dilemmas, that challenge personal and professional values and require a sound grounding in professional ethical decision-making in the face of grave circumstances. Empowerment practice will serve as an integrative framework for the

consideration of professional issues. (Open to senior students. Social Work Majors and Combined Majors in Social Work will be given registration priority.)

**SWRK-3500. Practical Strategies for Social Change: Intervening to Prevent Sexual Violence**
This course introduces students to sexual violence as a social problem; why it matters, the forms it takes, and how it can be changed. The importance of personal and community responsibility for social change is emphasized. This course also provides students with the background knowledge that is needed to successfully teach sexual violence prevention workshops for their peers. Restricted to students who have attained a cumulative GPA of 66% or higher at the time of application. (Prerequisite: Semester 4 standing or above and permission of the instructor by online application at bystander initiative.ca) (Also offered as PSYC-3500, SACR-3500, SJST-3500, SOSC-3500, and WGST-3500.)

**SWRK-3550. Feminist Social Work Practice**
This course prepares students to apply the principles, processes, and techniques of feminist social work practice. Required course for Social Work/Women's and Gender Studies students; elective for BSW students (Prerequisites:(SWRK-3360, SWRK-3370 plus three (WGST-xxx) Women Studies courses or, consent of instructor.) (Also offered as WGST-3550)

**SWRK-3560. Serving Older People**
The role of the social worker in such areas as institutionalization, community care and social support, separation and loss, family structures, and retirement, with emphasis on social policy as a determinant of services and practice. (Open to senior students. Social Work Majors and Combined Majors in Social Work will be given registration priority.)

**SWRK-3570. Child Welfare**
Examines issues in the present structure and functioning of services for children. The rights of children and their need for services will be examined in relation to existing services, such as protection, adoption, foster care, health services, and compulsory education, with special attention to extra-family parenting responsibilities. (Open to senior students. Social Work Majors and Combined Majors in Social Work will be given registration priority.)

**SWRK-3580. Social Work and Mental Health**
This course focuses on social work practice in the field of mental health. It will integrate policy, practice and research to mental health issues across the life-span. The course will examine social work practice assessment and intervention techniques. Both chronic and acute mental health issues will be examined. Community-based care and institutional care perspectives will be presented. (Open to senior students. Social Work Majors and Combined Majors in Social Work will be given registration priority.)

**SWRK-3590. Social Work and Health**
Explores generalist social work practice with various client systems in transaction with the Canadian health care system. Systems' structural characteristics as well as their philosophical underpinnings will be surveyed in a historical and theoretical context. This will be accomplished with current social work models using the person-in-environment framework and general systems theory. (Open to senior students. Social Work Majors and Combined Majors in Social Work will be given registration priority.)

**SWRK-3600. Social Work and Addictions**
Provides social work students with practice knowledge concerning the etiology, implications, and treatment issues related to addictions and substance abuse. Topics will include the history and consequences of addictions and substance abuse, addictions and the family, special at-risk groups, social policy and legal issues, medical and social-psychological aspects, and current research issues as well as the implications for intervention. (Open to senior students. Social Work Majors and Combined Majors in Social Work will be given registration priority.)

**SWRK-3710. Field Education Preparation**
The Field Education Preparation course (SWRK-3710) examines student progress in the social work program with the purpose of evaluating student readiness for a field practicum. Students will demonstrate the foundation level social work knowledge, skills, and values required to meet field education expectations and to ensure success in the field. The course integrates classroom and field learning through co-instructed learning sessions that include skill development facilitated by Field Learning Specialists with extensive practice experience, community resources training from community agencies and practicing professionals, exposure to service users, and assignments that require interaction with agencies and the community. This course will facilitate student development and growth on personal, professional, and civic levels. In addition, the course will ensure a smooth transition from the classroom setting into the field setting by demonstrating how connecting theory and practice results in successful individual, family, group, and community intervention. Finally, the course facilitates the development of professional, reflective, self-evaluating, and competent social workers. (Pre-requisites SWRK-3360 and SWRK-3370. Corequisites SWRK-3380 and SWRK-3390).(Contact Hours: 3.0)

**SWRK-4230. Social Policy and Social Welfare**
This course introduces the student to the formulation and analysis of social policy. The student uses knowledge of social services as a basis for assessing and recommending changes in existing programs or services, and for introducing new services. Special attention is given to identifying policy gaps in services and unmet needs of vulnerable populations within the general practice framework. (Prerequisite: 4th year Social Work Major or Combined Major in Social Work, or permission of instructor.)

**SWRK-4300. Integration Seminar I**
The Integration Seminar I course is taken concurrently with the Field Education I course (SWRK-4730). This seminar course builds on the knowledge, skills, and values developed in the theory and practice courses SWRK-3360, 3370, 3380 & 3390, along with problem solving models covered in SWRK-3440 and SWRK- 3710. The focus of learning for this course will be the application of concepts from theories and practice models to the process of assessment and intervention planning. The seminar enables students to integrate academic learning and field work experience to test and advance social work knowledge, values, and skills in preparation for professional social work practice. The course will provide students with opportunities to share their field placement experiences with the instructor and peers. This course will include classroom instruction, simulations, self-reflection, discussions, group sharing and problem solving, and presentations to facilitate the development of professional, reflective, self-evaluating, and competent social workers. (Prerequisites: SWRK-3710, SWRK-3360, SWRK-3370, SWRK-3380, SWRK-3390, SWRK-3440) (Co-requisite: SWRK-4730)

**SWRK-4310. Integration Seminar II**
The Integration Seminar II course is taken concurrently with the Field Education II course (SWRK-4750). This seminar course builds on the knowledge, skills, and values developed in Field Education I (SWRK-4730) and Integration Seminar I (SWRK-4300). The seminar enables students to integrate academic learning and field work experience to test and advance social work knowledge, values, and skills in

preparation for professional social work practice. The course will provide students with opportunities to share their field placement experiences with the instructor and peers. Students will participate in a variety of activities, including self-reflection, discussions, group sharing and problem solving and presentations to facilitate the development of professional, reflective, self-evaluating, and competent social workers. Students will be expected to engage in critical reflection to integrate knowledge and skills from generalist practice into their own developing practice framework. (Pre-requisite: SWRK-4300, SWRK-4730) (Co-requisite: SWRK-4750).

**SWRK-4500. Practicum in Social Change**
Supervised practicum in a university setting. Students consolidate and enhance their knowledge of sexual assault and bystander intervention. Students co-facilitate the Bringing in the Bystander® In Person Prevention program for one or more small groups of students on campus. The practicum experience equips students to deliver educational content on sensitive issues. (Prerequisite: Final mark of 75% or higher in SOSC-3500/PSYC-3500/SJST-3500/SACR-3500/SWRK-3500/WGST-3500 and permission of the instructor by online application at bystanderinitiative.ca.) (Also offered as PSYC-4500, SACR-4500, SJST-4500, SOSC-4500, and WGST-4500.)

**SWRK-4730. Field Education I**
The Field Education I course examines student progress in the field practice component of the Bachelor of Social Work program with the purpose of evaluating student readiness for Field Education II. Students will demonstrate the foundation level social work knowledge, skills, and values required to meet field practice expectations and ensure success in Field Education II (SWRK-4750). This course integrates classroom and experiential learning through placement in a community organization. Under the supervision of professional social workers, students are expected to apply beginning level knowledge, skills, values and ethics to generalist social work practice in “real-life” situations. The objectives and competencies outlined in the Field Education I Learning Agreement are minimum expectations for all students. The course fosters professional development wherein personal and professional skills are promoted in the interest of competent professional practice. Students will develop competence as an entry level professional in generalist social work practice within the four contexts of practice: organization, community, social work skills and professional context. Supported by Field Learning Specialists with extensive practice experience and professional social workers, students will develop substantive understanding of social work knowledge, values and skills and demonstrate an understanding of and commitment to the principles which underlie professional social work practice. This course operates as a practicum three days a week in the Fall semester. (Prerequisites: SWRK-3710, SWRK-3360, SWRK-3370, SWRK-3380, SWRK-3390, SWRK-3440) (Co-requisite: SWRK-4230, SWRK-4300).(Credit weight 9)

**SWRK-4750. Field Education II**
The Field Education II course (SWRK-4750) examines student progress in the field practice component of the Bachelor of Social Work program with the purpose of evaluating student readiness for professional social work practice. This course takes place in the approved field education agency in which the student successfully completed Field Education I (SWRK-4730). Under the continuing supervision of professional social workers, students are expected to develop competencies that go beyond the generic base acquired during Field Education I (SWRK-4730). Students are expected to build upon the knowledge, values and skills acquired in Field Education I to move along the continuum from beginning level social work knowledge to an increasingly complex level of skill development in generalist social work practice. The objectives and competencies outlined in the Field Education II Learning Agreement are minimum expectations for all students. Students will apply professional skills and techniques as well as analytical competence to work with direct and indirect systems in an agency/community setting to develop an understanding of the relationships between human behaviour and societal processes.

Students will demonstrate self-awareness and self-discipline sufficient to enable students to apply their knowledge, values, and skills when working with client systems. Supported by Field Learning Specialists, this course will result in the development of critical thinking skills and an inquiring interest in professional issues and knowledge, along with a commitment to the ethical principles of Social Work and the development of a professional identity. This course operates as a practicum four days a week in the Winter semester. (Prerequisites: SWRK-4730, SWRK-4300) (Co-requisite SWRK-4310) (Credit weight 12)

# WOMEN'S AND GENDER STUDIES (Housed in Social Work)

## PROGRAMS

### General BA in Women's and Gender Studies

**Degree Requirements**

Total courses: thirty.

(a) WGST-1000, WGST-2500, WGST-3060
(b) WGST/HIST-2510
(c) at least one of WGST/SACR-2100, or WGST-2200
(d) one of WGST/PHIL-3590, or WGST-3050
(e) at least two of WGST/WORK-2400, POLS/WGST-2110, WGST/WORK-2600, WGST-3100, WGST/SACR-3530, WGST-3300, WGST/HIST-3400
(f) three Women's and Gender Studies or Women's and Gender Studies Emphasis courses
(g) two courses from Arts
(h) one course from Science
(i) two courses from any area of study, excluding Social Sciences
(j) GART-1500, GART-1510
(k) six courses from any area of study, including Women's and Gender Studies (WGST)
(l) six courses from any area of study, excluding Women's and Gender Studies (WGST)

Courses used to calculate the major average are: courses listed under requirements (a) to (f), and any courses taken in the major area(s) of study.

### BA Honours in Women's and Gender Studies

**Degree Requirements**

Total courses: forty.

(a) WGST-1000, WGST-2200, WGST-2500, WGST-3060, WGST-4000, WGST-4100;
(b) WGST-2510/HIST-2510;
(c) WGST-2100/SACR-2100;
(d) WGST-3590/PHIL-3590 or WGST-3050;
(e) at least two of WGST/WORK-2400, POLS/WGST-2110, WGST/WORK-2600, WGST-3100, WGST-3530/SACR-3530, WGST-3300, WGST/HIST-3400;

(f) one Women's and Gender Studies or Women's and Gender Studies -Emphasis course at the 1000-level;
(g) nine additional Women's and Gender Studies or Women's and Gender Studies -Emphasis courses
(h) two courses from Arts;
(i) one course from Science;
(j) two courses from any area of study, excluding Social Sciences.
(k) GART-1500, GART-1510;
(l) six courses from any area of study, including Women's and Gender Studies (WGST);
(m) six courses from any area of study, excluding Women's and Gender Studies (WGST).

Courses used to calculate the major average are: courses listed under requirements (a) to (g), and any courses taken in the major area(s) of study.

## Combined Honours in Women's and Gender Studies

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a) Women's and Gender Studies: WGST-1000, WGST-2200, WGST-2500, WGST-3060, WGST-4000, WGST-4100; WGST-2510/HIST-2510; WGST-2100/SACR-2100; WGST-3590/PHIL-3590 or WGST-3050; at least two of WGST/WORK-2400, POLS/WGST-2110, WGST/WORK-2600, WGST-3100, WGST-3530/SACR-3530, WGST-3300, or WGST/HIST-3400*; one Women's and Gender Studies or Women's and Gender Studies-Emphasis course at the 1000-level; three additional Women's and Gender Studies or Women's and Gender Studies Emphasis courses.
(b) Course requirements-Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) GART-1500, GART-1510;
(d) two courses from Arts;
(e) one course from Science;
(f) two courses from any area of study, excluding Social Sciences.
(g) additional courses from any area of study a total of forty courses.

*Any course(s) not taken in category (e) can be taken in category (f) (except any cross-listed course numbers).

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

## Combined Honours Women's and Gender Studies when taken with Criminology

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a) Women's and Gender Studies: fourteen courses: WGST-1000, WGST-3060; WGST-2510/HIST-2510; at least one of WGST-2100/SACR-2100 or WGST-2200; at least one of WGST-2800 or WGST-3800; WGST-3590/PHIL-3590 or WGST-3050; at least one of PSYC/SACR/SOSC/SWRK/SJST/WGST-3500, WGST-3300, or WGST-3850; at least one of WGST-4000 or WGST-4100; at least two of WGST/WORK-2400, POLS/WGST-2110,WGST/WORK-2600, WGST-3100, or WGST/HIST-3400; one Women's and Gender Studies or Women's and Gender Studies-Emphasis course at the 1000-level;
(b) three additional Women's and Gender Studies or Women's and Gender Studies-Emphasis courses.
(c) Course requirements-Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(d) GART-1500, GART-1510;
(e) two courses from Arts;
(f) two courses from Languages or Science**;
(g) two courses from any area of study, excluding Social Sciences.
(h) additional courses from any area of study a total of forty courses.

*Any course(s) not taken in (a) can be taken in (b) (except any cross-listed course numbers).
**WGST-2500 will satisfy a Science requirement for students in the Faculty of Arts, Humanities and Social Sciences.

Courses used to calculate the major average are: courses listed under requirements (a) to (c), and any courses taken in the major area(s) of study.

## Honours Business Administration and Women’s and Gender Studies (with/without thesis)

This is a joint offering between Women’s and Gender Studies and the Odette School of Business. See the Odette School of Business for program requirements.

## Honours Bachelor of Social Work and Women's Studies

This is a joint offering between Women’s and Gender Studies and the Social Work. See the Social Work for program requirements.

## Certificate in Women's Studies

**Admission Requirements**
Admission requirements are the same as those for the Honours Women and Gender Studies program.

**Requirements**

Total courses: ten.

(a) WGST-1000 and WGST/HIST-2510;
(b) at least one of WGST/SACR-2100 or WGST-2200;
(c) at least one of WGST/PHIL-3590 (or WGST-3050) or WGST-3060;
(d) at least one of POLS/WGST-2110, WGST/WORK-2600, WGST-3100 or WGST/SACR-3530, or WGST-3900:
(e) five Women's and Gender Studies or Women's and Gender Studies Emphasis courses, with at least one at the 1000-level.

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Women's and Gender Studies

Major Concentration: WGST-1000, WGST/HIST-2510, WGST/SACR-2100, WGST-2200; at least one of WGST/PHIL-3590, WGST-3050, or WGST-3060; at least two of POLS/WGST-2110, WGST/WORK-2600, WGST-3100, WGST/SACR-3530 or WGST/HIST-3400; one Women's and Gender Studies/Women's and Gender Studies Emphasis course at the 1000-level or above, one Women's and Gender Studies/Women's and Gender Studies Emphasis course at the 2000-level or above, three Women's and Gender Studies/ Women's and Gender Studies Emphasis courses at the 3000-level or above.

Minor Concentration: six Women's and Gender Studies (WGST-) courses, including WGST-1000; and one Women's and Gender Studies (WGST-) course at the 3000- or 4000-level, no more than one other course may be at the 1000-level.

## Minor in Women's and Gender Studies

Requirements: six Women's and Gender Studies (WGST-) courses, including WGST-1000 and one Women's and Gender Studies (WGST-) course at the 3000- or 4000-level; no more than one other course may be at the 1000-level.

# WOMEN'S AND GENDER STUDIES COURSES

**Women's and Gender Studies Emphasis Courses**
Program requirements in Women's and Gender Studies make reference to Women's and Gender Studies Emphasis courses. Women's and Gender Studies Emphasis Courses are defined as courses from other disciplines that focus on gender from a feminist perspective.

These currently include:
English ENGL-2330;
Languages, Literatures and Cultures ARAB-2620,
History HIST-2490, HIST-2500, HIST-3360, HIST-3610, HIST-3620;
Psychology PSYC-2400, PSYC-4400, PSYC-4450;
Sociology SACR-2140, SACR-3510, SACR-3520, SACR-4080, SACR-4650;
Kinesiology KINE-4050.

Various areas of study from time to time offer courses dealing specifically with women and gender under specific course titles or general titles such as, "Special Topics", "Directed Readings", or "Seminars". Information regarding such courses will be available from a program advisor in Women's and Gender Studies and they may be taken with permission of the program.

**WGST-1000. Women in Canadian Society**
This course illustrates and account for the position of women in Canadian society. We explore how gender identities are informed by the process of social construction which privileges some women while disadvantaging others.

**WGST-1200. Gal Pals: Women and Friendship**
This course examines a diverse range of women's friendships. Through discussion, reading, and films we will explore topics such as the meaning of friendship for women, how women's friendships have been portrayed in literature and film, the link between friendship and social activism for women, and the political meanings of women's friendship in cultures resistant to woman-centered consciousness. (Can be taken for Social Science or Arts credit.)

**WGST-1300. Imagining Women**
This course examines a broad cross-section of historical and contemporary representations of western women in popular culture, and visual media – photographs, film and video, the fine arts, and advertising. The student will be introduced to feminist and gender-related theories of representation. (Can be taken for either Social Science or Arts credit.)

**WGST-1400. Queer Activism**
Students engage with LGBTQ+ activism, past and present. Students investigate how queer communities are created and sustained through protest, alliance-building, symbols, and memes. (Also offered as SJST-1400).

**WGST-2100. Gender, Sexuality and Social Justice**
This course examines the personal and cultural meanings of women's sexual identities in Canada today. Students consider how these identities are created and experienced in conjunction with other identities such as race/ethnicity, social class, and (dis)ability and how women challenge the personal, social, political, and economic inequities that continue to be based on these identities. Students are encouraged to analyze how their beliefs and behaviours are shaped by heterosexual privilege. (Also offered as Sociology SACR-2100.) (Prerequisites: WGST-1000.)

**WGST-2110. Women and Politics**
An introduction to the principal themes in the study of women in Canadian politics. Topics may include: feminist theory, women in Canadian political institutions, the status of women in the Canadian economy, and gender equality rights in the Charter. Also offered as Political Science POLS-2110.

**WGST-2190. Gender, Movement, and Performance**
This course explores how people come to know themselves and others through their bodies.Students investigate movement as a cultural message and explore how stereotypes connected to gender, race, sexuality, and ability are created and contested through the body. (Prerequisite: WGST-1000 or DRAM-1000 or with permission of the instructor)(Cross-listed as an Arts course in Dramatic Art DRAM-2190)

**WGST-2200. Women, Race, and Social Justice**

This course examines the personal and cultural meanings of women's racial and ethnic identities in Canada today. Students consider how these identities are created and experienced in conjunction with other identities such as sexuality, social class, and (dis)ability and how women challenge the personal, social, political, and economic inequities that continue to be based on these identities. Students are encouraged to analyze how their beliefs and behaviours are shaped by white privilege. (Prerequisite: WGST-1000 or permission of the instructor.)

**WGST-2350. Disability, Madness, and Social Justice**
This course uses first-person narratives to engage students in experiences of disability and madness. Students learn to develop a feminist intersectional, anti-ableist analysis of their own thoughts, feelings and behaviours in relation to disability, madness, and other intersecting forms of oppression. Intersections of disability, madness, race, class, sexuality, and gender identity are explored. Topics may include disability and madness in popular culture, disability and sexuality, mad activism, disability justice, and feminist perspectives on disability and madness. (Prerequisites: WGST-1000 or SJST/DISB-1000) (Also offered as SJST-2350)

**WGST-2360. Feminist Philosophies**
An examination of key philosophical themes in feminism and philosophical debates among feminists. The themes and subjects of debate addressed may include sexism and oppression, feminist identity; theories the political significance of language, personal appearance, and pornography; feminist ethics; and feminist theories of knowledge. (Prerequisite: PHIL-1100 or PHIL-1120 or semester 3 or above standing, or consent of the instructor. Can be taken as an Arts credit.) (Also offered as Philosophy PHIL-2360).

**WGST-2400. Work and Equality**
This course explores how paid and unpaid work are gendered, valued and rewarded. Students investigate how public policy, law, collective bargaining, and advocacy enhance equality in pay and working conditions for women and racialized workers. (Prerequisites: WORK-1500 or WGST-1000 or SACR-1000 OR SACR-1100 (Also offered as Work and Employment Issues WORK-2400)

**WGST-2500. Women's Bodies, Women's Health**
This course examines and critiques commonly cited biological evidence in support of sex differences and male superiority, including research on anatomy, genetics, hormones, and differential brain functioning. Students explore the social, cultural, and political meanings of the female body and consider how these understandings influence medical and non-medical definitions of “health” for women. Students investigate how sexism, classism, racism, ageism, and homophobia shape how individuals think about and value different female bodies. (Prerequisite: One Women’s and Gender Studies course or permission of the instructor.) (Can be taken for either Science or Social Science credit.)

**WGST-2510. History of Women's Movements in North America**
An exploration of the collective action of women in the past and present in North America. Areas of study may include women's involvement with the temperance, civil rights, suffrage, trade union, environmental, reproductive rights, and women's liberation movements. (Also offered as History HIST-2510.)

**WGST-2600. Women and Globalization**
This course introduces students to gender-sensitive analysis of the role of women in the global economy. Course materials cover the place of women in the international division of labour, the role of women in export-oriented industries in the "Third World," and women as "homeworkers" in the First and Third World. Students will utilize relevant empirical material to develop critical thinking and an

understanding of gender inequalities in the "development process." (Prerequisites: at least Semester 3 standing.)(Also offered as Work and Employment Issues WORK-2600.)

**WGST-2700. Gender, Power, and Language**
This course makes visible the politics hidden in the English language. Students learn how to identify and challenge aspects of language structure and use which perpetuate power and privilege. Topics include naming, slang, metaphor, grammar rules, and humour. (Prerequisite: Semester 3 standing or above and one Women's and Gender Studies course or consent of the instructor.) (Can be taken for either Social Science or Arts credit.)

**WGST-2800. Boys to Men: A critical exploration of masculinities**
This course uses personal narrative and popular culture to examine the lived realities of boys and men. The course explores dominant models of masculinity in order to challenge gender stereotypes that often flatten and narrow the lives of boys and men, and also the lives of women and girls. (Semester 4 standing or above.)

**WGST-2990. Special Topics in Women's Studies**
Special Topics courses will be offered occasionally to meet a demonstrated academic need that cannot be satisfied by regular course offerings. (Prerequisites: will vary depending on the subject.)

**WGST-3050. Feminist Theories**
This course traces the evolution of contemporary feminist theories, the connection between theory and practice, and illustrates the significance of theory-driven practice on women's lives. (Prerequisites: two Women's and Gender Studies (WGST-) courses at the 2000-level or above and at least semester 5 standing.)

**WGST-3060. Frameworks for Feminist Research**
An exploration of the diverse approaches to feminist research in a variety of fields. Students will examine the core questions and approaches that various disciplines bring to the study of women. (Prerequisites: Two courses at the 2000-level or above from Women's and Gender Studies or consent of the instructor.)

**WGST-3100. Women and the Law**
This course examines the relationship between gender inequality and the legal system. Topics include abortion, marriage, divorce, custody, equal pay, sexual harassment, rape, pornography, and prostitution. Students are introduced to basic legal research tools, such as statutes, regulations, cases, and legal literature. (Prerequisites: two Women's and Gender Studies courses.)

**WGST-3300. Victims, Survivors, and Warriors: Violence in the Lives of Women and Girls**
An interdisciplinary exploration of male violence against women and girls locally and globally. The course will explore the power of language to shape our understanding of issues, the many forms of subtle and explicit violence, the impact of violence on the individual and the status of women, and the creative resistance of women and girls, among other issues. (Prerequisites: two Women's and Gender Studies courses and at least semester 4 standing.)

**WGST-3340. Love, Honour, and Obey: Marriage and Gender**
Romantic heterosexual love shapes contemporary notions of marriage for both straight and gay women. But marriage is about much more than love. It shapes women’s lives and organizes relations between women and men. This course examines the interpersonal, economic, social, cultural, and legal aspects

of marriage past and present, primarily in North America. (Also offered as History HIST-3340.) (Prerequisite: One Women's and Gender Studies course or HIST-2510 or permission of the instructor.)

**WGST-3400. Women, War and Peace**
This course examines the various and distinct ways in which women experience war and peace, in both historical and contemporary contexts. Topics include home fronts during wartime in both combat and non-combat zones, women's peace activism, displacement, war crimes against women, women in combat, and media coverage of women and war/peace across the 20th and 21st centuries. (Also offered as History HIST-3400.) (Prerequisite: one 2000-level Women's and Gender Studies or History course or POLS-2600 or consent of the instructor.)

**WGST-3470. Social Work and Violence**
Examines aspects of violence in society, particularly against marginalized groups. The primary focus is on generalist social work intervention related to violence. (Open to senior students. Required course for Social Work/Women's and Gender Studies students; elective for BSW students. Pre-requisite: One Women's and Gender Studies (WGST-) course or permission of the instructor. (Also offered as SWRK-3470.)

**WGST-3500. Practical Strategies for Social Change: Intervening to Prevent Sexual Violence**
This course introduces students to sexual violence as a social problem; why it matters, the forms it takes, and how it can be changed. The importance of personal and community responsibility for social change is emphasized. This course also provides students with the background knowledge that is needed to successfully teach sexual violence prevention workshops for their peers. Restricted to students who have attained a cumulative GPA of 66% or higher at the time of application. (Prerequisite: Semester 4 standing or above and permission of the instructor by online application at bystanderinitiative.ca) (Also offered as SOSC-3500, PSYC-3500, SJST-3500, SWRK-3500, and SACR-3500.)

**WGST-3530. Women, Power, and Environments**
This course focuses on environmental issues as they affect women across cultures. It provides a feminist critical analysis of the power relations in modern societies that cause environmental degradation and examines the theories, policies, and institutions that contribute to unsustainable practices. Emphasis is placed on the women-nature debate within various environmental social movements and the historical role women have played as activists. (Also offered as Sociology SACR-3530.) (Prerequisite: Semester 3 or above standing and one course at the 2000-level or above from Women's and Gender Studies or Sociology.)

**WGST-3540. Gender, Space, and Time**
An examination of sociological and anthropological approaches to the study of space-time relations within the field of gender studies, including a focus on the development of gendered environments and cultural practices. (Also offered as Sociology SACR-3540.) (Prerequisites: SACR-2140 or WGST-1000 and semester 5 or higher standing.)

**WGST-3550. Feminist Social Work Practice**
This course prepares students to apply the principles, processes, and techniques of feminist social work practice. Required course for Social Work/Women's and Gender Studies students; elective for BSW students (Prerequisites:(SWRK-3360, SWRK-3370 plus three (WGST-xxx) Women Studies courses or, consent of instructor.) (Also offered as SWRK-3550)

**WGST-3590. Women, Knowledge, and Reality**
An exploration of feminist theories about knowledge and reality that inform and are informed by scholarship in Women's Studies. Students examine how gender might affect identity, reasoning, objectivity, and evidence, and in turn, how such variations might affect feminist political practices. (Prerequisites: Two courses at the 2000-level or above from Women's and Gender Studies and/or Philosophy and at least semester 5 standing.) (Also offered as Philosophy PHIL-3590.)

**WGST-3700. Madonnas, Monsters, and Machines: Representations of Motherhood**
This course examines representations of mothers and motherhood in literature, arts, and popular culture, and the effects of these representations on women's lives. Topics may include constructs of "good" and "bad" mothers, diverse pathways to motherhood, availability and use of reproductive technologies, and feminist activism around mothering. (Prerequisite: Semester 4 standing or above and two Women's and Gender Studies courses.)

**WGST-3800. Masculinity, Crime and Punishment**
Students examine the gendered nature of violence, crime and punishment in Canada today. Students will investigate how masculinity is lived on the streets, in the courts and in prisons, and imagine whether new forms of masculinity are possible. (WGST-2800 or permission of the instructor.)

**WGST-3850. Tough Chicks: Representations of Women's Strength and Anger in Popular Culture and Society**
This course examines popular interest in "tough chicks.". Students investigate the social construction of women's and girls' anger and aggression in fiction, popular media, and real life. and how these understandings are rooted in sexist, racist, homophobic, and other oppressive discourses. Students are encouraged to examine how their own lives and the lives of other women are impacted by these understandings. This course can be used for either Arts of Social Science credit. (Prerequisites: WGST-1000 and one 2000-level Women's and Gender Studies (WGST-) course or consent of the instructor)

**WGST-3990. Special Topics**
The content will vary to reflect student need and faculty expertise and may be offered as a cross-listed course with other programs. (Prerequisite: at least semester 4 standing. Additional prerequisites may apply depending on subject.)(May be repeated for credit if content changes.)

**WGST-4000. Exploring the Feminist Voice**
Students apply theoretical learning in Women's Studies to individual lived experiences and actions. Through writing and other modes of representation, they communicate their feminist ideas to target audiences. (Prerequisites: WGST-3590 (or WGST-3050) and WGST-3060 or consent of the instructor.)

**WGST-4100. Women in Protest**
This course examines women at the forefront of protest in historical and contemporary contexts. It analyzes gendered constructs of protest and social and political change. Students will study the role of women in protest movements such as suffrage, reproductive rights, anti-racism, labour rights, environmental justice, anti-globalization, and nationalist and religious movements. Case studies are explored in detail, with particular emphasis on primary-source material from women activists themselves. These studies are complemented by an examination of feminist, social movement, and protest theories. (Prerequisite: WGST-2510 or HIST-2510 and one 3000-level Women's and Gender Studies course or consent of the instructor.)

**WGST-4500. Practicum in Social Change**
Supervised practicum in a university setting. Students consolidate and enhance their knowledge of sexual violence and bystander intervention, and they lead sexual violence prevention workshops to groups of students on campus. This course equips students to deliver educational content on sensitive issues. (Prerequisite: Final mark of 75% or higher in SOSC-3500/PSYC-3500/SJST-3500/SWRK-3500/SACR-3500/WGST-3500 and permission of the instructor by online application at bystanderinitiative.ca.) (Also offered as PSYC-4500, SACR-4500, SJST-4500, SOSC-4500, SWRK-4500)

**WGST-4601. Seminar on Prostitution, Sexual Labour and Health**
This course engages in a critical study of the conception and construction of prostitution/sex work and sexual labour and its impact on social determinants of health. Students will be required to examine and critically reflect on a variety of issues pertaining to adult consensual sex work and the impact of public policy on the health and well-being of people working in the sex industry. Substantive topics may include: policy and regulation; the construction of sex trafficking; stigmatization; politics and the media; violence and victimization; health and safety; customers; and organizing and advocacy. Course delivery may vary according to instructor preference. (Prerequisite: Semester 7 standing or above, or permission of instructor). (Cross-listed with WORK-4601 and SOSC-4601.)

**WGST-4630. History of Gender and Sexuality**
This course explores major themes in the history of gender and sexuality. These may include reproduction, contraception, and abortion; gender, race, and power; sexuality and the state; heterosexual relations and marriage; gay, lesbian, and transgender identities. Time period and geographical region will vary with the instructor.)(Prerequisite: Semester 5 or above standing and one of HIST-2490, HIST-2500, or HIST-2510/WGST-2510 or permission of the instructor.)(Also offered as History HIST-4630.)

**WGST-4990. Independent Study in Women's and Gender Studies**
An independent research project that explores and applies advanced feminist theory. Applications must include: research question, preliminary reading list, and writing sample. Students must be prepared to present their research to an audience. (Prerequisites: Minimum grade of 80% in WGST-3590/ PHIL-3590 or WGST-3050 and WGST-3060 and minimum cumulative average of 75%.) (This course may be repeated for credit if topics are different.) Students must apply at uwindsor.ca/wgst/CoursesAndPrograms#IndependentStudy.

# SCHOOL OF CREATIVE ARTS

## MUSIC PROGRAM REGULATIONS

Advanced Standing Examinations: Upon admission to a Music program a student may petition to write advanced standing examinations in MUSC-1120, MUSC-1130, MUSC-2120, MUSC-2220, MUSC-2230, MUSC-3220, MUSC-3230, and MUSP-1110.
Program Approval: BMus students and Concurrent Bachelor of Music/Education students must have their programs approved by an advisor prior to registration. All applications for graduation will be subject to approval and such approval will be granted only when the academic program completed is identical with that previously approved by the academic advisor in consultation with the student.
Keyboard Proficiency Requirement: Keyboard skill is a valuable tool for learning in all aspects of music, and is an asset for careers in music. Students in the BMus program are required to demonstrate this skill by meeting a keyboard proficiency requirement within core music courses (Basic and Advanced Skills). The requirement includes playing scales, chords, arpeggios; sight reading and keyboard harmony practices.
Concert/Recital Viewing Policy: Attendance at a significant number of live musical performances will enrich students' musical experience and contribute to applied musical and academic success. Therefore, a Concert/Recital Viewing Requirement is included in applied lessons syllabi. This policy applies to all full-time students in BMus programs during each year of registration.

## AREAS OF STUDY

Requirements for programs in Music make reference to the following groups of courses:

**Areas of Study-Academic**
History and Literature (Musicology): MUSC-1260, MUSC-1270, MUSC-2270, MUSC-2470, MUSC-3170, MUSC-3260, MUSC-3270, MUSC-3460, MUSC-4260, MUSC-4360, MUSC-4370, MUSC-4470, MUSC-4940.
Theory and Composition: MUSC-1020, MUSC-1120, MUSC-1130, MUSC-2120, MUSC-2220, MUSC-2230, MUSC-2630, MUSC-3220, MUSC-3230, MUSC-3630, MUSC-3420, MUSC-4120, MUSC-4320, MUSC-4360, MUSC-4370, MUSC 4470.
Methods and Pedagogy (Music Education): MUSC-2390, MUSC-2480, MUSC-2490, MUSC-2550, MUSC-2690, MUSC-2790, MUSC-2850, MUSC-4580, MUSC-4840, MUSC-4850.

**Areas of Study-Performance**
Performance Studies: MUSP-1110.
Ensembles: MUSP-2100, MUSP-2200, MUSP-2400, MUSP-2700, MUSP-3100.

**Performance Instruction - For Bachelor of Music programs (Comprehensive, Music Education, or 5 Year Concurrent Bachelor of Music/Music Education).**

The following courses offer performance instruction as a 3.00 credit hour course (1-hour lesson a week). Course requirements include a fifteen-minute examination before a faculty jury at the end of each term of study, as well as the attainment of an appropriate level of achievement. Students should consult the SoCA Performance Area Coordinator for specific details regarding curricula for these examinations.

These courses are available to Bachelor of Music students with the approval of a program advisor in SoCA-Music. These students will elect their major instrument at the time of their admission.

Students classical/concert private lessons who have completed four semesters of study in courses MUSP-3470 – MUSP-3690 may complete their degree requirements in private lesson study by enrolling in courses MUSP-3710 or MUSP-3410 (Jazz/Pop). Students may audition for courses MUSP-3710 prior to completing four semesters of study in courses MUSP-3470 – MUSP-3690. Please contact the SoCA Performance Area Coordinator for details regarding regulations and registration. Students may audition for BMus program in either classical/concert or jazz/pop idioms.

Performance courses are intended to be taken in consecutive semesters. Any interruption in study must be followed by an audition for re-entry into the performance course sequence. The audition will be scheduled in consultation with the Performance Area Coordinator at the beginning of the semester.

Students registered in applied lessons courses who auditioned for BMus programs by DVD, Skype, or FaceTime may be required to perform a confirming audition during the first week of classes.

Private instruction courses may be repeated for credit.

| **3.00 Credit Course** | **Instrument** |
|---|---|
| MUSP-3470 | Voice |
| MUSP-3480 | Piano |
| MUSP-3490 | Organ |
| MUSP-3510 | Harpsichord |
| MUSP-3520 | Flute |
| MUSP-3530 | Oboe |
| MUSP-3540 | Clarinet |
| MUSP-3550 | Saxophone |
| MUSP-3560 | Bassoon |
| MUSP-3570 | French Horn |
| MUSP-3580 | Trumpet |
| MUSP-3590 | Trombone |
| MUSP-3610 | Euphonium |
| MUSP-3620 | Tuba |
| MUSP-3630 | Violin |
| MUSP-3640 | Viola |
| MUSP-3650 | Cello |
| MUSP-3660 | Double Bass |
| MUSP-3670 | Percussion |
| MUSP-3680 | Harp |
| MUSP-3690 | Classical Guitar |
| MUSP-3710 | Applied Jazz/Pop |

The following courses offer weekly performance instruction and participation in a group master class. As part of this course, students take weekly private lessons for which there is a private lesson fee. Course requirements include a performance examination before a faculty jury at the end of each term of study, as well as the achievement of the appropriate Level of Achievement. Students should consult the Music Office for specific details regarding curricula for these examinations.

It is the responsibility of the student to arrange for a qualifying audition by contacting the Music Office or Performance Area Coordinator no later than the end of the first week of classes. Students who fail to do so will relinquish their right to attend such classes and must complete the normal procedure for dropping a course as outlined on the Student Information System. The audition for entry to these courses is equivalent to that for the MUSP-3000 performance series. Private instruction courses are intended to be taken in consecutive semesters. Any interruption in study must be followed by an audition for re-entry into the performance course sequence. The audition will be scheduled in consultation with the Performance Area Coordinator at the beginning of the semester.

Bachelor of Music students may also opt to take Performance Instruction courses in any secondary instrument/voice of their choice, classical or jazz/pop. These courses involve the MUSP-2000 performance series and may be taken in addition to, not in replacement for the required MUSP-3000 performance series. The courses may not be taken by Bachelor of Music or Bachelor of Music Therapy students to meet the specific degree requirements in Performance Studies.
Applied instruction courses may be repeated for credit.

| **3.00 Credit Course** | **Instrument** |
|---|---|
| MUSP-2470 | Voice |
| MUSP-2480 | Piano |
| MUSP-2490 | Organ |
| MUSP-2510 | Harpsichord |
| MUSP-2520 | Flute |
| MUSP-2530 | Oboe |
| MUSP-2540 | Clarinet |
| MUSP-2550 | Saxophone |
| MUSP-2560 | Bassoon |
| MUSP-2570 | French Horn |
| MUSP-2580 | Trumpet |
| MUSP-2590 | Trombone |
| MUSP-2610 | Euphonium |
| MUSP-2620 | Tuba |
| MUSP-2630 | Violin |
| MUSP-2640 | Viola |
| MUSP-2650 | Cello |
| MUSP-2660 | Double Bass |
| MUSP-2670 | Percussion |
| MUSP-2680 | Harp |
| MUSP-2690 | Guitar |
| MUSP-2710 | Applied Jazz/Pop |

For 200 level lessons, the student may select an hour private lesson course or a 30 minute lesson course.  Cost recovery fees are attached to 200 level lessons courses.

# VISUAL ARTS - PROGRAM REGULATIONS

**Visual Arts General Information**
Transfer Students: Students who have taken art courses at other post-secondary institutions and desire credit for basic courses in Visual Arts may be required to submit a portfolio of their own work for evaluation by Visual Arts, together with an official transcript of their record and catalogues describing

the courses taken, all of which must be submitted no later than two weeks before the first day of classes.

**Visual Arts Program Requirements**
1) MACS-1500 must be taken in the first year.
2) Visual Arts students must take VSAR-1050, VSAR-1060, VSAR-1070, and VSAR-1080 in the first year.
3) Registration in any studio courses numbered in the VSAR-2xxx's requires a successful B.F.A. portfolio evaluation.
4) Fourth-year BFA. students will be required to participate in the B.F.A. Candidates' Exhibit. The selection of work to be exhibited is to be made with the approval of the student's instructor in Studio Practice II.

**Visual Arts and the Built Environment**
Note: Students admitted to the BFA in Visual Arts and the Built Environment (VABE) program are also required to apply for a US study visa in consultation with the University of Detroit Mercy (UDM), in order to attend and complete courses at the UDM School of Architecture. Admission to the VABE program does not guarantee the granting of a study visa by the US government. Continuation in the VABE program requires that a study visa is granted by the US government.

**Areas of Study**
Requirements for degree programs in Visual Arts make reference to the following groups of courses:
Basic Courses: VSAR-1050, VSAR-1060, VSAR-1070, VSAR-1080, and Media Art Histories/Visual Culture MACS-1500, MACS-2140 and MACS-2150.

Drawing/Printmaking: VSAR-2030, VSAR-2230, VSAR-3030, VSAR-3260, VSAR-3650, VSAR-3860, VSAR-3900.
Inter-media Practices: VSAR-3830, VSAR-3840, VSAR-3710, VSAR-3850, VSAR-3860, VSAR-3650, VSAR-3900
Internship: VSAR-3800
Painting: VSAR-2130, VSAR-3130, VSAR-3650, VSAR-3900.
Photography: VSAR-2530, VSAR-2900, VSAR-3460, VSAR-3470, VSAR-3480, VSAR-3650, VSAR-3900
Sculpture/Built Environment: VSAR-2330, VSAR-2550, VSAR-3330, VSAR-3710, VSAR-3850, VABE-2130, VSAR-3650, VSAR-3850, VSAR-3900.
Time-Based: VSAR-2430, VSAR-2450, VSAR-2630, VSAR-3430, VSAR-3450, VSAR-3630, FILM-3400 FILM-3300, FILM-4600, FILM-4300, FILM-4200, VSAR-3650, VSAR-3900

# PROGRAMS

## Bachelor of Fine Arts in Film Production

This is a joint program between Communication, Media, and Film and the School of Creative Arts.

**Degree requirements:**

Total courses: 40

(a) FILM-1001 and FILM-1900;
(b) FILM-1100, FILM-1110, FILM-2100, FILM-3100, FILM-4100, FILM-4105*
(c) FILM-2200, FILM-2300, FILM-2400, FILM-2500, and FILM-2600;

(d) two of CMAF-2400, CMAF-2410, or CMAF-3430;
(e) four of, FILM-3200, FILM-3300, FILM-3400, FILM-3600, and FILM-3700
(f) FILM-4900;
(g) two courses from Social Sciences;
(h) two courses from Languages or Science;
(i) GART-1500 and GART-1510;
(j) two courses from any area of study, excluding Arts;
(k)six courses from any area of study, including FILM;
(l) six courses from any area of study, excluding FILM

Courses used to calculate the major average are: Courses listed under requirements (a) to (f), and any courses taken in the major area of study (FILM).

## Honours Bachelor of Arts in Music

**Admission Requirements**
No audition is required to enrol in this degree; however, it is necessary to pass the entrance examinations for MUSC-1120 and MUSC-2220; and to audition for most ensemble courses for students who elect to enrol in them.

**Degree Requirements**

Total courses: forty

(a) twenty courses, consisting of MUSC-1120, MUSC-1130, MUSC-2120, MUSC-2130, MUSC-1260, MUSC-1270; the 1.50 courses MUSC-2220, MUSC-2230; two courses in Performance Studies or Ensemble; eleven additional Music courses, including six at the 2000-level or above from History and Literature (Musicology) and/or Theory and Composition.
(b) two courses from Social Sciences;
(c) two courses from Languages or Science;
(d) two courses from any area of study, excluding Arts.
(e) GART-1500, GART-1510;
(f) four courses from any area of study, including Music.
(g) eight courses from any area of study, excluding Music (GART-2100 is strongly recommended).

Courses used to calculate the major average are: courses listed under requirement (a) and any courses taken in the major area(s) of study.

## Honours Bachelor of Music (Music Education Stream)

**Admission Requirements**
In addition to meeting the regular requirements for admission to the University, admission to Bachelor of Music programs is conditional upon a successful audition evaluated by faculty members in Music. The audition will consist of:
(a) a theory evaluation test designed to show the nature and extent of the student's aptitude in music theory;
(b) a performance of at least ten minutes' length on the student's major instrument, showing a grasp of a variety of styles.

Candidates should contact a program advisor in Music for specific requirements in the various performance media. If an accompanist from Music is required, four weeks' prior notice must be given to the Music office, and an accompanist's fee will be charged. Candidates auditioning in Voice or Orchestral Instruments must perform at least one selection with accompaniment. Candidates should apply for an audition on-line at www.uwindsor.ca/music/audition-requirements.

**Other Regulations**
1) Music courses whose middle digit is 0 may not count toward the B.Mus. degree.

**Degree Requirements**

Total courses: forty.

(a) History and Literature (Musicology/Ethnomusicology): three courses, consisting of MUSC-1260, MUSC-1270 and one of MUSC-3460 MUSC-2270, MUSC-3260, MUSC-3270, MUSC-3170, MUSC-3460, MUSC-4260, MUSC-4270, MUSC-4370, MUSC-4470
(b) Theory and Composition: six courses, consisting of MUSC-1120, MUSC-1130, MUSC-2120, MUSC-2130; and the 1.50 credit hour courses MUSC-2220, MUSC-2230, MUSC-3220, and MUSC-3230.
(c) Performance Studies: eight courses, consisting of one course from the series MUSP-3470 to MUSP-3690, or MUSP-3710 (taken eight times). (Four corresponding 1.50 credit hour courses from the series MUSP-3170 to MUSP-3390, or MUSP-3410 may be substituted for two 3.0 credit hour courses.
(d) Ensembles: four courses, consisting of eight 1.50 credit hour courses (one in each of eight terms) of MUSP-2100, MUSP-2200, or MUSP-3100. Up to 6.0 Units of this requirement may be completed with the MUSP-2400 course.
(e) Methods and Pedagogy: five courses, consisting of MUSC-2390, MUSC-2480, MUSC-2550, MUSC-2690 and MUSC-2790.
(f) Music Education: four courses, consisting of MUSC-2850, MUSC-4840, MUSC-4850 and MUSC-4940.
(g) two additional courses in History and Literature (Musicology) or Theory and Composition, or one course in the above areas plus two 1.50 courses in Ensembles.
(h) GART-1500, GART-1510;
(i) six courses from any area of study, excluding Music and Music Therapy.

Courses used to calculate the major average are: courses listed under requirements (a) to (g), and any courses taken in the major area(s) of study.

## Honours Bachelor of Music (Comprehensive Stream)

**Admission Requirements**
In addition to meeting the regular requirements for admission to the University, admission to Bachelor of Music programs is conditional upon a successful audition evaluated by faculty members in Music. The audition will consist of:
(a) a theory evaluation test designed to show the nature and extent of the student's aptitude in music theory;
(b) a performance of at least ten minutes' length on the student's major instrument, showing a grasp of a variety of styles.

Candidates should contact a program advisor in Music for specific requirements in the various performance media. If an accompanist from Music is required, four weeks' prior notice must be given to the Music office, and an accompanist's fee will be charged. Candidates auditioning in Voice or

Orchestral Instruments must perform at least one selection with accompaniment. Candidates should apply for an audition on-line at www.uwindsor.ca/music/audition-requirements.

**Other Regulations**
1) Music courses whose middle digit is 0 may not count toward the B.Mus. degree.

**Degree Requirements**

Total courses: forty.

(a) History and Literature (Musicology/Ethnomusicology): four courses, consisting of MUSC-1260, MUSC-1270; and 2 additional History and Literature courses.
(b)Theory and Composition: six courses, consisting of MUSC-1120, MUSC-1130, MUSC-2120, MUSC-2130; and the 1.50 credit hour
(c) Performance Studies: six courses, consisting of one course from the series MUSP-3470 to MUSP-3690, or MUSP-3710 (taken six times). (Four corresponding 1.50 credit hour courses from the series MUSP-3170 to MUSP-3390, or MUSP-3410 may be substituted for two 3.0 credit hour courses.
(d) Ensembles: four courses, consisting of eight 1.50 credit hour courses (one in each of eight terms) of MUSP-2100, MUSP-2200,MUSP-2400, or MUSP-3100. (With the consent of the Director of the School students enrolled in MUSP-3710 or MUSP-3410 may substitute MUSP-2400.)
(e) Music Education: one course, MUSC-2850.
(f) three additional courses in History and Literature (Musicology), Theory and Composition or Music Education plus 6 additional Music courses
(g) GART-1500, GART-1510;
(h) six courses from any area of study, excluding Music and Music Therapy.
(i) two courses from any area of study, including Music.

In addition to a common core of Music courses, B Mus. (Comprehensive) students may pursue one of a number of different concentrations including Performance, Musicology/Ethnomusicology, Theory and Composition (including Technology). Other concentrations may be pursued, within the limit of faculty resources. Recommended Programs of Study with Suggested Course Sequences for these concentrations are available through Music.

Courses used to calculate the major average are: courses listed under requirements (a) to (f), and any courses taken in the major area(s) of study.

## Combined BA Honours Music Programs

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty

Permission from both Music and the second area of study is required to enroll in this degree program. No audition is required for the degree; however, it is necessary to audition for the required ensemble courses and to pass the examinations for MUSC-1120 and MUSC-2220.

(a) Music: seventeen courses consisting of MUSC-1120, MUSC-1130, MUSC-1260, MUSC-1270, MUSC-2120, MUSC-2130; plus two 1.50 credit hour courses, MUSC-2220 and MUSC-2230; a minimum of four semesters of ensemble courses up to a maximum of eight 1.5 credit courses; plus additional Music courses to a total of seventeen.
(b) Course requirements-Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) GART-1500 and GART-1510
(d) Other courses, as required, from any area of study to a total of forty courses.

Courses used to calculate the major average are: courses listed under requirements (a) to (b), and any courses taken in the major area(s) of study.

Music courses whose middle digit is 0 may not count towards this degree.

## Concurrent Bachelor of Music (Honours Music Education)/ Bachelor of Education

Direct admissions from high school only.

This is a joint offering between the School of Creative Arts and the Faculty of Education. See Faculty of Education for program requirements.

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Music

Minor Concentration: MUSC-1120, MUSC-1130, MUSC-1260, MUSC-1270, plus two additional Music courses (for a total of six credits)

Major Concentration: MUSC-1120, MUSC-1130, MUSC-1260, MUSC-1270, MUSC-3460, seven courses at the 2000-level or above, including two MUSC-series courses, two MUSP-series courses, and two Music History and Literature (Musicology) courses.

## Minor in Music

Six courses, including 2 courses in the area of Music History and Literature (Musicology); 2 courses in the area of Music Theory and Composition; plus two other music courses with the exception of private instruction courses. (3000 level series)
*consult course descriptions for information regarding prerequisites.

## General BA in Visual Arts

Note: As of Fall 2013 there are no direct admissions from High School, with the exception of students enrolled in the Concurrent Bachelor of Arts (Visual Arts General)/Bachelor of Education program. All other students will be applying directly to the Honours program.

**Degree Requirements**

Total courses: thirty.

(a) Visual Arts - seventeen courses: VSAR-1050, VSAR-1060, VSAR-1070 and VSAR-1080, and eight other studio courses numbered VSAR-2030 through VSAR-3900 plus MACS-1500, MACS-2140, MACS-2150 and either MACS-2450 or MACS-3450.
(b) two courses from Social Sciences;
(c) two courses from Languages or Science;
(d) two courses from any area of study, including Arts.
(e) GART-1500, GART-1510:
(f) INCS-2020, INCS-2030;
(g) four more courses from any area of study, including Visual Arts.

Courses used to calculate the major average are: courses listed under requirement (a) and any courses taken in the major area(s) of study.

## BA Honours in Media Arts and Culture

**Degree Requirements**

Total courses: forty.

(a) Visual Arts Studio: twelve courses, consisting of VSAR-1050, VSAR-1060, VSAR-1070 and VSAR-1080; two VSAR courses at the 3000 level; six additional VSAR courses at the 2000, 3000, or 4000 levels;
(b) Media Arts and Culture: sixteen courses, including MACS-1500, MACS-2140 and MACS-2150; MACS 3450 or MACS-3550; two MACS courses at the 4000 level; ten additional MACS courses numbered MACS-2450 through MACS-4560. Two of the following courses may be taken to fulfill the Media Arts and Culture requirement: FILM-1001, GRST-3011, CMAF-2400, CMAF-2410;
(c) GART-1500, GART-1510;
(d) two courses in a second language plus two courses in one of the following areas: Philosophy, English, Intercultural Studies, or Greek and Roman Studies;
(e) INCS-2020, INCS-2030 plus two courses in History (numbered HIST-XXXX);
(f) two courses in Science or Social Science

Courses used to calculate the major average are: courses listed under requirements (a) to (b), and any courses taken in the major area(s) of study.

## Combined BA Honours Visual Arts Programs

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a) seventeen courses consisting of Studio Fundamentals VSAR-1050, VSAR-1060, VSAR-1070 and VSAR-1080, plus nine other studio courses numbered VSAR-2030 through VSAR-3900 and/or Cinema Arts and/or Film courses numbered CNMA-2XXX through CNMA-4XXX or FILM-2XXX through FILM-4XXX. At least four courses must be at the 3000-level plus the following Media Art Histories/Visual Culture courses: MACS-1500, MACS-2140, MACS-2150, and either MACS-2450 or MACS-3450.
(b) Course requirements-Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) GART-1500, GART-1510:
(d) two courses from Social Sciences;
(e) two courses from Languages or Science;
(f) two courses from any area of study, including Arts.
(g) additional courses from any area of study to a total of forty courses.

Courses used to calculate the major average are: courses listed under requirements (a) to (b), and any courses taken in the major area(s) of study.

## Bachelor of Fine Arts in Visual Arts

**Degree Requirements**

Total courses: forty.

(a) twenty courses (66 course credits) as follows: VSAR-1050, VSAR-1060, VSAR-1070, VSAR-1080; one of VSAR-3830 or VSAR-3840; VSAR-4800 (6.0 credits), VSAR-4810 (6.0 credits), VSAR-4900 and VSAR-4910; plus at least three 2000-level courses in three other separate areas; five additional 3000-level courses in at least three separate areas; and three additional studio courses at the 2000 or 3000 level (courses beginning either with a VSAR- or a FILM). Media Art Histories/Visual Culture: eight courses (24 course credits) as follows: MACS-1500, MACS-2140, MACS-2150 and MACS-3450 or MACS-3550 (MACS-3450 or MACS-3550 must be taken before entry into year four), plus four more media art histories/visual culture courses, one of which has to be at the 4000-level.
(b) two courses from Social Sciences, Humanities or Arts (excluding Visual Arts);
(c) two courses from Languages or Science;
(d) two courses from any area of study, including Visual Arts.
(e) GART-1500, GART-1510:
(f) two courses from any area of study, including Visual Arts.

Courses used to calculate the major average are: courses listed under requirement (a) and any courses taken in the major area(s) of study. Students must maintain a 76% major average in order to enroll in

advanced courses: VSAR-4800; VSAR-4810; VSAR-4900; VSAR-4910 in year 4. Students whose average drops below this average can:
(a) be allowed to continue in the BFA program on a conditional basis, subject to re-evaluation;
(b) be allowed to transfer to the general Bachelor of Arts-Visual Arts program.

Consult a program advisor in Visual Arts for details regarding portfolio requirements and procedures.

## Bachelor of Fine Arts in Visual Arts and the Built Environment (VABE)

In accordance with US government regulations, the VABE program is open only to Canadian citizens legally permitted to commute to the United States. International Visa students interested in the architecture program at the University of Detroit Mercy must apply directly to that institution.

Note: Students admitted to the BFA in Visual Arts and the Built Environment (VABE) program are also required to apply for a US study visa in consultation with the University of Detroit Mercy (UDM), in order to attend and complete courses at the UDM School of Architecture. Admission to the VABE program does not guarantee the granting of a study visa by the US government. Continuation in the VABE program requires that a study visa is granted by the US government.

Students enrolled in the program may be eligible to apply to the fourth year of the architecture program at the University of Detroit Mercy (UDM), following completion of their third year in the VABE program. Students admitted to the fourth year of the UDM program would graduate with a General BA in Visual Arts from the University of Windsor. Students who continue to the fourth year of the Windsor program would graduate with a BFA in Visual Arts and the Built Environment. Students who successfully complete the fourth year of the UDM architecture program can graduate with a B.Sc. in Architecture or be eligible for admission to UDM's professional program in Architecture (M.Arch.).

**Degree Requirements**

Total courses: forty-four

(a) School of Creative Arts:
- (i) VSAR-1050, VSAR-1070, VSAR-1080, VABE-1100 (6.0 credit course), VABE-1200 (6.0 credit course); one of VSAR-3830 or VSAR-3840;
- (ii) VSAR-4800 (6.0 credit course), VSAR-4810 (6.0 credit course), and VSAR-4910;
- (iii) VABE-2130, VABE-4600
- (iv) two additional 3000-level studio courses in the same subject area;
- (v) plus MACS-1500, MACS-2140, MACS-2150, MACS-3910, and any one of: MACS-2500 or MACS-3520 or MACS-4520
- (vi) two other Art History courses, one of which has to be at the 4000-level;
- (vii) a successful VABE portfolio evaluation.*

(b) School of Architecture:
- (i) Professions: VABE-1190/ARCH1190, VABE-1290/ARCH1290 (each 1.5 credit courses)
- (ii) 4 Design Studio courses: VABE-2300/ARCH1300, VABE-2400/ARCH1400, VABE-3100/ARCH2100, VABE-3200/ARCH2200;
- (iii) Visual Communication: VABE-2110/ARCH 1211, VABE-2210/ARCH2110
- (iv) Building Structures modules: VABE-2640/ARCH2640, VABE-2840/ARCH2840;
- (v) Building Environment modules: VABE-2260/ARCH2260, VABE-2860/ARCH2860;

(vi) Building Construction modules: VABE-2680/ARCH2680, VABE-2880/ARCH2880;
(v) Co-op Training Prep: VABE-3000/CEC-300 or VSAR-3800 Visual Arts Internship
(c) two Social Science courses
(d) one Science course
(e) two additional courses from Arts excluding Visual Arts
(f) GART-1500 and GART-1510; DRAM-2100, PHIL-1100, and MATH-1780 or MATH-1760

Courses used to calculate the major average are: courses listed under requirements (a) to (b), and any courses taken in the major area(s) of study.

*Portfolio Evaluation: A third year gallery exhibition, and for students who pursue a BSc in Architecture from UDM, a successful portfolio evaluation is required. The portfolio evaluation takes place at the beginning of semester six, after the student has gained credit in VSAR-1050, VSAR-1070, VSAR-1080, MACS-1500, VABE-1100, VABE-1200, VABE-2300/ARCH1300, VABE-2400/ARCH1400, VABE-3100/ARCH2100, and is enrolled in VABE-3200/ARCH2200.

Those students seeking to pursue a BSc in Architecture from the UDM after their third year are encouraged to consult a VABE Advisor on what courses are transferable. Students who opt to graduate after year 3 and enter the UDM BSc program will receive a BA in Visual Arts. For these students, the VA studio course requirements in the BA will be replaced by the architecture studio courses taken at UDM. Acceptable substitutes for BA requirements INCS-2020 and INCS-2030 will include any two Social Sciences courses taken under the option requirements for the VABE program.

**Program Sequencing**

**YEAR 1**

**Fall**
University of Windsor
MACS-1500, VABE-1100, VSAR-1070, MATH-1780 or MATH-1760

University of Detroit Mercy (taken at UDM campus)
VABE-1190/ARCH1190

**Winter**
University of Windsor
DRAM-2100, VSAR-1050, VABE-1200, VABE-2130

University of Detroit Mercy (taken at UDM campus)
VABE-1290/ARCH1290

**YEAR 2**

**Fall**
University of Windsor
VSAR-1080, GART-1500, MACS-2140

University of Detroit Mercy (taken at UDM campus)
VABE-2160/ARCH2160, VABE-2300/ARCH1300, VABE-2330/ARCH2330

**Winter**
University of Windsor
GART-1510, MACS-2150, MACS-3910

University of Detroit Mercy (taken at UDM campus)
VABE-1160/ARCH1160
VABE-2400/ARCH1400
VABE-2430/ARCH2430

**YEAR 3**

**Fall**
University of Windsor
VSAR-3850, MACS-4560, PHIL-1100
1 Social Science Elective

University of Detroit Mercy (taken at UDM campus)
VABE-3100/ARCH2100, VABE-3000/CEC-300* Co-op Training Prep. or VSAR-3800 Visual Arts Internship.

NOTE: * VABE-3000 is only needed if a student is planning to enter the UDM B.Sc. Architectural Program after their 3rd year. Students who do not complete the co-op preparation course will need to substitute this requirement with VSAR-3800 Visual Arts Internship.

**Winter**
University of Windsor
2 Arts courses, excluding Visual Arts courses, 1 Social Sciences courses, 1 Science course

University of Detroit Mercy (taken at UDM campus)
VABE-3200/ARCH2200

**YEAR 4**

**Fall**
University of Windsor
VSAR-3XXX Studio course, VSAR-4800, VSAR-4910, MACS-XXXX Art History course

**Winter**
University of Windsor
VSAR-3XXX Studio course, VSAR-3830 or VSAR-3840, VSAR-4810, MACS-4XXX

## Concurrent General Bachelor of Arts (Visual Art)/Bachelor of Education

Direct admissions from high school only.

This is a joint offering between the School of Creative Arts and the Faculty of Education. See Faculty of Education for program requirements.

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Visual Art

Major Concentration: VSAR-1050, VSAR-1060, VSAR-1070 and VSAR-1080, MACS-1500; seven additional Visual Arts courses at the 200 level or above including three 3000-level or above courses.

Minor Concentrations: VSAR-1050, VSAR-1060, VSAR-1070, VSAR-1080 and MACS-1500; one additional Visual arts course at the 200 level.

## Minor in Art History/Visual Culture

Requirements: six Visual Arts courses, including one of VSAR-1050, VSAR-1060, VSAR-1070, VSAR-1080; plus MACS-1500, MACS-2140, MACS-2150 and two additional art history courses.

# SCHOOL OF CREATIVE ARTS COURSES

## ART HISTORY COURSES

Not all courses listed will necessarily be offered each year. Prerequisites for all Art History courses are waived for non-Visual Arts majors. Art History courses are three hours a week unless otherwise indicated.

**MACS-1500. Contemporary Visual Culture**
A critical investigation of the visual imagery and artifacts of contemporary culture. Drawing upon examples from TV, advertising, cinema, cyber culture, architecture, design and art, students are introduced to such concepts as spectacle, kitsch, simulacrum, hypertext paradigm. (Lab fees may apply.)

**MACS-2140. Survey of Art History: Ancient to Medieval**
History of art from prehistoric through medieval, with an introduction to composition, the language of the plastic arts and its relationship to culture.

**MACS-2150. Survey of Art History: Renaissance to Modern**
History of art from Italian Renaissance to the twentieth century, with emphasis on the influence of social and philosophical ideas.

**MACS-2200. The Planned City as a Work of Art**
The city as a grand plan has always been both an idea and an ideal in the West. This course will trace the development of the city envisioned as a single, unified construct, often with a specific purpose in mind. From the ancient world of Athens and Rome, to Medieval Siena and Renaissance Florence through to the 19th century in Europe and North America, these great urban visions continue to influence how we live. (Prerequisites: MACS-2140 and MACS-2150.)

**MACS-2450. Modern Art**
This course introduces students to the development of modern art from the eighteenth century to the middle of the twentieth century. The course covers the relationship between the artistic movements

during this period and the cultural and political ideas that inform them. This course traces the rise of abstraction in the early part of the twentieth century as well as subsequent developments to the 1960s. In addition to studying major movements, students develop critical language around modern art practices through the application of thematic concepts such as the sublime, the everyday and the body. MACS 2140 and MACS-2150 for majors; or semester four standing for non-majors)

**MACS-2500. Stories of the City**
This course examines how cities are imagined, dreamed, planned, described, and remembered. Students explore urban cultures, legends, scenes, and structures to discern how the spaces and rhythms of city life are expressed through its literature, visual arts, films, sounds, architectures and other media. While the course addresses urban disasters and achievements, it also investigates the everydayness of urban existence. Classes respond with theoretical, creative and community-based research projects that foster conversation and involvement with citizens.

**MACS-2600. History of Photography**
This course addresses the history of photography from a social and aesthetic perspective. With the invention of photography in the nineteenth century, debates about subjectivity, truth, memory and difference were radically re-framed. This course follows the emergence of photography in 1839 through its development in the twentieth century, exploring its documentary and aesthetic roles in relation to specific socio-historical contexts. The significance of technological innovations to image creation will also be addressed.

**MACS-2850. Learning by Living in an International Urban Setting**
This course develops the capability to describe and reflect upon the everyday rhythms and challenges of learning in a new culture and urban environment and finding expressive ways to communicate the experiences and challenges of learning to others. As an exploration of living in a city outside Canada students will examine films, literature, music, theatre, or other expressive forms that reflect its urban life. Students will write weekly blogs about their own experiences, perceptions and understanding of Italian culture and living abroad. Using old and new media, they will engage in a regular process of designing, drafting, and redrafting stories and relating interesting experiences from their time abroad that may be shared with their classmates, colleagues, family, and friends within an electronic portfolio. As managers of their own e-portfolios, students will develop a learning record designed to exceed the limits of the course. Regular assessment of the e-portfolio and its entries may be carried out by a small team of faculty at Windsor. (Permission of the Instructor is required.) (Prerequisites: GART-1500 and GART-1510.) (Also offered as VSAR-2850.)

**MACS-3450. Contemporary Art**
This course offers an overview of the major movements and aesthetic concerns in art from the 1960s to the present. The course charts the shifting boundaries of contemporary art including the impact of street art, new media, craft and design on art practices in the late 20th and early 21st centuries. Topics focus on the relationship between contemporary art production and the social, economic and cultural shifts that inform new movements. As most contemporary art strives to foster discussion and debate, students learn how to assess which themes and movements align with their own interests. Research and writing strategies focus on the development of informed critical language around contemporary art practices. (Prerequisites: MACS 2450; or semester 4 standing for non-majors.)

**MACS-3520. Techniques and Technologies of Urban Life**
This course examines the relationship between technologies, the built environments of cities, and the ways in which we experience, remember, connect and interact in urban spaces, places, and times. Drawing on cultural theories and creative practices, students develop conceptual tools for the analysis

of different technologies, media, cultural artifacts, spaces, and social practices, as well as creative research methodologies that use old and new technologies to question and document urban and suburban life. (Prerequisites: semester 4 standing.)

**MACS-3550. Curating as Cultural Practice**
This course will examine the expanding variety of models of curatorial practice in an interdisciplinary context. Students will acquire first hand experience in the conceptualization, proposal and realization of social and cultural events as creative practice that engages research and conceptual knowledge in new ways. It may also be understood as a form of social practice that is invested in public interaction. Class projects will be designed to frame contemporary issues and to communicate with new audiences. (Pre-requisites: For BFA or BA Visual Arts/Art History students: MACS-1500, MACS-2140, MACS-2150. For majors in FAHSS: GART/SOSC-2000). (May be repeated twice for credit.)

**MACS-3620. Contemporary Issues in Photography**
This course will provide an examination of the theoretical debates and key writings on photography in the modern and contemporary contexts. Critical areas to be discussed include photographic realism, documentary and narrative forms, digital reconfiguration, intermediality, gender and identity, space and place. The role of the photograph will be explored in relation to conditions in contemporary art and society to provide a broader context for interrogating photographic image-making.(Pre-requisites for Visual Arts majors: MACS 2140 and MACS 2150; pre-requisites for non-majors: semester 4 standing)

**MACS-3700. Media Art Histories**
This course surveys artistic practices and theoretical models that have emerged from the intersecting histories of art, media, science, and technology. These interwoven histories are explored through case studies of visual artists, filmmakers, musicians, and architects working between disciplinary and technological boundaries. Students will investigate ways in which these artists and practitioners have developed strategies across time to promote, test, evade, and challenge the social roles and forms of emerging media and technology. Pre-requisites for Visual Arts majors: MACS 2140 and 2150; prerequisites for non-majors: semester 4 standing.)

**MACS-3910. Contemporary Architecture**
A survey of the roots of contemporary architectural theory through an examination of representative structures since the Industrial Revolution. Students will be introduced to those individuals who have played a central role in the development of architectural thought in North America. (Prerequisites for Visual Arts majors: MACS-2140 and MACS-2150.) (3 lecture hours a week.)

**MACS-4000. Directed Individual Studies**
The Independent Study course in Media and Culture (MACS) is reserved for exceptional students to pursue a research paper under the supervision of a full-time faculty member in the Media Arts and Culture area. This course requires that students formulate new research questions that stem from previous course work and to write a substantial essay (minimum 15 - 20 pages) that focuses on an historical or theoretical issue in art, architecture, the built environment, and visual or sonic media. Students must apply to the MACS area coordinator at least two months prior to the beginning of semester to be considered. Applications will be considered on the basis of the availability of senior course offerings and the availability of faculty members in the MACS area. All applicants must have demonstrated superior academic ability in similar courses at the 3000 level and above. An 80% average in Media Arts and Culture courses will be required for this course. (Prerequisites: MACS-2140, MACS-2150 and a 3000 numbered course in the subject area. This course cannot be repeated for credit.)

**MACS-4500. Border Culture**

This course addresses the role of borders in contemporary global culture as both physical boundaries and affective conditions. In the context of the Windsor-Detroit border, students from the University of Windsor compare viewpoints based upon the experience of living in a border culture. Seminars and field trips address borders from a number of perspectives and contexts. Students look to historical and contemporary ideas about borders that have been articulated in various disciplines: from political theory and cultural geography, to urban planning, art, literature, architectural and spatial theory. (Open to majors and non-majors.) (Prerequisites: MACS-2140 and MACS-2150 for all Visual Arts Majors and semester 4 standing for non-majors.) (Also offered as CMAF-4500)

**MACS-4520. Urban Ecologies**
This course examines cities as a complex field of cultural, social, linguistic, technological, and architectural objects, activities, relationships, and experiences. Students investigate different ecological models of city life to contemplate tensions between the active and static, material and immaterial, porous and impermeable character of cities. In classroom seminars and research practice, students discuss and debate a range of theoretical models and develop creative strategies to probe the natural, physical, artistic, cultural, acoustic, and medial ecologies of cities. (Open to majors and non-majors.) (Prerequisites: Semester 4 standing.)

**MACS-4530. History of Detroit Architecture**
Since its founding in 1701, Detroit has reflected all major movements in North American architecture. This course will examine the evolution of architectural styles in Detroit beginning with the pre-American French Colonial, moving through the many revival styles of the 19th century, Beaux Arts, Art Deco and ending with Post Modernism and recent additions to the city's skyline. Course includes both lectures and on-site architectural visits. (Prerequisites: MACS-2140 and MACS-2150.)

**MACS-4560. Special Topics**
A course based on group encounters with special topics in Media Arts and Culture which will be considered through readings, discussions, papers, and museum and gallery trips. May be repeated for credit with permission. (Prerequisites: Restricted to MACS majors with semester 5 standing and MACS 2450.

## FILM COURSES

*FILM courses are jointly offered with the Department of Communication, Media, and Film.*

**FILM-1001. Film Studies I**
An introduction to basic concepts in film theory and aesthetics. A study of the history of film with a focus on the dominant artistic and commercial forms, theoretical analyses, genre classifications, and evolving technologies. (3-4 lecture or lab hours per week as determined by the instructor.) (Credit cannot be obtained for both FILM-1001 and CMAF-1400.)

**FILM-1100. Film Production I**
A study of the art and craft of film production through lectures and hands-on exercises. A survey of the stages of production, key artistic roles, and concepts of visualization and cinematic storytelling. (2 lecture hours and 1 laboratory hour per week.) (Credit cannot be obtained for both FILM-1100 and CMAF-1120.)

**FILM-1110. Film Production II**

A study of fundamental artistic and technical film production skills in all stages of production and post-production. Practical learning exercises build upon the artistic work created by students of Film Production I and students complete all phases of production of a short film project. (2 lecture hours and 1 laboratory hour per week) (Prerequisite: FILM-1100 or CMAF-1120.)(Credit cannot be obtained for both FILM-1110 and CMAF-1130.)

**FILM-1900. Film Business and Professional Practice I**
A study and practice of behavioural skills such as active listening, conflict resolution, running effective meetings, addressing ethics, etc., relevant to the film industry. A team environment will be used as we study interpersonal dynamics as they relate to roles in film production. (Open only to BFA Film Production majors.) (3 lecture hours a week.)

**FILM-2000. Special Topics in Film**
Special Topics course of an area in Film studies determined by the instructor. (May be repeated for credit if topic differs.)

**FILM-2050. Experimental Film and Video**
This course examines experimental processes in film, video and sound and provides a technical and critical foundation in each medium. Focus will be given to the basic events and artists central to the historical development of this genre as well as its contemporary practitioners. Based on screenings and various exercises, students will craft projects that explore the potential of these artistic forms in challenging the norms and conventions of mainstream cultural production. (Prerequisite: FILM-1110 or CMAF-1130.) (2 lecture hours and 1 laboratory hour per week). (Credit cannot be obtained for both FILM-2050 and CMAF-2150.)

**FILM-2100. Film Production III**
An intermediate study of the practical considerations and creative strategies employed in film production and post-production. Areas of focus include narrative techniques and production methods. Activities include conceiving and creating short films. (Prerequisite: FILM-1110 or CMAF-1130.) (2 lecture hours and 1 laboratory hour per week.)(Credit cannot be obtained for both FILM-2100 and CMAF-2310.)

**FILM-2200. Documentary Production I**
An introduction to documentary storytelling techniques and production methods through the creation of a short documentary film. Focus is on competencies in all phases of documentary film production. (Prerequisite: FILM-1110 or CMAF-1130.) (1.5 lecture hours and 1.5 laboratory hours per week.) (Credit cannot be obtained for both FILM-2200 and CMAF-2320.)

**FILM-2300. Screenwriting I**
An introduction to the craft of screenwriting with an emphasis on core concepts such as structure, character development, plot, theme, tone and dialogue. Writing exercises focus on the skills necessary to translate visual and story ideas into script format. (Prerequisite: FILM-1110 or CMAF-1130.) (2 lecture hours and 1 laboratory hour per week.) (Credit cannot be obtained for both FILM-2300 and CMAF-2200.)

**FILM-2400. Cinematography I**
An introduction to theories and methods of cinematography that covers traditional and contemporary camera technology, techniques, and lighting. (Prerequisites: FILM-1110 or CMAF-1130.) (Credit cannot be obtained for both FILM-2400 and CMAF-3140.)

**FILM-2500. Sound I**
An introduction to the artistic, theoretical, and technical aspects of film sound through all phases of the film sound process. (Prerequisite: FILM-1110 or CMAF-1130.) (2 lecture hours and 1 laboratory hour per week.)(Credit cannot be obtained for both FILM-2500 and CMAF-2090.)

**FILM-2600. Film-Editing I**
An introduction to the art, craft, and technology of film editing through a series of practical exercises that cover a variety of styles and genres. (Prerequisites: FILM-1110 or CMAF-1130.) (1.5 lecture hours and 1.5 laboratory hours per week.) (Credit cannot be obtained for both FILM-2600 and CMAF-3090.)

**FILM-3100. Film Production IV**
An intermediate to advanced study of the creative approach and technical practice of film production drawing on scripts developed in Screenwriting I or Screenwriting II. Students engage a hands-on, practiced-based integration of film theory, artistic, and technical knowledge. (Open only to BFA Film Production majors) (Prerequisite: FILM-2100; or CMAF-2310) (Credit cannot be obtained for both FILM-3100 and CMAF-3310.)

**FILM-3200. Documentary Production II**
An intermediate study of key artistic, craft, and narrative concepts associated with documentary film. Through the production of a short film, students explore approaches to documentary authorship, professional practice, and ethics. (Prerequisite: FILM-2200 or CMAF-2320.) (1.5 lecture hours and 1.5 laboratory hours per week.) (Credit cannot be obtained for both FILM-3200 and CMAF-3320.)

**FILM-3300. Screenwriting II**
An intermediate study of scriptwriting to develop and refine writing and visual storytelling skills. A workshop-based approach that includes peer review, pitch presentations, and analysis of texts. (Prerequisites: FILM-2300 or CMAF-2200.) (Credit cannot be obtained for both FILM-3300 and CMAF-3200.)

**FILM-3400. Cinematography II**
An intermediate study of cinematography with a focus on technical knowledge in film lighting, camera operation, camera support, and grip techniques. (Prerequisites: FILM-2400.) (Credit cannot be obtained for both FILM-3400 and CMAF-3100.)

**FILM-3600. Film-Editing II**
An intermediate study of the historical, aesthetic, and theoretical aspects of film editing and post-production. Topics may include film editing technique, narrative construction, and post-production skills. (Prerequisites: FILM-2600) (1.5 lecture hours and 1.5 laboratory hours per week.) (Credit cannot be obtained for both FILM-3600 and CMAF-3270.)

**FILM-3700. Directing**
A study of the art and craft of film directing. Hands-on activities will focus on screen language and the relationship between a director, creative collaborators, and actors or subjects. (Prerequisites: Semester 5 standing and FILM-2100 or CMAF-2310. (Credit cannot be obtained for both FILM-3700 and CMAF-3170.)

**FILM-3800. Producing**
A project-based study of pre-production and planning processes for film production, within an examination of the roles and responsibilities of the production department. Topics covered may include budgeting, resource planning, logistics, and regulatory issues. (Prerequisites: Semester 5 standing and FILM-2100 or CMAF-2310) (Credit cannot be obtained for both FILM-3800 and CMAF-3230.)

**FILM-4000. Special Topics in Film**
Special Topics course of an area in Film studies determined by the instructor. (May be repeated for credit if the topic differs.)

**FILM-4100. Film Production V**
A project-based study that develops professional capacities in all phases of the production process and synthesizes theoretical and practical learning. Drawing on scripts developed in Screenwriting II or Screenwriting III, students will create films that showcase their advanced production skills. (Open only to BFA Film Production majors). (Prerequisite: FILM-3100 or CMAF-3310.) (Credit cannot be obtained for both FILM-4100 and CMAF-4280.)

**FILM-4110. Commercial and Industrial Film Production**
A project-based study of industrial film genres such as advertisements, training, and industrial videos, corporate film, and social media assets. Topics may include client management, brand research, and professional communication. (Prerequisite: FILM-2100 or CMAF-2310) (2 lecture hours and 1 laboratory hour per week.) (Credit cannot be obtained for both FILM-4110 and CMAF-4240.)

**FILM-4200. Documentary Production III**
An advanced, project-based study of the art and craft of documentary storytelling, including notions of conventional and non-conventional documentary modes. Students complete all phases of production in the creation of a documentary short film. (Prerequisite: FILM-3200 or CMAF-3320). (1.5 lecture hours and 1.5 laboratory hours per week.) (Credit cannot be obtained for both FILM-4200 and CMAF-4320.)

**FILM-4300. Screenwriting III**
An advanced, workshop-based study of screenwriting with a focus on narrative craft, theory, and in-depth analysis of texts. Students further develop writing and storytelling skills and cultivate short film scripts toward a final pitch presentation. (Pre-requisite: FILM-3300 or CMAF-3200.) (Credit cannot be obtained for both FILM-4300 and CMAF-4200.)

**FILM-4400. Cinematography III**
An advanced, project-based study of the art and technology as well as the professional practice of cinematography with a focus on technical, conceptual, and aesthetic lighting skills for both studio and field locations. (Prerequisite: FILM-3400; or CMAF-3100.) (Credit cannot be obtained for both FILM-4400 and CMAF-4150.)

**FILM-4600. Film-Editing III**

An advanced, project-based study of the art, technology, and professional practice of film post-production. Students complete the post-production of a film from Film Production IV, Film Production V, or Documentary III, using contemporary professional protocols and workflows.- (Prerequisite: FILM-3600 or CMAF-3270) (1.5 lecture hours and 1.5 laboratory hours per week.) (Repeatable for credit, can be taken up to 2 times, not concurrently) (Credit cannot be obtained for both FILM-4600 and CMAF-4270.)

**FILM-4900. Film Business and Professional Practice II**
A study of the scope and nature of the Canadian film industry, with a focus on professional, business, and interpersonal skills necessary for entry into the media industry workplace. Topics may include career pathway identification, self-marketing, professional communication, and the respectful workplace. (Open only to BFA Film Production majors or by permission of the instructor.) (Prerequisite: Semester 7 standing.)

**FILM-4910. Film Marketing**
This course introduces students to marketing fundamentals in all phases of film production related to the market realities of distributing a film for an audience. Topics may include audience taste, market viability and current trends, distribution strategy, emerging platforms and channels, pricing and promotion. (Prerequisite: Semester 7 standing and FILM-2100; or Semester 7 standing and CMAF-3310 and one of: CMAF-3230 or CMAF-3320 or CMAF-3820.) (Credit cannot be obtained for both FILM-4910 and CMAF-4230.)

# MUSIC COURSES

Not all courses listed will necessarily be offered each term.

All courses are three hours a week (for 3.0 credit hours) unless otherwise indicated.

All Music courses except those whose middle digit is 0 may require consent of the instructor for enrollment.

**MUSC-1020. Fundamentals of Music and Sound**
An investigation of the principles, vocabulary and concepts of musical and sonic art forms, including the physical nature of sound, technologies for sound recording and processing, music notation, and basic elements of musical and sonic design.

**MUSC-1120. Music Theory I**
Examination of basic harmonic, contrapuntal, and formal elements in tonal music. (Admission by examination or consent of the instructor.) (Should be taken concurrently with MUSC-2220.) (3 hours a week, plus 2 keyboard laboratory hours a week.)

**MUSC-1130. Music Theory II**
Continuation of MUSC-1120, which is prerequisite. (Should be taken concurrently with MUSC-2230.) (3 hours a week, plus 2 keyboard laboratory hours a week.)

**MUSC-1260. Music History and Literature I**
Musical styles from the Middle Ages to about 1750. (Prerequisite: admission to the B. Mus., or B.A. (Music) programs or consent of the instructor.)

**MUSC-1270. Music History and Literature II**

Musical styles from about 1750 to the present day. (Prerequisite: MUSC-1260 or consent of the instructor.)

**MUSC-1470. Special Topics in Music**
Special study of an area of music chosen by the instructor. May be repeated for credit.

**MUSC-2120. Music Theory III**
Examination of more complex harmonic, contrapuntal, and formal elements in tonal music. (Prerequisite: MUSC-1130.) (Should be taken concurrently with MUSC-3220.)

**MUSC-2130. Music Theory IV**
Continuation of MUSC-2120, which is prerequisite. (Should be taken concurrently with MUSC-3230.)

**MUSC-2220. Basic Skills I**
Intensive drills in ear training, sight singing, dictation, and basic keyboard. (Admission by examination or consent of the instructor.) (Should be taken concurrently with MUSC-1120.) (1.50 credit hour course.)

**MUSC-2230. Basic Skills II**
Continuation of MUSC-2220, which is prerequisite. (Should be taken concurrently with MUSC-1130.) (1.50 credit hour course.)

**MUSC-2270. Studies in Baroque Music**
Special studies in the history and literature of Baroque music, to be arranged by the instructor. (Prerequisites: MUSC-1260, MUSC-1270.)

**MUSC-2390. Woodwind Techniques**
Fundamental techniques of woodwind instruments and their application in teaching beginners. Rental instruments are available. (Prerequisite: MUSC-1130)

**MUSC-2470. Analysis of Jazz Styles**
A stylistic study of major jazz innovators through the analysis of solo transcriptions and recordings. (Prerequisite: consent of the instructor.)

**MUSC-2480. Basic Conducting I**
Instruction in baton technique and the conducting of choral and instrumental ensembles.

**MUSC-2490. Basic Conducting II**
Instruction in score preparation and rehearsal techniques for vocal and instrumental ensembles. (Prerequisite: MUSC-2480.)

**MUSC-2550. Vocal Techniques**
Introduction to working with children's and adolescent voices. Topics include physiology of the voice, tonal placement, care of the teenage voice, the boy's changing voice, solo and group singing. (2 lecture hours a week and one laboratory hour a week.)

**MUSC-2630. Sonic Art**
An introduction to techniques for producing music and sound-based art, including sound recording, editing and processing, sample-based timbre design, soundscape composition, and MIDI-based electronica. (Also offered as VSAR-2630.) (Lab fees may apply.) (1.5 lecture hours and 1.5 lab hours per week.)

**MUSC-2690. Percussion Techniques**
Fundamental techniques of percussion instruments and their application in teaching beginners. (Prerequisite: MUSC-1130)

**MUSC-2790. Brass Techniques**
Fundamental techniques of brass instruments and their application in teaching beginners. Rental instruments are available. (Prerequisite: MUSC-1130)

**MUSC-2850. Foundations of Music Learning and Teaching**
An introduction to the philosophical, sociological, and historical foundations of teaching music. The nature and value of music education will be examined through discourse and reflective thought, with an emphasis on developing critical thinking skills and building a framework for a personal philosophy of music education. (Prerequisite: enrolment in the B.Mus., B.A. (Music) degrees, or permission of the instructor.)

**MUSC-2900. Special Topics in Music**
Special study of an area of music chosen by the instructor. May be repeated for credit.

**MUSC-3170. Film Music**
Exploration of the ways in which film music mediates perceptions of the visual. Includes focus on development of critical listening and interpretive skills using a number of (mostly) Hollywood films as principal texts while introducing a number of political, aesthetic and historical issues. (Prerequisites: MUSC-1260 and MUSC-1270).

**MUSC-3200. Music and Politics**
This course will focus on the intersection of music and politics. Students will deconstruct and analyze music in order to understand its political meaning and effect. We will examine music in various social, ideological and political formations, while also dealing with themes that concern musical nationalism, censorship, artistic freedom, ideological domination, propaganda. The course will explore genres such as protest songs, film scores, symphonic and other art music genres as well as various popular music forms. Finally, we will examine audience perception and identification, study the contributions of various composers and explore their political motivations while pursing the structures and political interests behind music's production. (Prerequisites: MUSC-1260 and MUSC-1270).

**MUSC-3220. Advanced Skills I**
Intensive drills in ear training, sight singing, keyboard harmony, dictation, and improvisation. (Prerequisites: MUSC-2230 and MUSC-1130 and successful completion of the Keyboard Proficiency Requirement.) (Should be taken concurrently with MUSC-2120.) (1.50 credit hour course.)

**MUSC-3230. Advanced Skills II**
Continuation of MUSC-3220, which is prerequisite. (1.50 credit hour course.)

**MUSC-3260. Studies in Classical Music**
Special studies in the history and literature of Classical music, to be arranged by the instructor. (Prerequisites: MUSC-1260 and MUSC-1270.)

**MUSC-3270. Studies in Romantic Music**
Special studies in the history and literature of Romantic music, to be arranged by the instructor. (Prerequisites: MUSC-1260 and MUSC-1270.)

**MUSC-3420. Voice-leading and Arranging I**
Study of voice-leading techniques with special attention to part-writing. Includes application of various approaches to writing tonal chord progressions, creating contrapuntal musical textures, and balancing melodic and harmonic considerations to the arrangement of music for a wide variety of homogenous vocal and instrumental ensembles.

**MUSC-3460. Introduction to Ethnomusicology**
Exploration of music cultures of the world within an ethnomusicological framework, including critical analysis of the discourse surrounding "world music" and conventional understanding of "local" and global". (Prerequisite: MUSC-1260 and MUSC-1270 or consent of the instructor.)

**MUSC-3630. Advanced Sonic Art**
An in-depth study of techniques for creating advanced sound-based art. Selected topics of study may include sound synthesis, electroacoustic music composition, sound installation, multimedia performance, and soundtracks for film and video. (Pre-requisite: VSAR-2630 or MUSC-2630 or permission of the instructor.) (Also offered as VSAR-3630) (May be repeated for credit.) (Lab fees may apply.)

**MUSP-3720. Applied Composition (Western Classical)**
The course is study in Western concert/classical music composition (though application of non-Western and non-classical elements may be explored) delivered through private weekly lessons. Students in the course complete original music projects as well as the generation of written scores and performance materials. The course will also include select preparatory literature and instrument performance practice studies. Repeatable for credit. (Prerequisite: MUSC-2130).

**MUSP-3730. Applied Composition/Arranging (Jazz/Pop)**
The course is study in Jazz/Pop music composition/arranging (though application of non-Western and classical art music elements may be explored) delivered through private weekly lessons. Students in the course complete original music projects as well as the generation of written scores and performance materials. The course will also include select preparatory literature and instrument performance practice studies. Repeatable for credit. (Prerequisite: MUSC-2130).

**MUSC-4120. Music Theory Seminar I**
Two- and three-part species counterpoint.

**MUSC-4260. Studies in Twentieth-Century Music**
Special studies in the history and literature of twentieth-century music, to be arranged by the instructor. (Prerequisites: MUSC-1260 and MUSC-1270.)

**MUSC-4270. Studies in the Music of North American Culture**
Selected studies that focus on Canadian and/or American musical culture with a special emphasis on transnational ideals and values, to be arranged by the instructor. (Prerequisites: MUSC-1260 and MUSC-1270; or consent of instructor.)

**MUSC-4320. New Music Workshop**
This course focuses on the composition, analysis, performance, and studio recording of new music. Students work individually and in groups on a series of projects, thus building a portfolio of work over the course of the semester. Projects may include the composition of new pieces, the performance of new repertoire (including student work), analytical papers that explore an aspect of new music or an individual piece, new media projects with a sound component, and interdisciplinary projects undertaken

in collaboration with students from other departments. (May be repeated for credit.) (Prerequisites: MUSC-2130 or consent of the instructor.)

**MUSC-4360. Directed Studies in Music I**
Advanced study in a selected area of music. (May be repeated for credit.) (Prerequisite: permission of a program advisor in Music.)

**MUSC-4370. Directed Studies in Music II**
Continuation of MUSC-4360, which is prerequisite. (May be repeated for credit.)

**MUSC-4470. Special Topics in Music**
Special study of an area of music chosen by the instructor. May be repeated for credit.

**MUSC-4580. Conducting Seminar I**
Advanced studies in choral or orchestral conducting. The student will serve as assistant conductor of an ensemble, with practical experience in rehearsal technique, score study, literature, and stylistic analysis. (Prerequisite: MUSC-2490 and consent of the instructor.)

**MUSC-4840. Seminar in Elementary Music Education**
Seminar in the critical examination of curriculum materials, teaching methods, and methodological approaches appropriate to elementary grades K-6; observation of music teaching in the school classroom. (Prerequisites: MUSC-2850.)

**MUSC-4850. Seminar in Secondary Music Education**
Seminar in the critical examination of techniques for building and maintaining a successful high school music program, including development of musical skills and discussion of materials and performance literature appropriate to Grades 6-12; observation of music teaching in the school classroom. (Prerequisites: MUSC-1130, MUSC-2230 MUSC-2480 and MUSC-2850.)

**MUSC-4910. Graduation Project**
Independent research or creative activity in the student's individual area of emphasis. The project may take the form of a major research paper, recital of original compositions, or other appropriate vehicle. (Prerequisite: permission of a programme advisor in Music.)

**MUSC-4940. Critical Issues in Music Education**
A critical examination of recent developments and issues in the philosophy, theory, history, and sociology of music education. Emphasis will be placed on the development of critical thinking skills needed for application in reflective practice. (Pre-requisite: MUSC-2850).

## MUSIC PERFORMANCE STUDIES COURSES

All students registered in Performance Study courses (except MUSP-2700) may be required to perform a confirming audition during the first week of classes. For courses in Performance Instruction, see "Areas of Study-Performance".

**MUSP-1110. Guitar Techniques**
Basic techniques for use with music groups. Chord charts, rhythm graphs, traditional note forms, and guitar accompaniment for individual and group singing. Students must supply their own instrument. (3.0 credit hour course.) (Open to Music Education students only)

**MUSP-2100. University Singers**
Performance of literature of various styles from all periods. (Normally 4 hours a week.) (May be repeated for credit.) (1.50 credit hour course.)

**MUSP-2200. University Wind Ensemble**
Performance of major works of the band and wind ensemble literature by groups of various sizes. Performances at University convocations, high school assemblies, and University concerts. (Normally 4 hours a week.) (May be repeated for credit.) (1.50 credit hour course.)

**MUSP-2400. Jazz Ensemble**
Performance of works arranged for standard jazz band instrumentation. (Normally 4 hours a week.) (May be repeated for credit.) (1.50 credit hour course.)

**MUSP-2700. Community Choir**
Membership open to everyone without audition. Rehearsals one evening a week, and normally one concert given during the term. (Normally 2.5 hours a week.) (May not count toward the B.Mus. degree.) (Offered on a pass/non-pass basis.) (May be repeated for credit.) (1.50 credit hour course.) (Offered on a pass/non-pass basis.)

**MUSP-3100. Chamber Choir**
Selected literature suitable for performance by a small choir. (Prerequisite: 2 terms of MUSP-2100, or MUSP-2200, or MUSP-2300, or consent of instructor.) (May be repeated for credit.) (1.50 credit hour course.) (Normally 4 hours week.)

**MUSP-3930. Recital I**
Public presentation of a recital of approximately forty minutes in playing time on the student's major instrument. Repertoire performed must show a variety of styles and time periods. (Prerequisite: permission of the applied lessons instructor and Performance Area Coordinator)

**MUSP-4000. Special Topics in Music Performance**
Special study of an area of applied music (performance) chosen by the instructor. May be repeated for credit.

**MUSP-4930. Recital II**
Public presentation of a recital of one hour in playing time on the student's major instrument. Repertoire performed must show a variety of styles and time periods. (Prerequisite: MUSP-3930.)

## MUSIC PERFORMANCE COURSES

See Music Program Regulations.

## VISUAL ARTS COURSES

Not all courses listed will necessarily be offered each year. Studio courses are either three hours a week or six hours a week, depending on the medium and level of study. See below for details. Art History courses are three hours a week unless otherwise indicated. Prerequisites for all Art History courses are waived for non-Visual Arts major.

Studio Courses: VSAR-1050, VSAR-1060, VSAR-1070, VSAR-1080, VSAR-2030, VSAR-2130, VSAR-2230, VSAR-2330, VSAR-2430, VSAR-2450, VSAR-2530, VSAR-2550, VSAR-2630, VSAR-2850, VSAR-2900, VSAR-3030, VSAR-3130, VSAR-3260, VSAR-3330, VSAR-3430, VSAR-3450, VSAR-3460, VSAR-3470, VSAR-3480, VSAR-3830, VSAR-3840, VSAR-3850, and VSAR-3860.

**VSAR-1050. Studio Practice and Ideas/Space**
An investigation of the principles, vocabulary and concepts of space-based art, including but not limited to sculpture and installation. Using traditional and contemporary materials, processes and practices, students will gain knowledge and experience through the exploration of the creative possibilities of three-dimensional space. (Lab Fees may apply.)

**VSAR-1060. Studio Practice and Ideas/Image**
An introduction to the fundamental skills and critical concepts of visual perception and production common to all areas of 2 dimensional image-making. Basic principles of composition and design, light and pigment-based colour theory, as these apply to painting, photo-based processes, and print production. Their use and application will be explored within the contemporary art context. Class projects may involve inter-disciplinarity between these media. Studio assignments are combined with related critical theory, historical practice and current strategies.

**VSAR-1070. Studio Practice and Ideas/Drawing**
An investigation of a variety of drawing processes, materials and concepts in a studio environment that fosters exploration. (Lab fees may apply.)

**VSAR-1080.Studio Practice and Ideas/Time-Based**
An investigation of the principles, vocabulary and concepts of time-based arts including digital media. Students will gain knowledge of the creative possibilities of emerging technologies and will develop a basic understanding of methods, tools and techniques of time-based media.

**THE FOLLOWING COURSES ARE OPEN TO VISUAL ARTS STUDENTS ONLY.**

**VSAR-2030. Introductory Drawing**
Media, techniques, vocabulary, and concepts of drawing, including the human figure and other subject matter. Development of drawing skills with exposure to more complex drawing situations, approaches, and points of view. Emphasis on a variety of materials (traditional and non-traditional). (Prerequisites: VSAR-1050, VSAR-1060, VSAR-1070, VSAR-1080.) (Lab fees may apply.)

**VSAR-2130. Introductory Painting**
Introduction to traditional and contemporary painting concerns, problems in rendering three-dimensional form in space and organization of the two-dimensional surface. (Prerequisites: VSAR-1050, VSAR-1060, VSAR-1070, VSAR-1080.) (Lab fees may apply.)

**VSAR-2230. Introductory Printmaking-Intaglio**
Introductory and intermediate techniques of contemporary printmaking practice are taught through Intaglio. The techniques of etching, engraving and monoprints are emphasized. (Prerequisites: VSAR-1050, VSAR-1060, VSAR-1070, VSAR-1080.) (Lab fees may apply.)

**VSAR-2330. Introductory Sculpture**
An introduction to the various concepts and processes of contemporary sculpture practice. Issues will be addressed through group discussion and practical application. (Prerequisites: VSAR-1050, VSAR-1060, VSAR-1070, VSAR-1080.) (Lab fees may apply.)

**VSAR-2430. Introductory Time-Based Art**
An investigation of the principles, vocabulary and concepts of time-based art. Emphasis is on exploring the potential of video for art projects as well as for community action in an experimental and critical environment. Assignments and screenings will stimulate students to explore issues inherent to time-based strategies in contemporary art as well as give a background to its brief history. (Prerequisites: VSAR-1080 or permission of the instructor.) (Lab fees may apply.)

**VSAR-2450. Digital Media and Design**
This course introduces students to the tools used to create art in virtual space, skills that assist in cross-over activity between art and design, and the history and investigation of the social, cultural and aesthetic issues pertinent to digital art making. (Prerequisites: VSAR-1050, VSAR-1060, VSAR-1070, VSAR-1080.) (Lab fees may apply.)

**VSAR-2530. Introductory Photography**
This introductory course in film and chemical photographic processes provides an opportunity for students to explore techniques and concepts within the medium of photography. Students will learn the basic technical skills of operating cameras, processing film, and making black and white prints, through a series of concerns specific to photography. (Prerequisites: VSAR-1050, VSAR-1060, VSAR-1070, VSAR-1080; Prerequisites for Majors in the BFA in Film Production: VSAR-1060, VSAR-1070, VSAR-1080; Prerequisite for Communication, Media and Film Majors: FILM-1110.) (Students must have a 35mm adjustable film camera to complete this course.) (Also offered as CMAF-2530.) (Lab fees may apply.)

**VSAR-2550. From 2D to 3D - Playing with Space**
How do we experience space? What are the elements that animate and activate a space? How have artists used space to communicate and investigate current issues within culture and society? From subtle cues such as temperature and smell, to the more obvious such as colour, texture, sound and construction, students will investigate the sensory, narrative and critical aspects of installation where space itself becomes our medium. In this studio-based course, students will bridge the gap between 2D image and 3D structure as an introduction to the processes used by artists to explore and manipulate space. Students will also look at current debates surrounding installation art and the gallery as “white cube.” This course is not limited to any particular medium, and students may respond in any medium offered within the School of Creative Arts. (Prerequisite: one “VSAR-” course at the 1000-level.)

**VSAR-2630. Sonic Art**
An introduction to techniques for producing music and sound-based art, including sound recording, editing and processing, sample-based timbre design, soundscape composition, and MIDI-based electronica. (Also offered as MUSC-2630.) (Lab fees may apply.) (1.5 lecture hours and 1.5 lab hours per week.)

**VSAR-2850. Learning by Living in an International Urban Setting**
This course develops the capability to describe and reflect upon the everyday rhythms and challenges of learning in a new culture and urban environment and finding expressive ways to communicate the experiences and challenges of learning to others. As an exploration of living in a city outside Canada students will examine films, literature, music, theatre, or other expressive forms that reflect its urban life. Students will write weekly blogs about their own experiences, perceptions and understanding of Italian culture and living abroad. Using old and new media, they will engage in a regular process of designing, drafting, and redrafting stories and relating interesting experiences from their time abroad that may be shared with their classmates, colleagues, family, and friends within an electronic portfolio. As managers of their own e-portfolios, students will develop a learning record designed to exceed the

limits of the course. Regular assessment of the e-portfolio and its entries may be carried out by a small team of faculty at Windsor. (Permission of the Instructor is required.) (Prerequisites: GART-1500 and GART-1510.)(Also offered as MACS-2850.)

**VSAR-2900. Introductory Photography: Digital**
An applied photography course concentrating on digital imaging processes, including camera operation for high quality digital image capture, colour use, image processing, and printing. The course offers an introduction to the elements of digital photography, concentrating on digital image capture, image processing using Adobe Photoshop and Bridge, colour management, and an introduction to scanning and printing. Various types of digital cameras are discussed. Critiques, presentations and readings assist students to expand their analytical and creative skills. (Lab fees may apply.) (Pre-requisites: VSAR-1050, VSAR-1060, VSAR-1070, VSAR-1080; Prerequisites for Majors in the Combined Communication, Media and Film and Visual Arts (Film and Media Arts): VSAR-1060, VSAR-1070, VSAR-1080.)

**VSAR-3030. Drawing**
Advanced problems in drawing, emphasizing individual directions, concepts, and various media. (Prerequisite: VSAR-2030.) (May be repeated for credit.) (Lab fees may apply.)

**VSAR-3130. Painting**
Development of the concepts and painting skills encountered in VSAR-2130. Exploration of the creative potential, range, and flexibility of non-traditional techniques, forms and media. (Prerequisites: VSAR-2130.) (May be repeated for credit.) (Lab fees may apply.)

**VSAR-3260. Printmaking**
Continued development of contemporary printmaking practice. Further investigation of process-oriented issue-based image making, with emphasis on student's chosen direction. Students are encouraged to expand their analytical, experimental and creative skills. (May be repeated for credit.) (Prerequisites: one 2000-level printmaking course.) (Lab fees may apply.)

**VSAR-3330. Sculpture**
An in-depth study of concepts and processes as they pertain to contemporary sculpture practice. Issues will be addressed through group discussion and practical application. (Prerequisites: VSAR-2330.) (May be repeated for credit.) (Lab fees may apply.)

**VSAR-3430. Time-Based Art**
This course explores time-based media in more complex and demanding projects than VSAR-2430. Projects may include experimental video, animation, video installation, audio projects, documentary and performance art. This studio course encourages the thoughtful engagement of complex ideas through visual and/or audio means within issues in visual culture and contemporary art practices. (Prerequisite: VSAR-2430 or VSAR-2630 or VSAR-2450) (May be repeated for credit.) (Lab fees may apply.)

**VSAR-3450. Digital Media and Interactivity**
This course introduces students to the basic concepts and tools of interactive multimedia as a creative medium. Students will experiment with interactive structures for creative content development using digital images, sound, text, etc. for disk-based delivery environments. The acquisition of the technical knowledge will be grounded within an exploration of aesthetic and social issues. (May be repeated for credit.) (Prerequisite: any of the following: VSAR-2450, VSAR-2430, VSAR-2630, VSAR-2900, VSAR-3430, VSAR-3470) (Lab fees may apply.)

**VSAR-3460. Documentary Photography**
This course is a concentrated investigation of the historic codification of the photograph as document and the current implications for this form of representation. Issues of photographic objectivity and truth will be examined in relation to the role of documentary photography as a tool of political and social advocacy. Students will produce a body of photographic work, with learning supported by lectures and critiques. (Lab fees may apply.) (Pre-requisites: VSAR-2530 or VSAR-2900)

**VSAR-3470. Photography: Sequence and Context**
This course is an intensive investigation into photographic representation. The course will concentrate on the properties of individual photographs and the meanings created when they are combined into groups, series and sequences. Photographic books, slide shows, magazine layouts, blogs, exhibitions, and installations are explored as means of developing visual fluency and coherent self-expression. Critical readings and class discussions will enlist a wide range of theoretical approaches. Students will create an independent body of work based on course material. (Lab fees may apply.) (Pre-requisites: VSAR-2530 or VSAR-2900)

**VSAR-3480. Photography: Concept and Production**
An applied exploration of current critical issues in photography. Students will explore, discuss and produce photographic work that addresses the current theme of the course. Themes will vary but may include: Decoding the Portrait, the City and the Land, the Vernacular, the Street and the Studio, Space and Place, Representation and Appropriation, and Gender and Landscapes. Students will produce a body of work and learning will be supported by lectures and critiques. (Lab fees may apply.) (Prerequisites: VSAR-2530 or VSAR-2900)

**VSAR-3630. Advanced Sonic Art**
An in-depth study of techniques for creating advanced sound-based art. Selected topics of study may include sound synthesis, electroacoustic music composition, sound installation, multimedia performance, and soundtracks for film and video. (Pre-requisite: VSAR-2630 or MUSC-2630 or permission of the instructor.) (Also offered as MUSC-3630.) (May be repeated for credit.) (Lab fees may apply.))

**VSAR-3650. Independent Studio**
Individual work on specific projects under the guidance of an instructor. (Prerequisite: one 3000-numbered studio course in the subject desired and consent of instructor.) (May be repeated for credit.) (Lab fees may apply.)

**VSAR-3710. Art in Public Spaces**
This studio practice course investigates concepts and processes by which artists work in public spaces. It considers intersections of ideas and disciplines that humanize the built environment while challenging and invigorating public spaces. Students will research, propose, and develop works of public art for civic squares, sculpture parks, back alleys, neighbourhoods, parking spaces, provincial parks, public beaches, lakes, rivers or other areas. Where possible, projects may also be executed in specific public spaces. Through location-driven research processes, students will uncover the uniqueness of space and place by exploring and exploiting each proposed location. This course is not limited to any particular medium, and students may respond in any medium offered within the School of Creative Arts. (Prerequisite: one “VSAR-” course at the 2000-level.)

**VSAR-3800. Visual Art Internship**
Practical work experience in organizations such as art centres, galleries, artists' studios, community organizations, and arts-related professional businesses. (Offered on a Pass/Non-Pass basis.) (Restricted

to B.F.A. Visual Arts Majors and to Visual Art Combined Honours students with an average of 75% (B) or better, and with permission of the Visual Arts Internship Coordinator.) (100 hours total, 80 hours working in the community.) Students are signed-in to the course by the Coordinator, rather than registering on-line. May not be repeated for credit.

**VSAR-3830. Inter-Media Practices - Processes**
A studio/seminar course providing the basis for an interwoven art practice in an interdisciplinary context is developed through a critical approach to materials, issues, and art-making. Required readings/research pertinent to current issues are discussed in relation to studio production. Studio production integrating two or more Visual Arts' disciplines is expected. (Prerequisites: VSAR-2030, two 2000 level studios, and three 200 or 300 studios.)

**VSAR-3840. Inter-Media Practices - Topics**
A practice-oriented seminar focusing on topics central to the interdisciplinary art practice in contemporary social and cultural contexts. Issues within areas such as history, gender, race and technology are considered within the context of varying perspectives. Students' studio production is challenged within a contemporary interdisciplinary environment. The students' individual production will be expected to be situated within the larger art and social context. (Prerequisites: VSAR-2030, two 2000 level studios, and three 2000 or 3000 studios.)

**VSAR-3850. Green Corridor**
A cross-disciplinary course that investigates and proposes various strategies for the creation and realization of public environmentally-aware art projects. Course work contributes to the creation of a City of Windsor/University of Windsor Green Corridor. Projects are generated in conjunction with community-based research and involvement with special interest groups. Students will be involved in the research and development of concepts evolving from discussions and participation in series of lecture/seminars. Areas of investigation during the course will include environmental study and impact, the social and political functions of public art in contemporary culture, the public creative process, the importance of public education in the development of community-based projects, marketing of public art and environmental awareness. (Prerequisites: at least Semester 5 and in good standing, or graduate student.) (May be repeated for credit with permission of instructor.)

**VSAR-3860. Bioart: Contemporary Art and the Life Sciences**
This course is a visual art and science crossover lab intended for students from various disciplines to foster interdisciplinary exploration of the intersections between art and the life sciences through hands-on laboratory protocols, critical readings, theoretical writing, and the production of contemporary artwork. No previous experience in the biological sciences is required. (Prerequisites: One 2000 level studio) (May be repeated for credit.) (Lab fees may apply.) (Students outside of the School of Visual Arts require permission of the instructor to enrol.)

**VSAR-3900. Studies in the Visual Arts**
Special projects, topics or cross-disciplinary undertakings in the Visual Arts, organized periodically. Specific information on course content will be available from Visual Arts (Prerequisites: consent of instructor.) (May be repeated for credit.) (Lab fees may apply.)

**VSAR-4800. Studio Practice l**
The advanced student is given wide range to work in a chosen medium to synthesize accumulated knowledge and experience with individual critique provided by the instructor. (Prerequisites: 14 studio courses which must include VSAR-3830 or VSAR-3840 plus three 3000-level courses in the same or related area.) (double credit weight)

**VSAR-4810. Studio Practice ll**
The advanced student is given wide range to work in a chosen medium to synthesize accumulated knowledge and experience with individual critique provided by the instructor. (Prerequisite: VSAR-4800.) (double credit weight)

**VSAR-4900. Seminar**
Investigation of professional practice and contemporary developments in the arts may include group discussion, visits to galleries, projects, lectures, written assignments. (Restricted to students registered in 4000-level Studio Practice courses in the B.F.A. program only.) (Lab fees may apply.)

**VSAR-4910. Critical Issues**
Development of an understanding of issues which have been addressed by contemporary artists and critics contextualized in history and artistic practices with an emphasis on individual students' concerns. (Restricted to students registered in 4000-level Studio Practice courses or permission of the instructor.) (Lab fees may apply.)

## VISUAL ARTS AND THE BUILT ENVIRONMENT (VABE) COURSES

**VABE-1100. Architectural Design I**
An introduction to the fundamental skills and critical concepts of visual perception and production common to all areas of 2 dimensional image-making. Basic principles of composition and design, light and pigment-based colour theory, as these apply to painting, photo-based processes, and print production. Their use and application will be will be explored within the contemporary art context. Class projects may involve interdisciplinarity between these media. Studio assignments are combined with related critical theory, historical practice and current strategies. The lab is intended to introduce students to design concept of form, space, composition, in two and three dimension, and how they relate to human experiences. Students are introduced to the principles of design and the design process as a foundation for architectural design. (6 lecture hours and 6 laboratory hours per week.) (6.0 credit course) (Credit will not be granted for VSAR-1060 if taken subsequently to VABE-1100.) (Restricted to students in the Visual Arts and the Built Environment program.)

**VABE-1160/ARCH1160. Computer Graphics**
An introduction to computer graphics. This course utilizes Autodesk's AutoCAD and Revit on IBM compatible hardware. The course stresses three dimensional digital modeling as a primary method of communication and design and includes elements of computer visualization techniques. Students acquire hands-on experience through a series of laboratory exercises and individual projects. (Taken at the University of Detroit Mercy.)

**VABE-1190/ARCH1190. Introduction to Architecture I**
An Introduction to Architecture is offered to first year VABE students to create awareness of the profession of architecture. The course looks at the history of the profession; how architecture is practiced; how the profession is changing; current issues with the architectural profession; and ethical concerns facing a practitioner today. The course gives students a broad based back-ground into architecture before they have an opportunity to be engaged in practice. (Taken at the University of Detroit Mercy.) (Open to VABE students only.)

**VABE-1200. Architectural Design II**
Students are introduced to media, techniques, vocabulary, and concepts of drawing, as well as principles directly related to the design of buildings and spatial experience. Students will be exposed to

complex drawing situations with an emphasis on a variety of materials. During the lab there will be several short term, intense projects that focus on architectural design and will include the study of exterior spaces, space programming, materiality, and constructability. (Prerequisites: VSAR-1070, VABE-1100.) (6.0 credit course) (Lab fees may apply.)

**VABE-1290/ARCH1290. Introduction to Architecture II**
This is a continuation of Introduction to Architecture I offered to first year VABE students to create awareness of the profession of architecture. The course looks at the history of the profession; how architecture is practiced; how the profession is changing; current issues with the architectural profession; and ethical concerns facing a practitioner today. The course gives students a broad based back-ground into architecture before they have an opportunity to be engaged in practice. (Taken at the University of Detroit Mercy.) (Open to VABE students only)

**VABE-2110/ARCH1211. Visual Communications II**
This course is a second-year class that is designed to develop the student's abilities in architectural graphic analysis and presentation techniques. This course builds on the experience gained from Architecture Design I and II, by introducing the student to methods of digital modeling, virtual simulation, representation and fabrication. Students also learn techniques of rendering through modeling virtual three-dimensional environments complete with materials and environmental lighting effects. (Taken at University of Detroit Mercy as ARCH 1211. Open to VABE students only).

**VABE-2130. Principles of Structural Behaviour**
An analysis of known structural systems in terms of spatial behavior in non-mathematical terms. The basic approaches to structure, proper scale of use and the effects of various materials, geometry and construction techniques are integrated into the course content. Illustrated lectures covering buildings from ancient to modern are used to demonstrate structural principles.

**VABE-2150/ARCH2150. Construction I**
This course is the first in a two-semester sequence covering building materials, methods of construction, and assemblies. The goals of Construction I are to explore the form and expression of buildings through their construction systems; to develop a basic understanding of materials and methods of construction; and to investigate the inherent relationship between construing an idea and its construction. Topics covered include site work, concrete, masonry, metals, woods and plastics, doors and windows, vertical transportation systems, glass, overall building assemblies, and systems integration. (Taken at University of Detroit Mercy as ARCH 2150. Open to VABE students only).

**VABE-2160/ARCH2160. 3D Computer Graphics**
This course in computer aided design uses primarily Autodesk 3D Studio software. The emphasis is on visualization and design in three dimensions. Students learn how to assemble complex three-dimensional, digital architectural landscapes equipped with real-life attributes of light, building materials, etc. These objects are rendered and animated to facilitate the needs of the design process as well as complex graphic presentations. Additional post-processing and graphic software is introduced. (Taken at the University of Detroit Mercy.)

**VABE-2210/ARCH 2110. Visual Communications III**
This course is the third in sequence of Visual Communications courses, building on the experience gained from Architecture Design I and II, that is designed to develop the student's abilities in architectural graphic analysis and presentation techniques. This course will use Computer Aided Design and Building Information Technologytools to analyze, interpret and illustrate building construction at

different levels of detail. The class will support lessons from the Construction II course and Architecture Design courses.(Taken at University of Detroit Mercy as ARCH 2110. Open to VABE students only).

**VABE-2250/ARCH2250. Construction II**
This course is the second in a two-semester sequence covering building materials, methods of construction, and assemblies. In Construction II principles, materials, and methods of architectural construction are examined as they relate to the exterior enclosure systems of buildings. An analysis of materials and systems, including: damp proofing, waterproofing, curtain walls, windows, glass and glazing, sealants and joint design, moisture and heat control is undertaken. Codes and standards are considered for their effects on the technical aspects of the construction process. The importance of maintaining the integrity of exterior enclosure systems is stressed. (Taken at University of Detroit Mercy as ARCH 2250. Open to VABE students only).

**VABE-2300/ARCH1300. Architectural Design III**
Design III is intended to transfer ideas explored in first year into their architectural applications while introducing students to the design of simple buildings and spaces as a creative integration of multiple systems i.e. concept, site, function, structure, mechanical systems, accessibility, materials and codes. The overall intent is to give students the opportunity to understand and explore in more detail how various systems inform, integrate and coordinate the design of architectural form and space. This term focuses on the issues of the integration of form and structure and the issue of materiality/constructability. (Prerequisites: VABE-1200) (Taken at the University of Detroit Mercy.)

**VABE-2330/ARCH2330. Structures I**
Analysis of structures. This course teaches the mathematical calculation of structures through lectures, and individual problem assignments. It focuses on resolution of forces; reaction; forces in frames and trusses; and forces in frames with beams. Also examined are characteristics of structural materials and structural components: shear and bending movements, flexural and shear stresses, combined stresses, principal stresses, combined bending and axial loads and stresses, deflection, continuity in structures. Light weight wood framing is presented as is wood as a structural material. (Prerequisites: VABE-2130) (Taken at the University of Detroit Mercy.)

**VABE-2400/ARCH1400. Architectural Design IV**
Design IV is a continuation of studies begun in Design III. It is intended to further develop the student's ability to design buildings and building complexes within the context of integrated multiple systems. The issues of focus for this term also include sustainability, environmental systems and the design of a totally integrated project. (Prerequisites: VABE-2300) (Taken at the University of Detroit Mercy.)

**VABE-2430/ARCH2430. Structures II**
This second course in structures focuses on principles of design of simple structures. Primarily studied are the design of beams, columns, trusses, built-up components and foundations in standard structural materials, steel and concrete. Related building construction techniques as well as lateral and seismic loading are also presented. (Prerequisites: VABE-2330) (Taken at the University of Detroit Mercy.)

**VABE-2640/ARCH-2640. Building Structures I**
Building Structures I is a module in a course of study focused on the impact of gravitational forces in architectural projects. It is intended to build upon the theory and physics background established in VABE-2130 Principals of Structural Behaviour to explore elementary structural systems, typically deployed in small-scale architectural works. The course covers gravity loads, load path analysis, and foundations and soil mechanics, in addition to wood, steel, and masonry structural systems. These

systems are explored through presentations, readings and dynamic, hands-on laboratory work. (Taken at University of Detroit Mercy. Open to Visual Arts and the Built Environment students only).

**VABE-2660/ARCH-2660. Building Environment I**
Building Environment I is a module in a course of study focused on the impact of environmental forces in architectural projects. It is intended to build upon the theory and physics background established in VABE-2130 Principals of Structural Behavior to explore the appropriate selection of passive heating, cooling, ventilation and daylighting systems, focused on deployment in small-scale architectural works. The course also introduces plumbing systems. These systems are explored through presentations, readings and dynamic, hands-on laboratory work (Taken at University of Detroit Mercy. Open to Visual Arts and the Built Environment students only).

**VABE-2680/ARCH-2680. Building Construction I**
Building Construction I is a module in a course of study focused on the underlying principles involved in the appropriate selection of building materials and building envelope components in architectural projects. It is intended to build upon the theory and physics background established in VABE-2130 Principals of Structural Behaviour to explore assemblage and material strategies, typically deployed in a small-scale architectural work, including fire protection concepts. These systems are explored through presentations, readings and dynamic, hands-on laboratory work (Taken at University of Detroit Mercy. Open to Visual Arts and the Built Environment students only).

**VABE-2840/ARCH-2840. Building Structures II**
Building Structures II is a module in a course of study focused on the impact of seismic and lateral forces in architectural projects. It is intended to build upon the background established in VABE-2640 Building Structures I to explore more advanced structural systems, typically deployed in mid-rise and high-rise architectural works, including lateral forces. This course will also explore the evaluation, selection and application of an appropriate structural system. These systems are explored through presentations, readings and dynamic, hands-on laboratory work (Taken at University of Detroit Mercy. Open to Visual Arts and the Built Environment students only).

**VABE-2860/ARCH-2860. Building Environment II**
Building Environment II is a module in a course of study focused on the impact of environmental forces in architectural projects. It is intended to build upon the background established in VABE-2660 Building Environment I to explore the appropriate selection of active environmental control systems, indoor air quality, moisture, vapor and energy transfer, communication and security systems, and renewable energy systems focused on deployment in mid-rise architectural works. These systems are explored through presentations, readings and dynamic, hands-on laboratory work (Taken at University of Detroit Mercy. Open to Visual Arts and the Built Environment students only).

**VABE-2880/ARCH-2880. Building Construction II**
Building Construction II is a module in a course of study focused on the appropriate selection of the components of assemblage and materiality in architectural projects. It is intended to build upon the background from the VABE-2680 Building Construction I to explore envelope assemblage and material strategies for performance, aesthetics and durability, 9-09-09 vertical transportation, life safety and building codes, plumbing codes and restroom design, and accessibility and universal design, typically deployed in a mid-rise architectural work. The systems are considered through the lenses of environmental impact and reuse. These systems are explored through presentations, readings and dynamic, hands-on laboratory work. (Taken at University of Detroit Mercy. Open to Visual Arts and the Built Environment students only).

**VABE-3000/ARCH3000. Co-op Training Presentation**
This course prepares students for the co-op experience. Topics covered include the Career Development Model and the Cooperative Education Model including job search & job readiness, learning objectives, resume writing, and practice interviews. This course offers students the opportunity to learn about the profession of architecture and its practice. Students must also collaborate on a group exhibition in the School of Creative Arts Gallery and develop and deliver a hard copy individual portfolio documenting their pedagogical art and design work. (Open to 3rd year VABE students only) (Course delivered at the University of Detroit Mercy with the full participation of a concluding exhibition at the University of Windsor.)

**VABE-3100/ARCH2100. Architectural Design 5**
This is the first of a series of studio courses that combines students from the third and fourth years into a common studio to explore a particular project type and theme. These projects change from term to term. Project types include: housing, civic buildings, urban design, retail, office, health care and manufacturing buildings, etc. Themes include: community design, architectural competitions, historic preservation, electronic design, sustainable design, representation, design-build, and architectural theory. It is the intent of these studios to broaden and deepen the student's design skills and experiences while preparing them for the Master's Studios. (Prerequisites: VABE-2400) (Taken at the University of Detroit Mercy.)

**VABE-3200/ARCH2200. Architectural Design 6**
Design VI is a continuation of studies begun in Design V and is the second part of the combined third and fourth year common senior studio series. The projects change from term to term and students explore different project types and themes. Project types include: housing, civic buildings, urban design, retail, office, health care and manufacturing buildings, etc. Themes include: community design, architectural competitions, historic preservation, electronic design, sustainable design, representation, design-build, and architectural theory. It is the intent of these studios to broaden and deepen the student's design skills and experiences while preparing them for the Master's Studios. (Prerequisites: VABE-3100) (Taken at the University of Detroit Mercy.)

**VABE-4600. Space in Acoustics and Light**
This course focuses on the spatial impact and design of acoustics, lighting, and relevant regulatory building code standards in Canada (NBC and OBC). The significance of lighting and acoustical phenomena on human experience and impact of all three systems on building performance are discussed. The course also addresses issues of life safety regulations, universal design, and fire protection. These themes are considered through the lenses of environmental impact, re-use, and human experience. Exploration of the topics is through presentations, readings, case studies, hands-on laboratory work, and on-site examples.

# SOCIOLOGY AND CRIMINOLOGY

## PROGRAM INFORMATION

**ANTHROPOLOGY**
Anthropology is the comparative study of cultures, societies and human diversity across space and time. Uniquely in academia, anthropology integrates approaches across the social and natural sciences and humanities to understand the human condition. Anthropologists emphasize human variation and the situated and subjective ways humans create meaning, value and engage in social within wider technological, economic and political forces. A background in Anthropology is excellent preparation for careers in public service, non-government organizations, international agencies, the education sector, and museums, in Canada – one of the most culturally diverse countries in the world – and beyond. Anthropology prepares you for the world.

**CRIMINOLOGY**
Criminology examines criminal activity, legal issues, and the criminal justice system, focusing on the social causes and consequences of crime, illegalities, harms, and regulation. Topics covered typically include: victimology, penology, the environment, white collar crime, policing, security, surveillance, drugs, media and culture, deviance, youth, gender, law, and policy. It provides rigorous training in analytical and communication skills, social research techniques and design, research ethics, and theory. The program is comprehensive, research driven, and attentive to global and local issues. It fosters critical thinking, and experiential learning.

**FAMILY AND SOCIAL RELATIONS PROGRAMS**
This interdisciplinary program, unique in Canada, developed by leading world-class researchers, provides practical and theoretical insights into changes affecting families and social responses to those changes. Students explore child studies, sexuality, and sexual health (domestic and international), family history and change, marriage dynamics, women's issues, changing gender roles, and aging. The program combines courses from a variety of disciplines including sociology, psychology, social work, history, and women's studies. Family and Social Relations prepares students for careers in child and youth human services, counselling/rehabilitation, community advocacy, case management, and a variety of other related career paths.

**Teaching Family and Social Relations**
Students intending to teach Family and Social Relations at the Intermediate -Senior level in the school system are advised to take the following courses as a part of the Family and Social Relations program: ECON-1100, PSYC-2230, PSYC-2240, PSYC-2400, PSYC-3270, SACR-2040, SACR-2050, SACR-3290, SACR-4510, SACR-2140.

**SOCIOLOGY**
Sociology is the study of societies, social life, and social change. It investigates social, cultural and demographic issues in Canada and around the world. Topics covered include: sexuality, popular culture, inequality, migration, race, ethnicity, class, gender, values, health, family dynamics, law, social movements, institutions, and community. A degree in sociology provides rigorous training in

fundamental research, analytical, and communication skills, research ethics, social research techniques and design, and theory. Program Strengths: comprehensive; fosters critical thinking; research-driven; attentive to global, national, and local dynamics and issues.

# PROGRAMS

## Honours Criminology

**Degree Requirements**

Total courses: forty.

(a) SACR-1100 (recommended) or SACR-1000, SACR-2910, SACR-2900, SACR-2600, SACR-2620, SACR-3080, SACR-3900;
(b) In order to proceed in the Criminology program, the following are required: a minimum final grade of 70% in both SACR-2600 and SACR-2620. Those who do not meet these requirements will automatically be enrolled in the Sociology BA (Hons.) program, given that the degree requirements for the Sociology and Criminology programs are consistent through the second year of the programs. Students are thereafter able to change their major from Sociology to a different program if desired.
(c) two of SACR-2200, SACR-2040,SACR-2050, SACR-2130, SACR-2140, SACR-2150, SACR-2270, SACR-2280, SACR-2400, SACR-2100, SACR-3010, SACR-3050, SACR-3230, SACR-3270, SACR-3290, SACR-3330, SACR-3150, SACR-3380, SACR-3390, SACR-3400, SACR-3410, SACR-3500, SACR-3510, SACR-3520, SACR-3530, SACR-3540
(d) SACR-3560 or SACR-3730 or SACR-3910
(e) three of SACR-3610, SACR-3620, SACR-3630, SACR-3650, SACR-3670, SACR-3680, SACR-3700, SACR-3500, SACR-3740, SACR-3820, and SACR-3710;
(f) two 4000-level courses, including one of SACR-4210, SACR-4510, SACR-4910, SACR-4600, SACR-4610, SACR-4620, SACR-4640, SACR-4650, SACR-4670
(g) two courses from Arts;(h) two courses from Languages or Science;
(i) two courses from any area of study, excluding Social Sciences.
(j) GART-1500, GART-1510;
(k) SOSC-2500;
(l) seven courses from Arts, Languages, Social Sciences, including Sociology
(m) nine courses from any area of study, excluding Sociology.

Courses used to calculate the major average are: courses listed under requirements (a) to (e), and any courses taken in the major area(s) of study.

**Recommended Courses:**
Anthropology: SACR-3230
History: HIST-1240, HIST-2180, HIST-2440, HIST-2470, HIST-2500, HIST-2510, HIST-2470
Labour Studies: WORK-1000, WORK-2000
Philosophy: PHIL-2210, PHIL-1290, PHIL-2260
Political Science: POLS-1000, POLS-1300, POLS-1600, POLS-2110, POLS-2130, POLS-2140, POLS-2210, POLS-2670, POLS-2680, POLS-3090, POLS-3140, POLS-3210
Psychology: PSYC-1150, PSYC-1160, PSYC-2200, PSYC-2230, PSYC-2240, PSYC-2360, PSYC-3330, PSYC-3220, PSYC-3300, PSYC-2280
Women Studies: WGST-1000, WGST-2200, WGST-2700, WGST-3100, WGST-3300

Notes:
1) Students interested in government service should include French language courses in their studies; other non-English language courses also are recommended.

## Combined Honours Criminology Programs

To combine Criminology with Sociology, see Combined Honours in Sociology and Criminology below.

An Honours Criminology Degree can be combined with a specialization in another subject (e.g., psychology, political science, etc.). In order to proceed in the Criminology program, the following are required: a minimum final grade of 70% in both SACR-2600 and SACR-2620. Note: the minimum course grades identified only apply to the Criminology component of Combined Criminology BA programs.

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a) Criminology: fifteen courses including SACR-1100 (strongly recommended) or SACR-1000, SACR-2910, SACR-2900, SACR-2600, SACR-2620, SACR-3080, SACR-3900; SACR-3730 or SACR-3910 or SACR-3560; three of SACR-3610, SACR-3620, SACR-3630, SACR-3650, SACR-3670, SACR-3680, SACR-3700, SACR-3500, SACR-3740, SACR-3820, and SACR-3710; two 4000-level courses, including one of SACR-4210, SACR-4500, SACR-4910, SACR-4600, SACR-4610, SACR-4620,SACR-4640, SACR-4650, SACR-4670; and two of any other Sociology (SACR-) courses.
(b) In order to proceed in the Criminology program, the following are required: a minimum final grade of 70% in both SACR-2600 and SACR-2620. Those who do not meet these requirements will automatically be enrolled in the Sociology BA (Hons.) program, given that the degree requirements for the Sociology and Criminology programs are consistent through the second year of the programs. Students are thereafter able to change their major from Sociology to a different program if desired.
(c) Course Requirements - Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(d) GART-1500, GART-1510;
(e) SOSC-2500;
(f) two courses from Arts;
(g) two courses from Languages or Science;(h) two courses from any area of study, excluding Social Sciences. (i) additional courses from any area of study to a total of forty courses.

Courses used to calculate the major average are: courses listed under requirements (a) to (b), and any courses taken in the major area(s) of study.

Notes:
1) Students interested in government service should include French language courses among their options; other non-English language courses also are recommended.

2) Students are encouraged to closely review prerequisites for other courses to ensure appropriate planning of their program of study.

## Minor in Forensic and Cultural Anthropology

Required: SACR-2130; SACR-2150; SACR-3230, SACR--3380; SACR-4150; and one of SACR-2140, SACR-3150, SACR-3400, SACR-3540.

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Criminology

Major Concentration: SACR-1100; two of SACR-2130, SACR-2270, SACR-2400, SACR-2100, SACR-3270, SACR-3330, SACR-3390, SACR-3510, SACR-3520, SACR-3530, SACR-3540; SACR-2910; SACR-2900; SACR-2600; SACR-2620; SACR-3900; SACR-3730 or SACR-3910; three of SACR-3610, SACR-3620, SACR-3630, SACR-3650, SACR-3670, SACR-3680, SACR-3700, SACR-3500, SACR-3740, SACR-3820, and SACR-3710; two 4000-level courses, including one of SACR-4210, SACR-4510, SACR-4910, SACR-4600, SACR-4610, SACR-4640, SACR-4650, SACR-4670.

In order to proceed in the Criminology program, the following are required: a minimum final grade of 70% in both SACR-2600 and SACR-2620. Those who do not meet these requirements will automatically be enrolled in the Sociology BA (Hons.) program, given that the degree requirements for the Sociology and Criminology programs are consistent through the second year of the programs. Students are thereafter able to change their major from Sociology to a different program if desired.

Minor Concentration: No Minor Concentration offered.

## General Family and Social Relations

**Degree Requirements**

Total courses: thirty.

(a) SACR-1100, SACR-2040; SACR-2050; SACR-2900; one of SACR-3900, SACR-3900, or WGST-3060*;
(b) one of HIST-2500, HIST-2510, PSYC-2400*,SACR-3010, SACR-2140, WGST-1000.
(c) five further courses, from among: SACR-3290, SACR-4090, SACR-4610, SACR-2100, SACR-3050, SACR-3510, SACR-4510, HIST-4630, SACR-3520, SACR-3530. SACR-3540, SACR-4080, WGST-2200, WGST-3100, WGST-3700, PSYC-2230, PSYC-2240, PSYC-3270, SWRK-1170, SWRK-1180.
(d) two courses from Arts;
(e) two courses from Languages or Science;
(f) two courses from any area of study, excluding Social Sciences.
(g) GART-1500, GART-1510;
(h)SOSC-2500 (or equivalent);
(i) PSYC-1150 and PSYC-1160 if required as a prerequisite for courses chosen above: otherwise, two Social Science courses;
(j) WGST-1000 if required as a prerequisite for courses chosen above; otherwise, a Social Science course;

(k) additional courses from any area of study, including any course listed above not used to fulfill other requirements, to a total of thirty.

Courses used to calculate the major average are: courses listed under requirements (a) to (c), and any courses taken in the major area(s) of study.

NOTE: *48-112 is a prerequisite for SACR-2140. PSYC-1150 and PSYC-1160 are prerequisites for further courses in Psychology. In History, HIST-2490, SACR-2100 must be taken before HIST-4630. WGST-1000 is a prerequisite for further courses in Women's and Gender Studies.

## Honours Family and Social Relations

**Degree Requirements**

Total courses: forty.

(a) SACR-1100, SACR-2040, SACR-2050, SACR-2900 (or equivalent), SACR-3080, one of SACR-3900, SACR-4160, WGST-3060;
(b) one of PSYC-2400, SACR-3010, HIST-2490, HIST-2500, HIST-2510, SACR-2140, or WGST-1000;
(c) three courses in the family, in sexuality or in gender:
Family Courses: SACR-3290, SACR-4090**, SACR-4610**, WGST-3700;
Sexuality Courses: SACR-3050, SACR-3510, SACR-4510, HIST-3630, WGST-3100;
Gender Courses three from among those not chosen under (b) above, or from the following: SACR-3520, SACR-3530, SACR-3540, SACR-4080**, WGST-2200, WGST-3100, WGST-3700. If not selected under (b), WGST-1000 must be chosen here.
(d) six further courses selected from those not chosen above, or from the following: PSYC-2230, PSYC-2240, PSYC-3270, SWRK-1170, SWRK-1180, SACR-4960.**
(e) two courses from Arts;
(f) two courses from Languages or Science;
(g) two courses from any area of study, excluding Social Sciences.
(h) GART-1500, GART-1510;
(i) SOSC-2500 (or equivalent);
(j) PSYC-1150 and PSYC-1160, if required as a prerequisite for courses chosen above: otherwise, two Social Science courses;
(k) WGST-1000, if required as a prerequisite for courses chosen above, but not used as part of a concentration in gender; otherwise, a Social Science course;
(l) additional courses from any area of study, including any course listed above not used to fulfil requirements (h) to a total of forty.

Courses used to calculate the major average are: courses listed under requirements (a) to (d), and any courses taken in the major area(s) of study.

Note: * 48-112 is a prerequisite for SACR-2140, PSYC-1150 and PSYC-1160 are prerequisites for further courses in Psychology.
In History, HIST-2490, SACR-2100 must be taken before HIST-4630. WGST-1000 is a prerequisite for further courses in Women's and Gender Studies.

** Highly recommended for those considering graduate work.

Family and Social Relations Honours students interested in graduate studies in Sociology should include the following courses in their program: SACR-2910, SACR-3910, plus one of SACR-4030, SACR-4050, SACR-4080 or SACR-4150.

## Combined Honours Family and Social Relations

Not available for a Combined Honours degree with Sociology.

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a) Family and Social Relations: thirteen courses, consisting of:
- (i) SACR-1100, SACR-2040, SACR-2050, SACR-2900 (or equivalent), one of SACR-3900, SACR-3900, SACR-4160, or WGST-3060;*
- (ii) one of SACR-2140*, PSYC-2400*, SACR-3010, HIST-2490, HIST-2500, HIST-2510, WGST-1000***;
- (iii) three courses from one of the following areas:
  Family: SACR-3290, SACR-4090**, SACR-4610**, WGST-3700*;
  Sexuality: SACR-2100, SACR-3050,SACR-3510, SACR-4510**, WGST-3100*;
  Gender: SACR-3520, SACR-3530, SACR-3540, SACR-4080**, WGST-2200*, WGST-3100*, WGST-3700*;
- (iv) four courses from those not selected aboce, or from the following: PSYC-2230*, PSYC-2240*, PSYC-3270*, SWRK-1170, SWRK-1180, SACR-4960**

(b) Course Requirements - Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) GART-1500, GART-1510;
(d) SOSC-2500 (or equivalent)
(e) two courses from Arts;
(f) two courses from Languages or Science;
(g) two courses from any area of study, excluding Social Sciences.
(h) additional courses from any area of study to a total of forty.

Courses used to calculate the major average are: courses listed under requirements (a) to (b), and any courses taken in the major area(s) of study.

* 48-112 is a prerequisite for SACR-2140, PSYC-1150 and PSYC-1160 are prerequisites for further courses in Psychology.
In History, HIST-2490, SACR-2100 must be taken before HIST-4630. WGST-1000 is a prerequisite for further courses in Women's and Gender Studies.
** Highly recommended for those considering graduate work.
***Students who plan to take additional Women's and Gender Studies courses must take this course.

Note: Family and Social Relations Honours students interested in graduate studies in Sociology should include the following courses in their program: SACR-2910, SACR-3910, plus one of SACR-4030, SACR-4050, SACR-4080 or SACR-4150.

## Minor in Family and Social Relations

Six of: SACR-2040, SACR-2050, SACR-3050, SACR-3010, SACR-3290, SACR-3510, SACR-4090, SACR-4290, and SACR-4510.

## General Sociology

**Degree Requirements**

Total courses: thirty.

(a) SACR-1100 (recommended) or SACR-1000, SACR-2200, SACR-2900, SACR-2910, SACR-3900, SACR-3910 or SACR-3560.
(b) three Sociology (SACR-) courses at the 3000 or 4000 level
(c) one additional Sociology (SACR-)course;
(d ) two courses from Arts;
(e) two courses from Languages or Science;
(f) two courses from any area of study, excluding Social Sciences.
(g) GART-1500, GART-1510;
(h) six courses from any area of study, including Sociology (SACR-);
(i) six courses from any area of study, excluding Sociology (SACR-).

Courses used to calculate the major average are: courses listed under requirements (a) to (c), and any courses taken in the major area(s) of study.

## Honours Sociology

**Degree Requirements**

Total courses: forty.

(a) SACR-1100 (recommended) or SACR-1000 SACR-2200, SACR-2900, SACR-2910, SACR-3080, SACR-3900, and SACR-3910 or SACR-3560;
(b) four Sociology (SACR-) courses at the 3000 level (excluding SACR- Criminology courses listed under*)
(c) two Sociology (SACR*) courses at the 4000 level (excluding SACR- Criminology courses listed under*)
(d) two additional Sociology (SACR-) courses (excluding SACR- Criminology courses listed under*)
(e) two courses from Arts;
(f) two courses from Languages or Science;
(g) two courses from any area of study, excluding Social Sciences.
(h) GART-1500, GART-1510;
(i) SOSC-2500;
(j) seven courses from Arts, Languages, or Social Sciences, including Sociology (SACR-XXXX);
(k) nine courses from any area of study, excluding Sociology (SACR-XXXX).

Courses used to calculate the major average are: courses listed under requirements (a) to (d), and any courses taken in the major area(s) of study.

* SACR- Criminology courses: SACR-2600, SACR-2620, SACR-3620, SACR-3630, SACR-3650, SACR-3670, SACR-3680, SACR-3700, SACR-3710, SACR-3730, SACR-3740, SACR-4600, SACR-4610, SACR-4640, SACR-4650 ,SACR-4670 and SACR-4910.

## Combined Honours Sociology Programs

To combine Sociology with Criminology, see Combined Honours in Sociology and Criminology below.

**Program Regulation**
Students in combined programs must complete all courses used to calculate the major average for both subject areas, and GART-1500 and GART-1510. They must also complete the degree requirements, in the order presented to a total of forty courses. Example: If the total course requirements add up to 43 once the requirements for the second subject area are included, the degree requirements are to be completed in the order presented, until the student reaches a total of 40 courses.

**Degree Requirements**

Total courses: forty.

(a) SACR-1100 (strongly recommended) or SACR-1000, SACR-2200, SACR-2900, SACR-2910, SACR-3080, SACR-3900, and SACR-3910 or SACR-3560;
(b) four Sociology (SACR-) courses at the 3000 level (excluding SACR- Criminology courses listed under*);
(c) two Sociology (SACR-) courses at the 4000 level (excluding SACR- Criminology courses listed under*);
(d) two additional Sociology (SACR-) courses (excluding SACR- Criminology courses listed under*)

*SACR- Criminology courses: SACR-2600, SACR-2620, SACR-3620, SACR-3630, SACR-3650, SACR-3670, SACR-3680, SACR-3700, SACR-3710, SACR-3730, SACR-3740, SACR-4600, SACR-4610, SACR-4640, SACR-4650, SACR-4670, and SACR-4910

Course Requirements - Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(e) GART-1500, GART-1510;
(f) SOSC-2500 (or equivalent);
(g) two courses from Arts;
(h) two courses from Languages or Science;
(i) two courses from any area of study, excluding Social Sciences.
(j) additional courses from any area of study to a total of forty courses.

Courses used to calculate the major average are: courses listed under requirement (a) and (b), and any courses taken in the major area(s) of study..

## Combined Honours in Sociology and Criminology

**Degree Requirements**

Total courses: forty.

(a) SACR-1100 (strongly recommended) or SACR-1000, SACR-2200, SACR-2600, SACR-2620, SACR-2900, SACR-2910, and SACR-3080 or SACR-3900*
(b) In order to proceed in the Criminology program, the following are required: a minimum final grade of 70% in both SACR-2600 and SACR-2620. Those who do not meet these requirements will automatically be enrolled in the Sociology BA (Hons.) program, given that the degree requirements for the Sociology and Criminology programs are consistent through the second year of the programs. Students are thereafter able to change their major from Sociology to a different program if desired.
(c) SACR-3560 or SACR-3730 or SACR-3910
(d) four of SACR-2040, SACR-2050, SACR-2130, SACR-2140, SACR-2150, SACR-2270, SACR-2280, SACR-2400, SACR-2100, SACR-3010, SACR-3050, SACR-3230, SACR-3270, SACR-3290, SACR-3330, SACR-3150, SACR-3380, SACR-3390, SACR-3400, SACR-3410, SACR-3500, SACR-3510, SACR-3520, SACR-3530, SACR-3540
(e) one of SACR-4030, SACR-4050, SACR-4080, SACR-4150, SACR-4160, SACR-4220, SACR-4250, SACR-4290, and SACR-4510
(f) four of SACR-3230, SACR-3610, SACR-3620, SACR-3630; SACR-3650, SACR-3670, SACR-3680, SACR-3700, SACR-3710, SACR-3740, and SACR-3820
(g) one of SACR-4210, SACR-4600, SACR-4610, SACR-4620, SACR-4640, SACR-4650, SACR-4670, SACR-4910
(h) two courses from Arts;
(i) two courses from Languages or Science;
(j) two courses from any area of study, excluding Social Sciences.
(k) GART-1500, GART-1510;
(l) SOSC-2500;
(m) seven courses from Arts, Languages, or Social Sciences, including Sociology (SACR-);
(n) 6 courses from any area of study, excluding Sociology and Criminology (SACR-) courses until the student reaches a total of 40 courses.

Courses used to calculate the major average are: courses listed under requirement (a) to (g), and any courses taken in the major area(s) of study..

*Students considering graduate schools that require training in both qualitative and statistical methods or careers in data analysis are advised to take both SACR-3080 and SACR-3900.

## Minor in Sociology

Required: six Sociology courses, including SACR-1100 or SACR-1000 and five courses at the 2000 level or above.

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Sociology

Major Concentration SACR-1100; SACR-2910; SOSC-2500; SACR-2900; SACR-3910; SACR-3900; three 3000-level or above courses; two 4000-level courses.

Minor Concentration: SACR-1100; plus two additional 2000-level course; three courses at the 3000-level or above.

Notes:
1. Students are encouraged to closely review prerequisites for other Sociology courses to ensure appropriate planning of their program of study.
2. Students interested in taking Criminology courses in years three and four will need to have the criminology prerequisites SACR-2600 and SACR-2620.

## Minor in Studies of Sexuality

Required: six of SACR-2050, WGST-2500, PSYC-2400, SACR-4510, SACR-3510, HIST-4630 (or WGST-4630).

## Minor in Anthropology

Required: six courses, including SACR-1100 or SACR-1000; SACR-2200; SACR-2130 or SACR-2150; and three of SACR-3230, SACR-3150, SACR-3380, SACR-3390, SACR-3560 or SACR-3910, SACR-4120, SACR-4150.

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Anthropology

Major Concentration: 48-111; 48-112; four 2000-level courses; SACR-3560; three 3000-level courses; two other 4000-level courses.

Minor Concentration: 48-111; 48-112; one 2000-level course; and three other Anthropology courses at the 3rd year or above.

# SOCIOLOGY AND CRIMINOLOGY COURSES

Not all courses listed will necessarily be offered each year. All courses are three hours a week unless otherwise indicated.

**SACR-1000. Understanding Social Life**
Understanding society through the exploration of contemporary social issues. (SACR-1000 is intended as a course for students who are not majors or minoring in Sociology, Criminology, Anthropology, and Family and Social Relations programs.) (Students who complete SACR-1000 may not subsequently enroll in SACR-1100 for credit.)

**SACR-1100. Foundations of Social Life**
This course will introduce students to the key concepts, theories, and methods appropriate to Sociology, Anthropology, and Criminology. Focus will be on application of issues important to studying social life using multiple perspectives while exercising the sociological imagination. Topics may include discussion of culture, gender, social stratification, race and ethnicity, family, and crime and deviance. (Open only to Program Majors and Minors in the Department of Sociology and Criminology and students enrolled in BES and International Relations and Development Studies). (Students who complete SACR-1100 may not subsequently enroll in SACR-1000 for credit).

**SACR-1110. Introduction to Family and Social Relations**

This course introduces students to the field of family and social relations. It includes introduction to family processes, the legal and social contexts of family life, and definitional issues related to family, childhood, and an ageing population.

**SACR-2040. Sociology of Families**
Sociological perspectives on cross-cultural variations and changes in family forms. Topics may include discussion of marriage, kinship, family structure and organization of intimate relationships. (Prerequisites: third semester standing.)

**SACR-2050. Sociology of Sexualities**
An analysis of sexual differentiation, sex role acquisition, sexual attitudes, sexual behaviour, and the sex structure of Canadian society. (Prerequisites: third semester standing.)

**SACR-2100. Gender, Sexuality and Social Justice**
This course examines the personal and cultural meanings of women's sexual identities in Canada today. Students consider how these identities are created and experienced in conjunction with other identities such as race/ethnicity, social class, and (dis)ability and how women challenge the personal, social, political, and economic inequities that continue to be based on these identities. Students are encouraged to analyze how their beliefs and behaviours are shaped by heterosexual privilege.(Also offered as Women's and Gender Studies WGST-2100.) (Prerequisites: WGST-1000)

**SACR-2130. Perspectives on Culture**
An examination of the emergence, development, meaning, and idea of culture. The different ways the concept is used in applied anthropology and sociology, ethnographic research, and popular discourse are discussed. (Prerequisites: third semester standing.)

**SACR-2140. Gender, Culture, and Power**
A feminist exploration of how sex/gender system intersects with other organizing categories to frame masculinity and femininity and people's roles and status in Canada and globally. It will examine how gender works in areas such as: popular culture, family, marriage, education, work, crime, migration, globalization or politics.(Prerequisites: third semester standing.)

**SACR-2150. Principles of Physical Anthropology**
A biocultural perspective of human genetic and phenotypic variation in an evolutionary context including but not limited to: comparisons to other primates; identifying sources and nature of variation in living humans and critique of race; investigations of illness in the past and present; and the study of extinct species.

**SACR-2160. Education and Society**
This course employs sociological perspectives on education as central to social reproduction (in the transmission of knowledge, skills and values), as well as its place within broader social struggles and the creation and maintenance of social inequalities. Central theories are reviewed in light of empirical studies. Topics may include: schools as agents of socialization, stratification in education, social mobility, schooling and the labour market, cross-cultural educational practices, alternative forms of schooling, peer group influence, higher education, teacher-student relations, apprenticeships, arts-training, and the challenges associated with school violence. (Prerequisites: third semester standing.)

**SACR-2170. Religion and Society**
This course investigates religion as a social institution, examining beliefs, symbols, relations and practices. Central theories and methods are reviewed in light of historical and cross-cultural variations.

Interactions with culture, education, family, community, the economy, and politics are considered. Topics may include: the sacred and the profane, secularization, myth, totemism, cults, fundamentalisms, integration, exclusion, violence, new religions and/or new age movements. (Prerequisites: third semester standing.)

**SACR-2200. Social Dilemmas: Social Science Perspectives**
This course will examine major sociological issues facing countries today, such as economic inequality, political polarization, racism and racialization, immigration, human rights, education, media, globalization, incarceration, precarious work, gender and family, and climate change. It will explore how social science research measures and tracks changes in these areas. It will examine, for example, how different ideologies, ethical frameworks, and political positions on these issues address these issues, and how public policies, popular media, and politicians use social science research. (Prerequisite: second-semester standing).

**SACR-2220. Morals, Markets, and Myths**
An introduction to economic sociology, anthropology, and criminology; this course examines how markets and forms of exchange are embedded in social institutions, are regulated by morals and suffused with moral tales (concerning debts, gifts, and taxes for instance), and depend on specialized knowledge and technology. Topics covered may include: consumerism, debt, the financialization of everyday life, market formation and regulation, corporations, capital accumulation regimes, the critical consideration of assumptions in economic research and social policy, struggles for tax justice, workers' organizations, the gendered division of social labour, digital commerce, charity, black markets, and the impacts of economic crises on societies. (Prerequisite: Third semester standing or above.)

**SACR-2270. Globalization, Development and Social Change**
This course examines such issues as the impact of colonialism on global poverty and trade policies, global restructuring, neoliberal policies, global governance, poverty alleviation efforts, cultural resistance, gendered patterns of development, population displacements and popular responses to globalization. (Prerequisites: third semester standing.)

**SACR-2280. Class, Wealth and Power in Canada**
The study of structured social inequality. The existence of class and power structures and their effects on the lives of Canadians. The relation of different forms of inequality based on class, ethnicity, and gender. The various strategies people employ to respond to inequality. (Prerequisites: third semester standing.)

**SACR-2400. Introduction to Race and Ethnicity**
An introduction to race and ethnic relations, with global and Canadian perspectives, which may draw on both sociological and anthropological literature. Topics may include Canadian cultural, indigenous, ethnic and racial identities; multiculturalism; im/migration and integration; separatist movements; pursuit of collective rights; transnationalism and diaspora. (Prerequisites: third semester standing.)

**SACR-2600. Introduction to Criminology**
Theories and research in crime causation, the nature and extent of crime, and policy responses. (Prerequisites: SACR-1000 or SACR-1100)

**SACR-2620. Introduction to Criminal Justice**
This course will examine the creation and administration of law and justice. Topics may include: legal systems, legal and justice professionals, civil and criminal law, courts and sanctions. Focus of the course will vary by instructor. (Prerequisites: SACR-1000 or SACR-1100)

**SACR-2900. Researching Social Life**
Introduction to social research with focus on guiding students through the research process. This includes: constructing a research problem; formulating research questions; conducting a literature review; evaluating journal articles; understanding research ethics; and becoming familiar with quantitative and qualitative research methods. At the end of the course, it is expected that students will obtain a Research Ethics Certificate (TCPS2). (Prerequisites: SACR-1100 (strongly recommended) or SACR-1000; students must be in semester 3 of their program to register for this course).

**SACR-2910. Theorizing Social Life**
This course introduces students to theoretical work by focusing on classical social theorists such as Marx, Weber, and Durkheim and showing how classical approaches inform contemporary social analysis. Students learn how to interpret and persuasively appropriate theory, think conceptually, reflect on the basic assumptions of social analysis, and assess explanations. Topics covered typically include approaches to social order and change, modernity, ways of conceptualizing society and social life, methodology, institutional dynamics, class, inequality, and culture (Prerequisites: SACR-1100 (strongly recommended) or SACR-1000; students must be in Semester 3 of their program to register for this course).

**SACR-3010. Sociology of Childhood**
This course explores the experience of childhood as a moment within the human life cycle, yet one subject to great variation according to the family and social context. Students will become familiar with ongoing debates about the nature of children and childhood, the concept of socialization, the role and place of children in family, social, and economic life, as well as children's own agency in shaping their lived experience. (Prerequisites: SACR-2040 and semester 5 or higher standing.)

**SACR-3050. Sexuality and Health**
Contemporary topics in sexuality and health examined from Canadian and international perspectives, such as HIV and AIDS, sexual health movements, and the social construction of sexual dysfunction. (Prerequisite: SACR-2050 and semester 5 or higher standing)

**SACR-3080. Intermediate Statistics**
Basic inferential statistics, including estimation, confidence intervals, and hypothesis testing. Also included is the application of computer packages to selected statistical problems. (Prerequisite: SOSC-2500, SACR-2900 (or equivalent), and semester 5 or higher standing.) (Credit can only be obtained for one of PSYC-3130 or SACR-3080.) (2 lecture hours, 1 laboratory hour a week.)

**SACR-3150. On Death and Dying**
A critical exploration of topics related to death and dying. Topics covered may include: historical and cross-cultural perspectives on dying and death; memorial and commemoration; palliative care and medical aid in dying; death and popular culture; genocide and mass deaths; pandemics; the construction and medicalization of death; and death planning. Course delivery may vary according to instructor preference. (Pre-requisites: Semester 5 or higher standing or permission of instructor). (Cross-listed with SOSC-3150)

**SACR-3170. Humanitarianism and Counterinsurgency Warfare**
Humanitarianism and counterinsurgency warfare are two sides of the same coin in the post-Cold War global security paradigm. This course will examine how each became pillars of that paradigm: humanitarianism as the ostensible commitment to save the victims of natural and political disasters worldwide; and counterinsurgency warfare as the strategy both to eliminate criminal and terrorist networks that challenge the legitimacy of the inter
-state system and to "win the hearts and minds" of local populations whom they threaten. In that context, the course will investigate responses to armed insurrections as well as natural disasters, epidemics, and acute famines that, today, combine humanitarian with militarized responses. The course will also consider how humanitarianism and counterinsurgency warfare draw heavily on academic expertise (e.g. anthropology, sociology, criminology, geography, history, political science, religious studies, and psychology), thus inviting the controversial issue of the relationship between the scholar, the university, and the security apparatus. (Prerequisite: semester 5 standing).

**SACR-3230. Forensic Anthropology**
An overview of anthropological methods as applied to death investigations. Topics may include detection, recovery, and examination of human remains; problems of identification and individualization; and the reconstruction of events that occurred around the time of death. (Prerequisite or Corequisite: SACR-2150, and semester 3 or higher standing, or consent of instructor.)

**SACR-3270. Social Movements**
An examination of theories and case studies of world revolutions, class struggles, and various social movements, such as the feminist, gay and lesbian, labour, native, ecological, and other movements. (Also offered as WORK-3270.) (Prerequisites: SACR-1100, SACR-1000, or WORK-1000 and semester 5 or higher standing.) (Credit can only be obtained for either SACR-3270 or WORK-3270.)

**SACR-3290. Contemporary Families**
Examines the empirical sociological literature on families and their formation in the context of postwar change with emphasis on the Canadian experience, including key demographic trends such as the rise of cohabitation and two-earner families, and changes in divorce rates. (Prerequisites: SACR-2040 or SACR-3010 and semester 5 or higher standing

**SACR-3330. Crimes of the State: Genocide, War Crimes and Ethnic Cleansing**
This course examines complex issues related to genocide, war crimes, ethnic cleansing and other related crimes of the state in comparative contexts and considers the possibilities and constraints of international law and humanitarian intervention in detecting and preventing future mass atrocities. (Prerequisites: SACR-2400 and semester 5 or higher standing.)

**SACR-3380. Stuff: Seeing Culture Through 'Things'**
Why do we need so much stuff and how has it changed over time? An examination of the representation and interpretation of the material artifacts of culture in a global context, including theoretical approaches to objects and cultural products way artifacts and objects are interpreted, used and represented in our social and economic institutions, our everyday lives and in a global context. We ask: What is the function of objects in contemporary capitalist societies? To what degree do we 'need' things to make our way in the world? How do objects inform our social identities? The course draws on a variety of theoretical approaches to explore the meaning, circulation and production of objects, including the relationship of objects to consumption. Topics may include cultural products and commodities, advertising, consumption and technologies, places and museums, media and visual displays. (Prerequisites: SACR-2130 and SACR-2910, or SACR-2200 and SACR-2910, and semester 5 or higher standing).)

**SACR-3390. Refugees, Borders, and Human Rights**
Who are refugees, illegal migrants and asylum seekers? Where do asylum seekers come from and why? What do states do about them? Which agencies, actors and interest groups engage with refugees? What are the links between refugees and nationalism and racism, borders, immigration policies and attitudes, state sovereignty, diaspora and transnationalism, human rights and cultural identities? How do we understand borders, boundaries, and biopolitics in our contemporary world? This course provides the student with the analytical skills to interpret historical and contemporary claims, vested interests and local, regional and global complexities of these issues. (Prerequisites: one of SACR-2130, SACR-2200, SACR-2270 or SACR-2400, and semester 5 or higher standing.)

**SACR-3400. Food and Global Sustainability**
This course offers a comparative examination of the emergence of a global food system and its implications for culture, environment, working conditions, health, and population movements. (Prerequisites: one of SACR-1100, SACR-1000, SACR-2130, SACR-2200, or SACR-2270 ~~or SACR-2400~~, and semester 5 or higher standing or instructor's consent.)

**SACR-3410. Human-Animal Studies**
A sociologically-informed examination of the growing field of human-animal studies, focusing on the effects of social, legal, political, economic, technological, and cultural change on our relations with and representations of nonhuman animals. Topics covered may include examining the socio-political constructions of animals, policies governing the (ab)use of animals, consumptive practices involving animals, use of animals for leisure and entertainment, and intersectional conceptions of social, environmental and species justice. (Prerequisites: semester 5 or higher standing.)

**SACR-3500. Practical Strategies for Social Change: Intervening to Prevent Sexual Violence**
This course introduces students to sexual violence as a social problem; why it matters, the forms it takes, and how it can be changed. The importance of personal and community responsibility for social change is emphasized. This course also provides students with the background knowledge that is needed to successfully teach sexual violence prevention workshops for their peers. Restricted to students who have attained a cumulative GPA of 66% or higher at the time of application. (Prerequisite: Semester 4 standing or above and permission of the instructor by online application at bystanderinitiative.ca) (Also offered as PSYC-3500, SOSC-3500, SJST-3500, SWRK-3500, and WGST-3500.)

**SACR-3510. Gay and Lesbian Studies**
A multidisciplinary review of critical issues in the social organization and representation of same-sex bonding, including discussion of: cross-cultural studies, historical constructions of homosexuality and romantic friendship, coming out and identity, relationships and family, theories of homophobia and sexual repression, the development of communities and social movements in modern societies, the impacts of AIDS, and the emergence of queer theory. (Prerequisites: SACR-2050 and semester 5 or higher standing.)

**SACR-3520. Citizenship, Rights, and Social Justice**
An examination of the impact of the 'global' on social and economic processes, human rights and struggles over rights in specific locales worldwide. Topics may include: gender-based violence, poverty and 'development', children's rights, changing labour practices; human rights principles and institutions; and cultural and political struggles for rights in European, North American, and post-colonial settings (Prerequisite: one of SACR-2130, SACR-2140, SACR-2200, SACR-2270, SACR-2400 or SACR-2910 and semester 5 or higher standing or instructor's consent.)

**SACR-3530. Women, Power, and the Environment**
This course focuses on environmental issues as they affect women across cultures. It provides a feminist critical analysis of the power relations in modern societies that cause environmental degradation and examines the theories, policies, and institutions that contribute to unsustainable practices. Emphasis is placed on the women-nature debate within various environmental social movements and the historical role women have played as activists. (Also offered as Women's and Gender Studies WGST-3530.) (Prerequisite: Semester 5 or higher standing and one course at the 2000-level or above from Women's and Gender Studies.)

**SACR-3540. Gender, Space, and Time**
An examination of sociological and anthropological approaches to the study of space-time relations within the field of gender studies, including a focus on the development of gendered environments and cultural practices. (Also offered as Women's and Gender Studies WGST-3540.) (Prerequisites: SACR-2140 or WGST-1000 and semester 5 or higher standing.)

**SACR-3560. Cultural Theory**
Through a selective examination of social theory, this seminar examines key ideas that inform identities and reflect contemporary issues. Topics may include: race, culture and ethnicity, colonial and post-colonial theory. (Prerequisite: SACR-2900 and SACR 2910 and semester 5 or higher standing.)

**SACR-3610. Youth in Conflict with the Law**
The course covers theories of delinquency causation, the youth justice system, Youth Criminal Justice Act, prevention, and treatment programs. (Prerequisites: SACR-2600, SACR-2620, and semester 5 or higher standing).

**SACR-3620. Victimology**
Victimology is a subfield of criminology that Focuses on victims within the study of crime. Topics explored may include: victimology patterns, the process and aftermath of the victimization experience, the involvement and treatment of victims in the criminal justice system, legal remedies and services available to victims, restorative justice initiatives, and victims' rights. (Prerequisites: SACR-2600, SACR-2620, and semester 5 or higher standing).

**SACR-3630. Penology**
Study of the correctional institution including the impact of prison on inmates, the prison subculture, prison architecture, and administration, special institutions, and the assessment of education, occupational, recreational, and treatment programs. (Prerequisites: SACR-2600, SACR-2620, and semester 5 or higher standing).

**SACR-3650. Green Criminology**
This course will introduce undergraduate students to green criminology, a new and growing sub-field within criminology examining harms (criminal and otherwise) perpetrated against the environment and human and non-human animals. It examines the conceptual and theoretical developments within this field, as well as specific substantive harms, the various layers of actors involved, and the potentials and limitations of regulation. (Prerequisites: SACR-2600, SACR-2620 and semester 5 or higher standing).

**SACR-3670. White Collar Crime**
This course focuses on criminal and non-criminal harms perpetrated by powerful individuals, organizations, and institutions. Topics covered may include political corruption, genocide, environmental crime, workplace injury and death, food contamination, stock market manipulation and

various other kinds of fraud. The development and enforcement of criminal, administrative, and civil law will be examined along with different theoretical perspectives on this specific type of criminal behaviour. (Prerequisites: SACR-2600, SACR-2620 and semester 5 or higher standing)

**SACR-3680. Policing and Security**
This course will provide an overview of the development of public policing and security in Canadian society. Topics will include the history, development, organization, role and mandate of public policing. The course will also introduce students to the concept of security and will cover interpretive models for assessing how policing and security are governed and practiced both in Canada and internationally (Prerequisites: SACR-2600, SACR-2620, and semester 5 or higher standing).

**SACR-3700. Selected Topics in Criminology**
Course content varies by instructor and can be taken more than once if content changes. Details about the course will be made available through the department. (Prerequisites: SACR-2600, SACR-2620, and semester 5 or higher standing.)

**SACR-3710. Drugs and Society**
Using a sociological perspective, this course aims to provide a foundation for the critical understanding of drugs and society. In particular, this course explores the various processes (i.e., social, cultural, political, economic) that shape our understanding of and policies towards drugs and drug use in historical and contemporary society. (Prerequisites: SACR-2600, SACR-2620, and semester 5 or higher standing.)

**SACR-3730. Contemporary Criminological Theory**
A review of modern theoretical approaches in criminology. (Prerequisites: SACR-2910, SACR-2900, SACR-2600 and SACR-2620 and semester 5 or higher standing.)

**SACR-3740. Crime, Media and Culture**
This course explores the relationships between crime, crime control, media and popular culture by focusing on the theoretical understanding of the interplay between crime, media and culture, how crime and crime control are represented through various forms of media, and the potential effects of various media on crime and crime control policy. Focus and topics may vary by instructor. (Prerequisite: SACR-2600; SACR-2620; and semester 5 or higher standing).

**SACR-3820. Surveillance and Society**
The course provides an overview of surveillance in contemporary society. Substantive topics may include surveillance in relation to national security, covert police activities, social media, consumers, workplace, biometrics and inequality, social sorting, privacy, and privacy law/regulation. Focus of the course will vary by instructor. (Prerequisites: SACR-2600; SACR-2620; and semester 5 or higher standing).

**SACR-3900. Qualitative Approaches to Social and Cultural Research**
An exploration and application of interpretive research strategies. Student will be taught to employ various techniques as they bear on real world issues and research questions. Techniques may include for example, participant observation, historical comparative analysis, oral histories, interviewing, cultural and discourse analysis. Students are expected to hold their TCPS certificate and learn to apply ethical issues specific to the interpretive and qualitative methodologies employed in the course. (Prerequisites: SACR-2900/210 (or equivalent), SACR-2910, and semester 5 or higher standing)

**SACR-3910. Contemporary Social Theory**
Investigates influential contemporary approaches to understanding and explaining social life. Emphasis is placed on epistemology, ontology and normativity, and on critically evaluating and creatively using theory. Theories covered may include Symbolic Interactionism, Structural-Functionalism, Phenomenology, Structuralism, Neo-Marxism, Psychoanalysis, Feminism, Postmodernism, and Postcolonialism among others. (Prerequisite: SACR-2910, SACR-2900 (or equivalent), and semester 5 or higher standing.)

**SACR-3970. Selected Topics in Sociology**
Course content will vary by instructor. This course may be taken more than once if content changes. (Prerequisites: semester 5 or higher standing.)

**SACR-4030. Advanced Seminar in Culture and Ideology**
The study of the influence of social location on human understanding, including the social organization, creation, and distribution of knowledge. Topics may include how social practices shape scientific knowledge, the origins of common sense and conventional wisdom, how politics affect medical definitions, and cultural constructions of class, gender, race, and sexuality. (Prerequisite: SACR-3910 or SACR-3560 or SACR-3730; SACR-3900 or SACR-3080 and semester 7 or higher standing, or consent of instructor.)

**SACR-4050. Advanced Seminar in Social Theory**
An exploration of contemporary social theory as it bears on sociology and related disciplines. Theoretical approaches examined will vary by instructor. (Prerequisite: SACR-3910 or SACR-3560 or SACR-3730; SACR-3900 or SACR-3080 and semester 7 or higher standing, or consent of instructor.)

**SACR-4080. Advanced Seminar in Feminism**
This course explores contemporary feminist thought; it includes the application of feminist theories to the understanding of social issues, political engagement and cultural struggles. Key topics may include diversity and identities, globalization, the politics of pleasure, reproductive politics, gender, sexualities, and social movements. (Prerequisite: SACR-3910 or SACR-3560 or SACR-3730; SACR-3900 or SACR-3080 and semester 7 or higher standing, or consent of instructor.)

**SACR-4090. Advanced Seminar in Family, Gender and Culture**
A critical examination of key issues and debates in multiple family forms and relations in contemporary society. The course will adopt a cross-cultural approach examining and analyzing family forms and processes with emphasis on the intersectionalities of gender, culture, age, ethnicity, and class. (Prerequisites: SACR-2040, SACR-3910 or SACR-3560 or SACR-3730; SACR-3900 or SACR-3080 and semester 7 or higher standing, or consent of instructor.)

**SACR-4120. Human Skeletal Variation**
This course is an advanced critical review of theories and methods for collecting, analyzing, and interpreting data from human skeletal remains in bioarchaeological (paleopathology, paleodemography, etc.) and forensic contexts. Students will learn to pursue a biocultural approach for the study of human skeletal variation.(Prerequisite or Corequisite: SARC-3230, and semester 5 or higher standing, or consent of instructor.)

**SACR-4150. Advanced Seminar in Culture, Power, and Globalization**
A critical and substantive examination of culture in a global context, including cultural practices, political economy and culture, culture and representation and culture and identity. Topics may include: material

culture, commodities and cultural products; colonialism; globalization; ideas of place and time; transnational networks. (Prerequisites: SACR-3910 or SACR-3560 or SACR-3730; SACR-3900 or SACR-3080 and semester 7 or higher standing, or consent of instructor.)

**SACR-4160. Survey Research Capstone**
The design, implementation, and analysis of sample surveys of topical and timely issues related to social life. (Prerequisite: SACR-2900 (or equivalent), SACR-3080, and three 2000 or 3000-level courses; a minimum of 73% in the program; semester 7 or higher standing, and permission of the instructor) (3 lecture hours, or 2 lecture hours, one tutorial/laboratory hour a week.)

**SACR-4210. Special Topics in Sociology and Criminology**
Topics may vary by instructor; consult the departmental website for details. (Prerequisites: SACR-3910 or SACR-3560 or SACR-3730; SACR-3900 or SACR-3080 and semester 7 or higher standing, or consent of instructor.) (May be repeated for credit if content changes.)

**SACR-4220. Advanced Seminar on Race and Ethnicity**
This course explores theoretical approaches to race and ethnicity with a focus on political and cultural struggles and issues encountered by racialized and ethnic minorities. Topics may include: multicultural politics, anti-racist strategies, transnational and diasporic mobilization, and in intersectionality. (Prerequisites: SACR-2400; SACR-3910 or SACR-3560 or SACR-3730; SACR-3900 or SACR-3080 and semester 7 or higher standing, or consent of instructor.)

**SACR-4250. Social Life in the City Capstone**
The course is designed to give advanced students the opportunity to engage in qualitative research projects on social issues and cultural practices in the Windsor-Essex Region. (Prerequisites: a 73% in the program, SACR-3910 or SACR-3560 or SACR-3730; SACR-3900; and semester 7 or higher standing).

**SACR-4290. Advanced Seminar in Family Studies**
Discussion of major themes in family theory, which may include explanations for family forms, functioning, processes and structure. (Prerequisites SACR-2040, SACR-3910 or SACR-3560 or SACR-3730; SACR-3900 or SACR-3080 and semester 7 or higher standing, or consent of instructor.)

**SACR-4500. Practicum in Social Change**
Supervised practicum in a university setting. Students consolidate and enhance their knowledge of sexual assault and bystander intervention. Students co-facilitate the Bringing in the Bystander® In Person Prevention program for one or more small groups of students on campus. The practicum experience equips students to deliver educational content on sensitive issues. (Prerequisite: Final mark of 75% in SOSC-3500/PSYC-3500/SJST-3500/SACR-3500/SWRK-3500/WGST-3500 and permission of the instructor.) (Also offered as PSYC-4500, SJST-4500, SOSC-4500, SWRK-4500, and WGST-4500.)

**SACR-4510. Advanced Seminar in Sexualities and Identities**
A critical engagement with the historical, contemporary and newly burgeoning sociological approaches to sexualities and sexual identities. The course will adopt a cross-cultural approach in examining and analyzing human sexualities, with emphasis on the intersectionalities of other forms of inequality such as gender, race, ethnicity, disability, and class. Topics may vary from year to year. (Prerequisite: SACR-2050, SACR-3910 or SACR-3560 or SACR-3730; SACR-3900 or SACR-3080 and semester 7 or higher standing, or consent of instructor.)

**SACR-4600. Advanced Seminar in Deviance and Social Issues: Policies and Debates**

Using relevant theory and research, this course engages in a critical exploration of polices and debates concerning deviance and social issues. Substantive topics will vary by instructor. (Prerequisites: SACR-2600, SACR-3910 or SACR-3730 or SACR-3560; SACR-3900 or SACR-3080 and semester 7 or higher standing, or consent of instructor.)

**SACR-4610. Advanced Seminar in Law and Social Policy**
This course explores theory and research concerned with legal and government policies and their impact on individuals, social institutions and society. Substantive topics will vary by instructor. (Prerequisites: SACR-3910 or SACR-3730 or SACR-3560; SACR-3900 or SACR-3080 and semester 7 or higher standing; at least one 3000-level course from the 3000-level criminology course selection or consent of instructor.)

**SACR 4620. Advanced Seminar in Policing, Security, and Surveillance**
This course explores theory and research about 21st Century developments in policing, security, and surveillance. Topics may cover intelligence-gathering, pre-crime, fusion centres, social media policing, body-worn cameras, artificial intelligence/predictive policing, and big data surveillance by public and private agencies. (Prerequisites: SACR 2600; 2620; SACR 3820 or SACR 3680 or SACR 3730; SACR 3910 or SACR 3080, and semester 7 or higher standing; or higher.)

**SACR-4640. Advanced Seminar in Sociology of Law**
An investigation of theory and research in the sociology of law. Topics may include the social construction of law, the legal profession, law and social change, legal consciousness, law as governance, legal avoidance, moral regulation, and popular representations of law. Criminal and other forms of law will be discussed in relation to these topics. Focus of the course will vary by instructor. (Prerequisites: SACR-3910 or SACR-3730 or SACR-3560; SACR-3900 or SACR-3080 and semester 7 or higher standing; at least one 3000-level course from the 3000-level criminology course selection; or consent of instructor.)

**SACR-4650. Advanced Seminar in Gender, Law, and Crime**
This course will examine the ways gender intersects with the law and crime. It focuses on the importance of taking gender into consideration in understanding offending and victimization, the development and impacts of legislation, and the work of the criminal justice system. Focus of the course will vary by instructor. (Prerequisites: SACR -3910 or SACR -3730 or SACR -3560; SACR-3900 or SACR-3080 and semester 7 or higher standing; at least one 3000-level course from the 3000-level criminology course selection; or consent of instructor.)

**SACR-4670. Criminology Professional Development Practicum**
This practicum provides students in the Criminology program with the opportunity to apply learned concepts and theory to a practical setting and to become further familiarized with an area related to Criminology. Students will be placed in organizations in the Windsor-Essex region related to their area of interest within Criminology (e.g., the law, corrections, etc.) and will be expected to dedicate a total of 100 hours to both the in-class learning and practicum components of the course. Additionally, students will be required to complete assignments as assigned by the instructor. This course is open to Criminology majors only. (Prerequisites: SACR-2600, SACR-2620, SACR-3730 or SACR-3910 or SACR-3560, semester 7 or higher standing, and minimum major average of 73%.)

**SACR-4910. Advanced Seminar in Criminology**
This course exposes students to advanced criminological topics through the lens of the instructor's current research. Practical and/or theoretical implications of the research within local, national, global and/or cyberspace communities will be examined. Topics will vary by instructor. (Prerequisites: SACR-2600; SACR -2620; SACR-3910 or SACR-3730 or SACR-3560; SACR-3900 or SACR-3080 and semester 7 or

higher standing; at least one 3000-level course from the 3000-level criminology course selection; or consent of instructor.)

**SACR-4960. Honours Essay**
Independent research or internship conducted under the supervision of an individual faculty member. (Prerequisites: SACR-3910 or SACR-3560 or SACR-3730, SACR-3080; SACR-3900 and semester 7 or higher standing; or consent of instructor.)

# ODETTE SCHOOL OF BUSINESS

## BUSINESS PROGRAM REGULATIONS

**FOR ALL SPECIALIZATIONS**
Students in the thesis option must complete BUSR-4950 and BUSR-4990. Students who have enrolled in BUSR-4990 prior to Winter 2018 may substitute BUSR-4950 with a fourth-year research-based independent study course.

## Co-operative Education Program Regulations

The Business Administration Co-op Program will help students acquire valuable professional experience in the workplace while they are pursuing their academic careers.

Students are admitted into the Bachelor of Commerce Co-op Program either directly out of their Grade 12 (or equivalent) Year, or in the Fall term of their second year of study in the Odette School of Business Administration. The Co-operative option is not available for the Honours Business and Economics or the Commerce for University Graduates program. Admission to the Program is competitive. Students applying from secondary school will be admitted based on academic achievement (typically, a minimum of 75% is required). Second-year students will complete a co-op application form and may be invited to an interview.

Students admitted to the Program must maintain a major average of 70% or better and a cumulative average of 65% or better, and must successfully complete three paid work terms to remain in the Co-op Program. To remain in the Co-op program only one outstanding failing grade (grade below 50%) is permitted.

Withdrawal from the co-op program will be granted on an exception basis only as it must be determined that the student has no outstanding commitments to employers. Students who wish to withdraw must meet with a Co-op Coordinator and complete a withdrawal form. However, the only time a student may withdraw from an undergraduate co-op program without further co-op fee payment implications is by the 1st Friday of classes after their first co-op work term. Students who withdraw from Co-operative Education at any other time will be liable for paying the co-op fee for the term in which they are dropping and one additional term. This will help offset the costs of developing another student for placement.

In the interest of building solid partnerships with employers, students who have accepted a co-op employment offer (either by ranking a position in round 1 of the job competition or by accepting a position either verbally or in writing in later rounds) must honour that commitment. Therefore, once students have accepted an offer of employment for a work term, they will be considered registered in the appropriate work term course and must remain in the co-op program until they have completed their work term requirements. Failure to honour these commitments and/or to complete all work term requirements will lead to being required to withdraw from the co-op program and will result in a failing grade on his/her transcript for that work term.

All Co-op positions must be full-time, paid, related to the degree program and approved by the University. The process of securing a co-op position is competitive. Co-op students will apply for work

opportunities as advertised by the Centre for Career Education using an Internet-based software program and employers will make interview and hiring decisions. Students are also encouraged to seek co-op employment outside of the advertised postings by completing a guided job search process facilitated by the Centre for Career Education.

The work/study sequence is as follows:

YEAR 1
Fall term: Study
Winter term: Study

YEAR 2
Fall term: Study
Winter term: Study
Summer term: Work

YEAR 3
Fall term: Study
Winter term: Work
Summer term: Study

YEAR 4
Fall term: Work
Winter term: Study
Summer term: Study

**Professional and Certificate Courses**
Designated courses in the Management and Labour Studies area meet the educational requirements for achieving Professional Designation by the Human Resources Professionals Association of Ontario (HRPAO). Consult with a Faculty Advisor in Management and Labour Studies for details. The Michigan State Board of Accounting accepts graduates of the program with a major in accounting for the Certificate Examination. The Institute of Chartered Accountants of Ontario, the Society of Management Accountants of Ontario and the Certified General Accountants' Association of Ontario grant graduates of the Bachelor of Commerce program credits towards professional certification for the satisfactory completion of certain Business Administration courses. A faculty advisor in Accounting should be consulted with respect to the specific exemptions available.

**Concentrations in Business**
Eligible business students may elect to concentrate in specified areas of business. To be accepted into a concentration, a student must have achieved a certain grade in that concentration's gate-in course(s). To successfully obtain the concentration, a student must successfully complete all the requirements for the Bachelor of Commerce degree and must achieve a certain average grade for courses in the concentration and a certain grade in the concentration's capstone course. Although concentrations will not be formally recognized on transcripts or degrees, the Odette School of Business will provide students with documentation indicating that they have successfully obtained their particular concentration. Students who have selected a concentration will normally be given course registration priority in their area.

Note: Students registered in the Bachelor of Commerce for University Graduates program will be able to complete a concentration only by taking additional courses beyond those required for their degree.

Depending upon the concentration, students registered in the Honours Business Administration and Computer Science (co-op and non co-op), the Honours Business Administration and Economics, or the Honours Business Administration and Psychology programs may not be able to complete a concentration without taking additional courses beyond those required for their degree.

**Students who wish to concentrate in Accounting, must fulfill the following requirements:**

Number of courses (excluding gate-in courses): 8
Gate-in courses: ACCT-1510 and ACCT-2550 with a minimum grade of 65% in each course
Courses in concentration (including capstone course): ACCT-2510, ACCT-2520, ACCT-3520, ACCT-3560, ACCT-3580, ACCT-3600, ACCT-3610 and ACCT-4570 with a minimum average grade of 67%
Capstone course: ACCT-4570 with a minimum grade of 70%

**Students who wish to concentrate in Human Resources, must fulfill the following requirements:**

Number of courses (excluding gate-in course): 9
Gate-in course: MGMT-2430 with a minimum grade of 65%
Courses in concentration (including capstone course): MGMT-3420, MGMT-3440, MGMT-4410, MGMT-4510, MGMT-4520, MGMT-4850 plus any 3 of MGMT-3830, MGMT-4450, MGMT-4480, MGMT-4490, MGMT-4810 and MGMT-4910 with a minimum average grade of 70%
Capstone course: MGMT-4850 with a minimum grade of 70%

**Students who wish to concentrate in Finance, must fulfill the following requirements:**

Number of courses (excluding gate-in course): 6
Gate-in course: FINA-2710 with a minimum grade of 65%
Courses in concentration (including capstone course): FINA-4740 and any 5* of FINA-3710, FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910 with a minimum average grade of 67%
Capstone course: FINA-4740 with a minimum grade of 67%

*Students who successfully complete the CSC exam (1 & 2) will be able to substitute this completion for one of the 5 concentration courses. Students who successfully complete the CFA Level 1 exam will be able to substitute this completion for 2 of the 5 concentration courses. The substitutions above only apply toward the finance concentration and do not apply in any way toward their Bachelor of Commerce degree requirements. It is the student's responsibility to bring forward the appropriate documentation in a timely manner in order to receive the above noted substitutions.

**Students who wish to concentrate in Supply Chain and Business Analytics, must fulfill the following requirements:**

Number of courses (excluding gate-in course): 6
Gate-in course: MSCI-2200 with a minimum grade of 65%
Courses in concentration (including capstone course): 2 courses from MSCI-2230, MSCI-3110, MSCI-3120, MSCI-3230, MSCI-4230; 2 courses from MSCI-3050, MSCI-3200, MSCI-3410, MSCI-4310, MSCI-4980, MKTG-3390; 1 course from MSCI-4310 and MSCI-4980; 1 additional course MSCI-xxxx. 6 courses with a minimum average grade of 67%.
Capstone course: one of MSCI-4310 and MSCI-4980 with a minimum grade of 67%.

**Students who wish to concentrate in Marketing, must fulfill the following requirements:**

Number of courses (excluding gate-in course): 7
Gate-in courses: MKTG-1310 (MKTG-2320 with a minimum grade of 65% in each course
Courses in concentration (including capstone course): MKTG-3320, MKTG-4390 and any 5 of MkTG-3340, MKTG-3350, MKTG-3370, MKTG-3380, MKTG-3390, MKTG-4320, MKTG-4330, MKTG-4350, MKTG-4360, MKTG-4370, MKTG-4380 and MKTG-4910 with a minimum average grade of 67%
Capstone course: MKTG-4390 with a minimum grade of 67%.

**Students who wish to concentrate in Strategy and Entrepreneurship, must fulfill the following requirements:**

Number of courses (excluding gate-in course):5
Gate-in courses: STEN-1000 and STEN-2900 with a minimum grade of 67% in each course
Courses in concentration (including capstone course): STEN-2900; one of STEN-3900 and STEN-3910; and any four of MGMT-4450, STEN-3930, STEN-4900, STEN-4910, STEN-4930, STEN-4950, and STEN-4960 including at least 1 of STEN-4930, STEN-4950 and STEN-4960; 6 courses with a minimum average grade of 67%.
Capstone course: one of STEN-4930, STEN-4950 and STEN-4960 with a minimum grade of 70%.

**Students in Honours Business Administration and Psychology who wish to concentrate in Human Resources Management and Industrial Organizational Psychology, must fulfill the following requirements:**

Number of courses (excluding gate-in course): 9
Gate-in course: MGMT-2430 with a minimum grade of 65%
Courses in concentration (including capstone course): 7 courses MGMT-3420, MGMT-3440, MGMT-4410, MGMT-4510, MGMT-4520, MGMT-4850 plus any 1 of MGMT-3830, MGMT-4450, MGMT-4480, MGMT-4490, MGMT-4810 and MGMT-4910 with a minimum average grade of 70%; 2 courses PSYC-3700 (Industrial-Organizational Psychology) and PSYC-4xxx
Capstone course: MGMT-4850 with a minimum grade of 70%

NOTE: Where an area permits, a student may be able to substitute a Special Topics Course offered by the Odette School of Business for one of the courses in the concentration (excluding the gate-in and capstone courses) with the approval of the Area Chair.

# PROGRAMS

## Honours Business Administration (with/without Thesis)

The purpose of the Bachelor of Commerce program is to develop educated men and women with a grounding in business ideas and techniques which will help equip them for positions of responsibility in industry and commerce. The program is designed to provide the broad outlook needed in modern business, and accordingly stresses general procedures and methods of attack on problems. Students are guided toward independent study, and they are encouraged to grapple with business problems on their own. The objective is to give students an awareness of the position and significance of business in the world today.

**Degree Requirements**

Total courses: forty or 120 credits.*

(a) ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, FINA-2700, MGMT-3000, FINA-2710, MSCI-1000, MSCI-2020, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980; eight additional business courses or BUSR-4950, BUSR-4990 (6.0 credit course), and five additional business courses.
(b) ECON-1100, ECON-1110, MATH-1980/1250/1720/1760 (or equivalents); six additional courses from outside of the Odette School of Business Administration; six courses from any area of study including Business.

Students wishing a stronger Mathematics background or wishing to concentrate in finance should take MATH-1720 in addition to MATH-1980.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

This program cannot be completed through Distance Education.

**Suggested Program Sequencing**

YEAR 1

First Term
ECON-1100
MATH-1980/1250/1720/1760 (or equivalents)
STEN-1000
Two courses from outside of Business Administration

Second Term
ECON-1110
ACCT-1510
MGMT-1000
MSCI-1000
MKTG-1310

YEAR 2

First Term
MGMT-2400
ACCT-2550
FINA-2700
MSCI-2020
One course from outside of Business Administration

Second Term
MGMT-2430
FINA-2710
MSCI-2130
MSCI-2200

One course from within or outside of Business Administration

YEAR 3

First Term
MGMT-3000
MSCI-3310 or MSCI-3410
Three courses (Consult a faculty advisor).

Second Term
STEN-3970
Four courses. (Consult a faculty advisor).

YEAR 4

First and Second Terms
STEN-4980 and nine additional courses. (Consult a faculty advisor.)

## Honours Business Administration Co-operative Education Program (with/without Thesis)

See above for Co-operative Education Program Regulations.

**Degree Requirements**

Total courses: forty or 120 credits, plus three co-op work terms

(a) ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-1000, MSCI-2020, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980; STEN-2050, STEN-3050, STEN-4050; eight additional business courses or BUSR-4950, BUSR-4990 (6.0 credit course), and five additional business courses.
(b) ECON-1100, ECON-1110, MATH-1980/1250/1720/1760 (or equivalents); six additional courses from outside of the Odette School of Business Administration; six courses from any area of study including Business.

Students wishing a stronger Mathematics background or wishing to concentrate in finance should take MATH-1720 in addition to MATH-1980.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

This program cannot be completed through Distance Education.

Work experience obtained with C.A. firms and other designated organizations will count toward work experience required for obtaining a C.A. designation. Students in the C.A. stream will be given credit for work experience earned since September 1, 1997 with an office approved for the training of C.A. students.

**Suggested Program Sequencing**

YEAR 1

First Term
ECON-1100
MATH-1980/1250/1720/1760 (or equivalents)
STEN-1000
Two courses from outside of Business Administration

Second Term
ECON-1110
ACCT-1510
MGMT-1000
MSCI-1000
MKTG-1310

YEAR 2

First Term
ACCT-2550
MGMT-2400
FINA-2700
MSCI-2020
One course from outside of Business Administration

Second Term
MGMT-2430
FINA-2710
MSCI-2130
MSCI-2200
One course from within or outside of Business Administration

Third Term
STEN-2050 Work term

YEAR 3

First Term
MGMT-3000
MSCI-3310 or MSCI-3410
Three courses (Consult a faculty advisor).

Second Term
STEN-3050 Work term

Third Term
STEN-3970
Four courses. (Consult a faculty advisor).

YEAR 4

First Term
STEN-4050 Work term

Second and Third Terms
STEN-4980 and nine additional courses. (Consult a faculty advisor.)

## Honours Business Administration with Specialization in Accounting (with/without Co-op and with/without Thesis)

For admission to Accounting specialization, students must receive a minimum grade of 65% in each gate-in courses ACCT-1510 and ACCT-2550.

**Degree Requirements**

Total courses: forty (120 credits) or forty-three (129 credits) for Co-op Option.

(a) ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, FINA-2700, MGMT-3000, FINA-2710, MSCI-1000, MSCI-2020, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980; [BUSR-4950 (3 credits) and BUSR-4990 (6 credits) for Thesis Option]
(b) ACCT-2510, ACCT-2520, ACCT-3520, ACCT-3560, ACCT-3580, ACCT-3600, ACCT-3610 and ACCT-4570
(c) ECON-1100, ECON-1110, MATH-1980/1250/1720/1760 (or equivalents);
(d) six additional courses from outside of the Odette School of Business Administration;
(e) six courses from any area of study including Business. [Students in the Thesis Option will get credit for 3 courses towards (e) for completing BUSR-4950 (3 credits) and BUSR-4990 (6 credits) required under (a) and will be required to complete 3 additional courses towards (e)]
(f) For Co-op Students: STEN-2050, STEN-3050, and STEN-4050.

Note: to be eligible for the Accounting Specialization, students must receive a minimum grade of 65% in each gate-in course ACCT-1510 and ACCT-2550, an overall minimum average of 67% in ACCT-2510, ACCT-2520, ACCT-3520, ACCT-3560, ACCT-3580, ACCT-3600, ACCT-3610 and ACCT-4570 and a minimum grade of 70% in the capstone course ACCT-4570.

Courses used to calculate the major average are: The courses listed in section (a) and (b) and any courses taken in the major area of study

## Honours Business Administration with Specialization in Human Resources (with/without Co-op and with/without Thesis)

For admission to Human Resources specialization, students must receive a minimum grade of 65% in the gate-in course MGMT-2430.

**Degree Requirements**

Total courses: forty (120 credits) or forty-three (129 credits) for Co-op Option.

(a) ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, FINA-2700, MGMT-3000, FINA-2710, MSCI-1000, MSCI-2020, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980; [BUSR-4950 (3 credits) and BUSR-4990 (6 credits) for Thesis Option]
(b) MGMT-3420, MGMT-3440, MGMT-4410, MGMT-4510, MGMT-4520, MGMT-4850 plus any 2 of MGMT-3830, MGMT-4450, MGMT-4480, MGMT-4490, MGMT-4810.
(c) ECON-1100, ECON-1110, MATH-1980/1250/1720/1760 (or equivalents)
(d) six additional courses from outside of the Odette School of Business Administration;
(e) six courses from any area of study including Business. [Students in the Thesis Option will get credit for 3 courses towards (e) for completing BUSR-4950 (3 credits) and BUSR-4990 (6 credits) required under (a) and will be required to complete 2 additional courses towards (e)]
(f) For Co-op Students: STEN-2050, STEN-3050, and STEN-4050.

Note: to be eligible for Human Resources specialization, students must receive a minimum grade of 65% in the gate-in course MGMT-2430, an overall minimum average of 70% in MGMT-3420, MGMT-3440, MGMT-4410, MGMT-4510, MGMT-4520, MGMT-4850 plus any 2 of MGMT-3830, MGMT-4450, MGMT-4480, MGMT-4490,and MGMT-4810 and a minimum grade of 70% in the capstone course MGMT-4850.

Courses used to calculate the major average are: The courses listed in section (a) and (b) and any courses taken in the major area of study.

## Honours Business Administration with Specialization in Finance (with/without Co-op and with/without Thesis)

For admission to Finance specialization, students must receive a minimum grade of 65% in the gate-in course FINA-2710.

**Degree Requirements**

Total courses: forty (120 credits) or forty-three (129 credits) for Co-op Option.

(a) ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, FINA-2700, MGMT-3000, FINA-2710, MSCI-1000, MSCI-2020, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980, two additional business courses OR BUSR-4950 (3 credits) and BUSR-4990 (6 credits) for Thesis Option
(b) FINA-3710, FINA-4740 and any 4* of FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910
(c) ECON-1100, ECON-1110, MATH-1980/1250/1720/1760 (or equivalents)
(d) six additional courses from outside of the Odette School of Business Administration;
(e) six courses from any area of study including Business. [Students in the Thesis Option will get credit for 1 course towards (e) for completing BUSR-4950 (3 credits) and BUSR-4990 (6 credits) required under (a) and will be required to complete 5 additional courses towards (e)]
(f) For Co-op Students: STEN-2050, STEN-3050, and STEN-4050.

Note: to be eligible for Finance specialization, students must receive a minimum grade of 65% in the gate-in course FINA-2710, an overall minimum average of 67% in FINA-3710,FINA-4740 and any 4* of FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910, and a minimum grade of 67% in the capstone course FINA-4740.

*Students who successfully complete the CSC exam (1 and 2) will be able to substitute this completion for one of the 5 specialization courses FINA-3710, FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910. Students who successfully complete the CFA Level 1 exam will be able to substitute this completion for 2 of the 5 specialization courses FINA-3710, FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910. The substitutions above only apply toward the finance specialization and do not apply in any way toward their Bachelor of Commerce degree requirements. It is the student's responsibility to bring forward the appropriate documentation in a timely manner in order to receive the above noted substitutions.

Courses used to calculate the major average are: The courses listed in section (a) and (b) and any courses taken in the major area of study.

## Honours Business Administration with Specialization in Supply Chain and Business Analytics (with/without Co-op and with/without Thesis)

For admission to Supply Chain and Business Analytics specialization, students must receive a minimum grade of 65% in the gate-in each of the gate-in courses MSCI-2200 and MSCI-2130.

**Degree Requirements**

Total courses: forty (120 credits) or forty-three (129 credits) for Co-op Option.

(a) ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, FINA-2700, MGMT-3000, FINA-2710, MSCI-1000, MSCI-2020, MSCI-2130, MSCI-2200, MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980; two additional business courses OR BUSR-4950 (3 credits and BUSR-4990 (6 credits) for Thesis Option
(b) MSCI-4230 or MSCI-4310 or MSCI-4980 and any 5 of MSCI-2230, MSCI-3050, MSCI-3110, MSCI-3120, MSCI-3200, MSCI-3230, MSCI-3310, MSCI-4230, MSCI-4310, MSCI-4910, MSCI-4950, MSCI-4980, and MKTG-3390 including at least two of MSCI-3050, MSCI-3200, MSCI-3310, MSCI-4310, MSCI-4980, MKTG-3390, and at least two of MSCI-2230, MSCI-3110, MSCI-3120, MSCI-3230, MSCI-4230.
(c) ECON-1100, ECON-1110, MATH-1980/1250/1720/1760 (or equivalents)
(d) six additional courses from outside of the Odette School of Business Administration;
(e) six courses from any area of study including Business. [Students in the Thesis Option will get credit for 1 course towards (e) for completing BUSR-4950 (3 credits) and BUSR-4990 (6 credits) required under (a) and will be required to complete 5 additional courses towards (e)]
(f) For Co-op Students: STEN-2050, STEN-3050, and STEN-4050.

Note: to be eligible for Supply Chain and Business Analytics specialization, students must receive a minimum grade of 65% in each of the gate-in courses MSCI-2200 and MSCI-2130; an overall minimum average of 67% in the capstone course MSCI-4230 or MSCI-4310 or MSCI-4980 and any 5 of MSCI-2230, MSCI-3050, MSCI-3110, MSCI-3120, MSCI-3200, MSCI-3230, MSCI-3310, MSCI-4230, MSCI-4310, MSCI-4910, MSCI-4950, MSCI-4980, and MKTG-3390 including at least two of MSCI-3050, MSCI-3200, MSCI-3310, MSCI-4310, MSCI-4980, MKTG-3390, and at least two of MSCI-2230, MSCI-3110, MSCI-3120, MSCI-3230, MSCI-4230; and a minimum grade of 67% in the capstone course MSCI-4230 or MSCI-4310 or MSCI-4980.

Courses used to calculate the major average are: The courses listed in section (a) and (b) and any courses taken in the major area of study.

# Honours Business Administration with Specialization in Marketing (with/without Co-op and with/without Thesis)

For admission to Marketing specialization, students must receive a minimum grade of 65% in each gate-in course MKTG-1310 and MKTG-2320.

**Degree Requirements**

Total courses: forty (120 credits) or forty-three (129 credits) for Co-op Option.

(a) ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, FINA-2700, MGMT-3000, FINA-2710, MSCI-1000, MSCI-2020, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980; [BUSR-4950 (3 credits) and BUSR-4990 (6 credits) for Thesis Option]
(b) MKTG-2320, MKTG-3320, MKTG-3340, MKTG-4390 and any 4 of MKTG-3350, MKTG-3370, MKTG-3380, MKTG-3390, MKTG-4320, MKTG-4330, MKTG-4350, MKTG-4360, MKTG-4370, MKTG-4380, MKTG-4450 and MKTG-4910
(c) ECON-1100, ECON-1110, MATH-1980/1250/1720/1760 (or equivalents)
(d) six additional courses from outside of the Odette School of Business Administration;
(e) six courses from any area of study including Business. [Students in the Thesis Option will get credit for 3 courses towards (e) for completing BUSR-4950 (3 credits) and BUSR-4990 (6 credits) required under (a) and will be required to complete 3 additional courses towards (e)]
(f) For Co-op Students: STEN-2050, STEN-3050, and STEN-4050.

Note: to be eligible for Marketing specialization, students must receive a minimum grade of 65% in each gate-in course MKTG-1310 and MKTG-2320, an overall minimum average of 67% in MKTG-3320, MKRG-3340, MKTG-4390 and any 4 of MKTG-3350, MKTG-3370, MKTG-3380, MKTG-3390, MKTG-4320, MKTG-4330, MKTG-4350, MKTG-4360, MKTG-4370, MKTG-4380, MKTG-4450 and MKTG-4910, and a minimum grade of 67% in the capstone course MKTG-4390.

Courses used to calculate the major average are: The courses listed in section (a) and (b) and any courses taken in the major area of study.

# Honours Business Administration with Specialization in Strategy and Entrepreneurship (with/without Co-op and with/without Thesis)

For admission to Strategy and Entrepreneurship specialization, students must receive a minimum grade of 67% in each gate-in course STEN-1000 and STEN-2900.

**Degree Requirements**

Total courses: forty (120 credits) or forty-three (129 credits) for Co-op Option.

(a) ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, FINA-2700, MGMT-3000, FINA-2710, MSCI-1000, MSCI-2020, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980, two additional business courses OR BUSR-4950 (3 credits), BUSR-4990 (6 credits) for Thesis Option

(b) STEN-2900, one of STEN-3900, STEN-3910, and any four of STEN-3930, STEN-4900, STEN-4910, STEN-4930, STEN-4950, STEN-4960, and MGMT-4450 including one of STEN-4930, STEN-4950 and STEN-4960.
(c) ECON-1100, ECON-1110, MATH-1980/1250/1720/1760 (or equivalents);
(d) six additional courses from outside of the Odette School of Business Administration;
(e) six courses from any area of study including Business. [Students in the Thesis Option will get credit for one course towards (e) for completing BUSR-4950 (3 credits) and BUSR-4990 (6 credits) required by (a) and will be required to complete five additional courses towards (e)]
(f) For Co-op Students: STEN-2050, STEN-3050, and STEN-4050.

Note: to be eligible for Strategy and Entrepreneurship specialization, students must receive a minimum of 67% in each gate-in course STEN-1000 and STEN-2900, a minimum average of 67% in STEN-2900, one of , STEN-3900, STEN-3910, and any four of STEN-3930, STEN-4900, STEN-4910, STEN-4930, STEN-4950, STEN-4960, and MGMT-4450 including 1 of STEN-4930, STEN-4950 and STEN-4960 and a minimum grade of 70% in the capstone course 1 of STEN-4930, STEN-4950 and STEN-4960.

Courses used to calculate the major average are: The courses listed in section (a) and (b) and any courses taken in the major area of study.

## Honours Business Administration with Specialization in International Business (with/without Thesis) (with/without Co-op)

**Degree Requirements**

Total course equivalents: forty (120 credits) or forty-three (129 credits) for Co-op Option

a) Business 17 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-1000, MSCI-2020 or equivalent, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980; [BUSR-4950 (3 credits) and BUSR-4990 (6 credits) for Thesis Option]
b) Business 6 courses towards specialization in International Business from 8 courses MGMT-3830, FINA-3710, FINA-3790, MKTG-2320, MKTG-4350, MKTG-4380, STEN-3930, STEN-4900
c) Business additional 2 courses
d) Economics 2 courses: ECON-1100, ECON-1110
e) Mathematics 1 course: MATH-1980/1250/1720/1760 (or equivalents)
f)6 courses from outside Odette School of Business including at least 1 of ECON-3730, ECON-3740, POLS-2330, POLS-2490, POLS-3230, POLS-3540, POLS-3550, POLS-3560, POLS-3600, GRMN-3000, ITLN-3000, SPAN-3000, FREN-3170
g) 6 courses from any area of study including Business [Students in the Thesis Option will get credit for 3 courses towards (g) for completing BUSR-4950 (3 credits) and BUSR-4990 (6 credits) required under (a) and will be required to complete 3 additional courses towards (g)]
h) For Co-op Students: STEN-2050, STEN-3050, and STEN-4050.

Note: To graduate with the International Business Specialization, students are strongly recommended to take part in a formal exchange program through the Exchange Office at the University of Windsor or International co-op program. Students must receive a minimum grade of 65% in each gate-in course MGMT-2430, FINA-2710, and MKTG-2320 a minimum average of 67% in 5 courses from MGMT-3830, FINA-3710, FINA-3790, MKTG-4350, MKTG-4380, STEN-3930, and STEN-4900, and a minimum grade of 70% in one of MKTG-4350, MKTG-4380 and STEN-4900. Students may receive a maximum credit of 1

course towards b) for taking a fourth year special topic course with permission from the undergraduate program director.

Courses used to calculate the major average are: The courses listed in section a) and b) and any courses taken in the major area of study

## Honours Business Administration and Computer Science (with/without Co-op and with/without Thesis)

**Degree Requirements**

Total course equivalents: forty (120 credits) plus three Co-op work terms for Co-op Option

a) Business 14 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980
b) Business 7 courses: Seven business electives, alternatively, students in the Thesis Option will complete 04-495, 04-499 (6.0 credit course), and four additional business courses
c) Computer Science 14 courses: COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-3150, COMP-3300, COMP-3340, COMP-3670, COMP-4250 plus two 3000-level or above Computer Science courses
d) Economics 2 courses: ECON-1100, ECON-1110
e) Mathematics and Statistics 3 courses: MATH-1250, MATH-1720 (or MATH-1760), and STAT-2910.

Courses used to calculate the major average are: The courses listed in sections a), b) and c).

## Honours Business Administration and Computer Science with Specialization in Accounting (with/without Co-op and with/without Thesis)

**Degree Requirements**

Total course equivalents: forty-one (123 credits) plus 3 course equivalents BUSR-4950 (3 credits) and BUSR-4990 (6 credits) for Thesis Option plus three Co-op work terms for Co-op Option

a) Business 14 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980
b) Business 8 courses towards specialization in Accounting: ACCT-2510, ACCT-2520, ACCT-3520, ACCT-3560, ACCT-3580, ACCT-3600, ACCT-3610 and ACCT-4570
c) Computer Science 14 courses: COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-3150, COMP-3300, COMP-3340, COMP-3670, COMP-4250 plus two 3000-level or above Computer Science courses
d) Economics 2 courses: ECON-1100, ECON-1110
e) Mathematics and Statistics 3 courses: MATH-1250, MATH-1720 (or MATH-1760), and STAT-2910.

Note: to be eligible for the Accounting Specialization, students must receive a minimum grade of 65% in each gate-in course ACCT-1510 and ACCT-2550, an overall minimum average of 67% in ACCT-2510,

ACCT-2520, ACCT-3520, ACCT-3560, ACCT-3580, ACCT-3600, ACCT-3610 and ACCT-4570 and a minimum grade of 70% in the capstone course ACCT-4570.

Courses used to calculate the major average are: The courses listed in sections a), b), c) and any courses taken in the major area of study.

## Honours Business Administration and Computer Science with Specialization in Human Resources (with/without Co-op and with/without Thesis)

**Degree Requirements**

Total course equivalents: forty-one (123 credits) plus 3 course equivalents BUSR-4950 (3 credits) and BUSR-4990 (6 credits) for Thesis Option plus three Co-op work terms for Co-op Option

a) Business 14 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980
b) Business 8 courses towards specialization in Human Resources: MGMT-3420, MGMT-3440, MGMT-4410, MGMT-4510, MGMT-4520, MGMT-4850 plus any 2 of MGMT-3830, MGMT-4450, MGMT-4480, MGMT-4490, and MGMT-4810.
c) Computer Science 14 courses: COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-3150, COMP-3300, COMP-3340, COMP-3670, COMP-4250 plus two 3000-level or above Computer Science courses
d) Economics 2 courses: ECON-1100, ECON-1110
e) Mathematics and Statistics 3 courses: MATH-1250, MATH-1720 (or MATH-1760), and STAT-2910.

Note: to be eligible for Human Resources specialization, students must receive a minimum grade of 65% in the gate-in course MGMT-2430, an overall minimum average of 70% in MGMT-3420, MGMT-3440, MGMT-4410, MGMT-4510, MGMT-4520, MGMT-4850 plus any 2 of MGMT-3830, MGMT-4450, MGMT-4480, MGMT-4490, and MGMT-4810 and a minimum grade of 70% in the capstone course MGMT-4850.

Courses used to calculate the major average are: The courses listed in sections a), b), c) and any courses taken in the major area of study.

## Honours Business Administration and Computer Science with Specialization in Finance (with/without Co-op and with/without Thesis)

**Degree Requirements**

Total course equivalents: forty (120 credits) or forty-two (126 credits) for Thesis Option plus three Co-op work terms for Co-op Option

a) Business 14 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980
b) Business 6 courses towards specialization in Finance: FINA-3710, FINA-4740 and any 4* of FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910
c) Computer Science 14 courses: COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-3150, COMP-3300, COMP-3340, COMP-3670, COMP-4250 plus two 3000-level or above Computer Science courses
d) Economics 2 courses: ECON-1100, ECON-1110
e) Mathematics and Statistics 3 courses: MATH-1250, MATH-1720 (or MATH-1760), and STAT-2910.
f) One additional course from Business or 3 course equivalents for Thesis Option: BUSR-4950, BUSR-4990 (6.0 credit course).

Note: to be eligible for Finance specialization, students must receive a minimum grade of 65% in the gate-in course FINA-2710, an overall minimum average of 67% in FINA-3710, FINA-4740 and any 4* FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910, and a minimum grade of 67% in the capstone course FINA-4740.

*Students who successfully complete the CSC exam (1 and 2) will be able to substitute this completion for one of the 5 specialization courses FINA-3710, FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910. Students who successfully complete the CFA Level 1 exam will be able to substitute this completion for 2 of the 5 specialization courses FINA-3710, FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910. The substitutions above only apply toward the finance specialization and do not apply in any way toward their Bachelor of Commerce degree requirements. It is the student's responsibility to bring forward the appropriate documentation in a timely manner in order to receive the above noted substitutions.

Courses used to calculate the major average are: The courses listed in sections a), b), c) and any courses taken in the major area of study.

## Honours Business Administration and Computer Science with Specialization in Supply Chain and Business Analytics (with/without Co-op and with/without Thesis)

**Degree Requirements**

Total course equivalents: forty (120 credits) or forty-two (126 credits) for Thesis Option plus three Co-op work terms for Co-op Option

a) Business 14 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-2200, MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980
b) Business 6 courses towards specialization in Supply Chain and Business Analytics: MSCI-4230 or MSCI-4310 or MSCI-4980 and any 5 of MSCI-2230, MSCI-3050, MSCI-3110, MSCI-3120, MSCI-3200, MSCI-3230, MSCI-3310, MSCI-4230, MSCI-4310, MSCI-4910, MSCI-4950, MSCI-4980, and MKTG-3390 including at least two of MSCI-3050, MSCI-3200, MSCI-3310, MSCI-4310, MSCI-4980, MKTG-3390, and at least two of MSCI-2230, MSCI-3110, MSCI-3120, MSCI-3230, MSCI-4230.
c) Computer Science 14 courses: COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-3150, COMP-3300, COMP-3340, COMP-3670, COMP-4250 plus two 3000-level or above Computer Science courses

d) Economics 2 courses: ECON-1100, ECON-1110
e) Mathematics and Statistics 3 courses: MATH-1250, MATH-1720 (or MATH-1760), and STAT-2910.
f) One additional course from Business or 3 course equivalents for Thesis Option: BUSR-4950, BUSR-4990 (6.0 credit course).

Note: to be eligible for Supply Chain and Business Analytics specialization, students must receive a minimum grade of 65% in the gate-in course MSCI-2200; an overall minimum average of 67% in the capstone course MSCI-4230 or MSCI-4310 or MSCI-4980 and any 5 of MSCI-2230, MSCI-3050, MSCI-3110, MSCI-3120, MSCI-3200, MSCI-3230, MSCI-3310, , MSCI-4230, MSCI-4310, MSCI-4910, MSCI-4950, MSCI-4980, and MKTG-3390 including at least two of MSCI-3050, MSCI-3200, MSCI-3310, MSCI-4310, MSCI-4980, MKTG-3390, and at least two of MSCI-2230, MSCI-3110, MSCI-3120, MSCI-3230, , MSCI-4230; and a minimum grade of 67% in the capstone course MSCI-4230 or MSCI-4310 or MSCI-4980.

Courses used to calculate the major average are: The courses listed in sections a), b), c) and any courses taken in the major area of study.

## Honours Business Administration and Computer Science with Specialization in Marketing (with/without Co-op and with/without Thesis)

**Degree Requirements**

Total course equivalents: forty-one (123 credits) plus 3 course equivalents BUSR-4950 (3 credits) and BUSR-4990 (6 credits) for Thesis Option plus three Co-op work terms for Co-op Option

a) Business 14 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980
b) Business 8 courses towards specialization in Marketing: MKTG-2320, MKTG-3320, MKTG-3340, MKTG-4390 and any 4 of MKTG-3350, MKTG-3370, MKTG-3380, MKTG-3390, MKTG-4320, MKTG-4330, MKTG-4350, MKTG-4360, MKTG-4370, MKTG-4380, MKTG-4450 and MKTG-4910
c) Computer Science 14 courses: COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-3150, COMP-3300, COMP-3340, COMP-3670, COMP-4250 plus two 3000-level or above Computer Science courses
d) Economics 2 courses: ECON-1100, ECON-1110
e) Mathematics and Statistics 3 courses: MATH-1250, MATH-1720 (or MATH-1760), and STAT-2910.

Note: to be eligible for Marketing specialization, students must receive a minimum grade of 65% in each gate-in course MKTG-1310 and MKTG-2320, an overall minimum average of 67% in MKTG-3320, MKTG-3340, MKTG-4390 and any 4 of MKTG-3350, MKTG-3370, MKTG-3380, MKTG-3390, MKTG-4320, MKTG-4330, MKTG-4350, MKTG-4360, MKTG-4370, MKTG-4380, MKTG-4450 and MKTG-4910, and a minimum grade of 67% in the capstone course MKTG-4390.

Courses used to calculate the major average are: The courses listed in sections a), b), c) and any courses taken in the major area of study.

# Honours Business Administration and Computer Science with Specialization in Strategy and Entrepreneurship (with/without Co-op and with/without Thesis)

**Degree Requirements**

Total course equivalents: forty (120 credits) or forty-two (126 credits) for Thesis Option plus three Co-op work terms for Co-op Option

a) Business 14 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980
b) Business 6 courses towards specialization in Strategy and Entrepreneurship: STEN-2900, one of STEN-3900, STEN-3910, and any four of STEN-3930, STEN-4900, STEN-4910, STEN-4930, STEN-4950, STEN-4960, and MGMT-4450 including one of STEN-4930, STEN-4950 and STEN-4960.
c) Computer Science 14 courses: COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-3150, COMP-3300, COMP-3340, COMP-3670, COMP-4250 plus two 3000-level or above Computer Science courses
d) Economics 2 courses: ECON-1100, ECON-1110
e) Mathematics and Statistics 3 courses: MATH-1250, MATH-1720 (or MATH-1760), and STAT-2910.
f) One additional course from Business or 3 course equivalents for Thesis Option: BUSR-4950, BUSR-4990 (6.0 credit course).

Note: to be eligible for Strategy and Entrepreneurship specialization, students must receive a minimum grade of 67% in each gate-in course STEN-1000 and STEN-2900, a minimum average of 67% in STEN-2900, one of STEN-3900, STEN-3910, and any four of STEN-3930, STEN-4900, STEN-4910, STEN-4930, STEN-4950, STEN-4960, and MGMT-4450 including 1 of STEN-4930, STEN-4950 and STEN-4960 and a minimum grade of 70% in the capstone course 1 of STEN-4930, STEN-4950 and STEN-4960.

Courses used to calculate the major average are: The courses listed in sections a), b), c) and any courses taken in the major area of study.

**Recommended Course Sequencing for Bachelor of Commerce and Computer Science programs**

YEAR 1

First Term
ECON-1100
COMP-1000
COMP-1400
MATH-1720 (or MATH-1760)
STEN-1000

Second Term
ECON-1110
COMP-1410
STAT-2910
ACCT-1510
MGMT-1000

YEAR 2

First Term
COMP-2120
COMP-2650
MATH-1250
ACCT-2550
MGMT-2400

Second Term
COMP-2540
COMP-2560
MGMT-2430
MSCI-2200
MKTG-1310

YEAR 3

First Term
COMP-3150
COMP-3300
FINA-2700
MSCI-3310 or MSCI-3410
One Computer Science course

Second Term
COMP-3340
COMP-3670
FINA-2710
STEN-3970
One course from within Business Administration

YEAR 4

First Term
MGMT-3000
Three Business courses
One Computer Science course

Second Term
STEN-4980
COMP-4250
Three Business courses

**RECOMMENDED COURSE SEQUENCE (Co-operative Education Program)**
The work/study sequence is as follows:

YEAR 1

Fall term: Study
Winter term: Study

YEAR 2
Fall term: Study
Winter term: Study
Summer term: Work

YEAR 3
Fall term: Study
Winter term: Work
Summer term: Study

YEAR 4
Fall term: Work
Winter term: Study
Summer term: Study

YEAR 1

First Term
ECON-1100
COMP-1000
COMP-1400
MATH-1720 (or MATH-1760)
STEN-1000

Second Term
ECON-1110
COMP-1410
STAT-2910
ACCT-1510
MGMT-1000

YEAR 2
First Term
COMP-2120
COMP-2650
MATH-1250
ACCT-2550
MGMT-2400

Second Term
COMP-2540
COMP-2560
MGMT-2430
MSCI-2200
MKTG-1310

Third Term

STEN-2050 Work term

YEAR 3

First Term
COMP-3150
COMP-3300
FINA-2700
MSCI-3310 or MSCI-3410
One Computer Science course

Second Term
STEN-3050 Work term

Third Term
COMP-3340
COMP-3670
FINA-2710
STEN-3970
One course from within Business Administration

YEAR 4

First Term
STEN-4050 Work term

Second Term
MGMT-3000
COMP-4250
Three Business courses

Third Term
STEN-4980
Three Business courses
One Computer Science course

## Honours Business Administration and Economics (with/without Thesis)

The University of Windsor offers an Interdisciplinary Program leading to the Honours Business Administration and Economics. The objective of the program is to prepare students for the growing demand for graduates trained in Business with a strong Economics background. The program combines both the core of the Bachelor of Commerce program and the core of the Bachelor of Arts Economics

program while allowing the student to use flexible course requirements to gain additional training in Economics.

**Degree Requirements**

Total course equivalents: forty* (120 credits)

a) Business 16 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-1000, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980
b) Business 7 courses: Seven business electives, alternatively, students in the Thesis Option will complete BUSR-4950, BUSR-4990 (6.0 credit course), and four additional business courses.
c) Economics 13 courses: ECON-1100, ECON-1110, ECON-2120 (or STAT-2950), ECON-2210, ECON-2220, ECON-2310 and ECON-2320; plus six additional economics courses, at least 4 or which have to be at the 3000 level or above.
d) Mathematics 1 course: MATH-1980/1250/1720/1760 (or equivalents);
e) Statistics 1 course: MSCI-2020 or STAT-2910 (or STAT-2920)
f) 2 courses from any area of study.

Courses used to calculate the major average are: The courses listed in sections a), b) c) and any courses taken in the major area of study.

## Honours Business Administration and Economics with Specialization in Accounting (with/without Thesis)

**Degree Requirements**

Total course equivalents: forty (120 credits) or forty-two (126 credits) for Thesis Option

a) ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-1000, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980
b) Business 8 courses towards specialization in Accounting: ACCT-2510, ACCT-2520, ACCT-3520, ACCT-3560, ACCT-3580, ACCT-3600, ACCT-3610 and ACCT-4570
c) Economics 13 courses: ECON-1100, ECON-1110, ECON-2120 (or STAT-2950), ECON-2210, ECON-2220, ECON-2310 and ECON-2320; plus six additional economics courses, at least 4 or which have to be at the 3000 level or above.
d) Mathematics 1 course: MATH-1980/1250/1720/1760 (or equivalents);
e) Statistics 1 course: MSCI-2020 or STAT-2910 (or STAT-2920)
f) One additional course or 3 course equivalents for Thesis Option: BUSR-4950, BUSR-4990 (6.0 credit course).

Note: to be eligible for the Accounting Specialization, students must receive a minimum grade of 65% in each gate-in course ACCT-1510 and ACCT-2550, an overall minimum average of 67% in ACCT-2510, ACCT-2520, ACCT-3520, ACCT-3560, ACCT-3580, ACCT-3600, ACCT-3610 and ACCT-4570 and a minimum grade of 70% in the capstone course ACCT-4570.

Courses used to calculate the major average are: The courses listed in sections a), b), c) and any courses taken in the major area of study.

# Honours Business Administration and Economics with Specialization in Human Resources (with/without Thesis)

**Degree Requirements**

Total course equivalents: forty (120 credits) or forty-three (129 credits) for Thesis Option

a) ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-1000, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980
b) Business 8 courses towards specialization in Human Resources: MGMT-3420, MGMT-3440, MGMT-4410, MGMT-4510, MGMT-4520, MGMT-4850 plus any 3 2 of MGMT-3830, MGMT-4450, MGMT-4480, MGMT-4490, and MGMT-4810.
c) ECON-1100, ECON-1110, ECON-2120 (or STAT-2950), ECON-2210, ECON-2220, ECON-2310 and ECON-2320; plus six additional economics courses, at least 4 or which have to be at the 3000 level or above.
d) Mathematics 1 course: MATH-1980/1250/1720/1760 (or equivalents);
e) Statistics 1 course: MSCI-2020 or STAT-2910 (or STAT-2920)
f) One additional course or 3 course equivalents for Thesis Option: BUSR-4950, BUSR-4990 (6.0 credit course).

Note: to be eligible for Human Resources specialization, students must receive a minimum grade of 65% in the gate-in course MGMT-2430, an overall minimum average of 70% in MGMT-3420, MGMT-3440, MGMT-4410, MGMT-4510, MGMT-4520, MGMT-4850 plus any 2 of MGMT-3830, MGMT-4450, MGMT-4480, MGMT-4490, and MGMT-4810 and a minimum grade of 70% in the capstone course MGMT-4850.

Courses used to calculate the major average are: The courses listed in sections a), b), c) and any courses taken in the major area of study.

# Honours Business Administration and Economics with Specialization in Finance (with/without Thesis)

**Degree Requirements**

Total course equivalents: forty (120 credits)

a) Business 16 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-1000, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980
b) Business 6 courses towards specialization in Finance: FINA-3710, FINA-4740 and any 4* of FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910
c) Economics 13 courses: ECON-1100, ECON-1110, ECON-2120 (or STAT-2950), ECON-2210, ECON-2220, ECON-2310 and ECON-2320; plus six additional economics courses, at least 4 or which have to be at the 3000 level or above.
d) Mathematics 1 course: MATH-1980/1250/1720/1760 (or equivalents);
e) Statistics 1 course: MSCI-2020 or STAT-2910 (or STAT-2920)
f) 3 courses including one from Business and two from any area of study, alternatively, students in the Thesis Option will complete 3 course equivalents BUSR-4950, BUSR-4990 (6.0 credit course).

Note: to be eligible for Finance specialization, students must receive a minimum grade of 65% in the gate-in course FINA-2710, an overall minimum average of 67% in FINA-3710, FINA-4740 and any 4* of FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910, and a minimum grade of 67% in the capstone course FINA-4740.

*Students who successfully complete the CSC exam (1 and 2) will be able to substitute this completion for one of the 5 specialization courses FINA-3710, FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910. Students who successfully complete the CFA Level 1 exam will be able to substitute this completion for 2 of the 5 specialization courses FINA-3710, FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910. The substitutions above only apply toward the finance specialization and do not apply in any way toward their Bachelor of Commerce degree requirements. It is the student's responsibility to bring forward the appropriate documentation in a timely manner in order to receive the above noted substitutions.

Courses used to calculate the major average are: The courses listed in sections a), b), c) and any courses taken in the major area of study.

## Honours Business Administration and Economics with Specialization in Supply Chain and Business Analytics (with/without Thesis)

**Degree Requirements**

Total course equivalents: forty* (120 credits)

a) Business 16 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-1000, MSCI-2130, MSCI-2200, MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980
b) Business 6 courses towards specialization in Supply Chain and Business Analytics: MSCI-4230 or MSCI-4310 or MSCI-4980 and any 5 of MSCI-2230, MSCI-3050, MSCI-3110, MSCI-3120, MSCI-3200, MSCI-3230, MSCI-3310, MSCI-4230, MSCI-4310, MSCI-4910, MSCI-4950, MSCI-4980, and MKTG-3390 including at least two of MSCI-3050, MSCI-3200, MSCI-3310, MSCI-4310, MSCI-4980, MKTG-3390, and at least two of MSCI-2230, MSCI-3110, MSCI-3120, MSCI-3230, MSCI-4230.
c) Economics 13 courses: ECON-1100, ECON-1110, ECON-2120 (or STAT-2950), ECON-2210, ECON-2220, ECON-2310 and ECON-2320; plus six additional economics courses, at least 4 or which have to be at the 3000 level or above.
d) Mathematics 1 course: MATH-1980/1250/1720/1760 (or equivalents);
e) Statistics 1 course: MSCI-2020 or STAT-2910 (or STAT-2920)
f) 3 courses including one from Business and two from any area of study, alternatively, students in the Thesis Option will complete 3 course equivalents BUSR-4950, BUSR-4990 (6.0 credit course).

Note: to be eligible for Supply Chain and Business Analytics specialization, students must receive a minimum grade of 65% in each of the gate-in courses MSCI-2200 and MSCI-2130; an overall minimum average of 67% in the capstone course MSCI-4230 or MSCI-4310 or MSCI-4980 and any 5 of MSCI-2230, MSCI-3050, MSCI-3110, MSCI-3120, MSCI-3200, MSCI-3230, MSCI-3310, MSCI-4230, MSCI-4310, MSCI-4910, MSCI-4950, MSCI-4980, and MKTG-3390 including at least two of MSCI-3050, MSCI-3200, MSCI-3310, MSCI-4310, MSCI-4980, MKTG-3390, and at least two of MSCI-2230, MSCI-3110, MSCI-3120,

MSCI-3230, MSCI-4230; and a minimum grade of 67% in the capstone course MSCI-4230 or MSCI-4310 or MSCI-4980.

Courses used to calculate the major average are: The courses listed in sections a), b), c) and any courses taken in the major area of study.

## Honours Business Administration and Economics with Specialization in Marketing (with/without Thesis)

**Degree Requirements**

Total course equivalents: forty (120 credits) or forty-two (126 credits) for Thesis Option

a) Business 16 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-1000, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980
b) Business 8 courses towards specialization in Marketing: MKTG-2320, MKTG-3320, MKTG-3340, MKTG-4390 and any 4 of MKTG-3350, MKTG-3370, MKTG-3380, MKTG-3390, MKTG-4320, MKTG-4330, MKTG-4350, MKTG-4360, MKTG-4370, MKTG-4380, MKTG-4450 and MKTG-4910
c) Economics 13 courses: ECON-1100, ECON-1110, ECON-2120 (or STAT-2950), ECON-2210, ECON-2220, ECON-2310 and ECON-2320; plus six additional economics courses, at least 4 or which have to be at the 3000 level or above.
d) Mathematics 1 course: MATH-1980/1250/1720/1760 (or equivalents);
e) Statistics 1 course: MSCI-2020 or STAT-2910 (or STAT-2920)
f) One additional course or 3 course equivalents for Thesis Option: BUSR-4950, BUSR-4990 (6.0 credit course).

Note: to be eligible for Marketing specialization, students must receive a minimum grade of 65% in each gate-in course MKTG-1310 and MKTG-2320, an overall minimum average of 67% in MKTG-3320, MKTG-3340, MKTG-4390 and any 4 of MKTG-3350, MKTG-3370, MKTG-3380, MKTG-3390, MKTG-4320, MKTG-4330, MKTG-4350, MKTG-4360, MKTG-4370, MKTG-4380, MKTG-4450 and MKTG-4910, and a minimum grade of 67% in the capstone course MKTG-4390.

Courses used to calculate the major average are: The courses listed in sections a), b), c) and any courses taken in the major area of study.

## Honours Business Administration and Economics with Specialization in Strategy and Entrepreneurship (with/without Thesis)

**Degree Requirements**

Total course equivalents: forty (120 credits)

a) Business 16 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-1000, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980

b) Business 6 courses towards specialization in Strategy and Entrepreneurship: STEN-2900, one of STEN-3900, STEN-3910, and any four of STEN-3930, STEN-4900, STEN-4910, STEN-4930, STEN-4950, STEN-4960, and MGMT-4450 including one of STEN-4930, STEN-4950 and STEN-4960.
c) Economics 13 courses: ECON-1100, ECON-1110, ECON-2120 (or STAT-2950), ECON-2210, ECON-2220, ECON-2310 and ECON-2320; plus six additional economics courses, at least 4 or which have to be at the 3000 level or above.
d) Mathematics 1 course: MATH-1980/1250/1720/1760 (or equivalents);
e) Statistics 1 course: MSCI-2020 or STAT-2910 (or STAT-2920)
f) 3 courses including one from Business and two from any area of study, alternatively, students in the Thesis Option will complete 3 course equivalents BUSR-4950, BUSR-4990 (6.0 credit course).

Note: to be eligible for Strategy and Entrepreneurship specialization, students must receive a minimum grade of 67% in each gate-in course STEN-1000 and STEN-2900, a minimum average of 67% in STEN-2900, one of STEN-3900, STEN-3910, and any four of STEN-3930, STEN-4900, STEN-4910, STEN-4930, STEN-4950, STEN-4960, and MGMT-4450 including 1 of STEN-4930, STEN-4950 and STEN-4960 and a minimum grade of 70% in the capstone course 1 of STEN-4930, STEN-4950 and STEN-4960.

Courses used to calculate the major average are: The courses listed in sections a), b), c) and any courses taken in the major area of study.

**Recommended Course Sequencing for Business and Economics programs**

Students who desire to concentrate their studies in a particular area may need to modify this recommended sequence. These students should consult a faculty member in that area for an optimal sequence of courses.

YEAR 1

First Term
ECON-1100
MATH-1980/1250/1720/1760 (or equivalents);
STEN-1000
MGMT-1000
MKTG-1310

Second Term
ECON-1110
MSCI-1000
ACCT-1510
MGMT-2400
MGMT-2430

YEAR 2

First Term
ECON-2210
ECON-2310
MSCI-2020 or STAT-2910 (or STAT-2920)
ACCT-2550
FINA-2700

Second Term
ECON-2120
ECON-2220
FINA-2710
MSCI-2200
MSCI-3310 or MSCI-3410

YEAR 3

First Term
ECON-2320
MSCI-2130
Two courses from any area of study
One additional Business course

Second Term
MGMT-3000
STEN-3970
One additional Business courses
Two Economics courses

YEAR 4

First Term
Two Economics courses
Three Business courses

Second Term
STEN-4980
Two Business courses
Two Economics courses

Notes:
1) Non-specified courses taken in the Odette School of Business Administration should be chosen in consultation with the appropriate Area Chairperson and will lead to some specialization.
2) Non-specified courses taken in Economics should likewise be chosen in consultation with an advisor.
3) Credit may not be obtained for both of MGMT-3440 and ECON-3530.
4) Students who wish to accelerate their programs by taking courses in Summer must seek academic advising in the appropriate area.

## Honours Business Administration and Mathematics (with/without Thesis)

**Degree Requirements**

Total courses: forty (120 credits)

a) Business 20 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, FINA-2700, MGMT-3000, FINA-2710, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980; five additional business courses OR BUSR-4950 (3 credits), BUSR-4990 (6 credits) and two additional business courses for Thesis Option,
b) Mathematics and Statistics 16 courses: MATH-1250 or MATH-1260, MATH-1720 or MATH-1760, MATH-1730, MATH-1020, MATH-2780, MATH-2790, MATH-2250, MATH-2251, MATH-3580, MATH-3581, MATH-3590, MATH-3200, STAT-2920, STAT-2950; plus two courses from ACSC-3980, MATH-4960, and STAT-3960.
c) Economics 2 courses: ECON-1100, ECON-1110
d) Computer Science 2 courses: COMP-1400, COMP-1410

Courses used to calculate the major average are: courses listed under requirements (a) to (c), and any courses taken in the major area(s) of study

## Business Administration and Mathematics with Specialization in Supply Chain and Business Analytics (with/without Thesis)

**Degree Requirements**

Total courses: forty (120 credits) or forty-three (129 credits) for Thesis Option.

a) Business 15 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, FINA-2700, MGMT-3000, FINA-2710, MSCI-2130, MSCI-2200, MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980;
b) Business 5 courses towards Specialization in Supply Chain and Business Analytics: MSCI-4230 or MSCI-4310 or MSCI-4980 and any 4 of MSCI-2230, MSCI-3050, MSCI-3110, MSCI-3120, MSCI-3200, MSCI-3230, MSCI-3310, , MSCI-4230, MSCI-4310, MSCI-4910, MSCI-4950, MSCI-4980, and MKTG-3390 including at least two of MSCI-3050, MSCI-3200, MSCI-3310, MSCI-4310, MSCI-4980, MKTG-3390, and at least two of MSCI-2230, MSCI-3110, MSCI-3120, MSCI-3230, , MSCI-4230.
c) Mathematics and Statistics 16 courses: MATH-1250 or MATH-1260, MATH-1720 or MATH-1760, MATH-1730, MATH-1020, MATH-2780, MATH-2790, MATH-2250, MATH-2251, MATH-3580, MATH-3581, MATH-3590, MATH-3200, STAT-2920, STAT-2950; plus two courses from ACSC-3980, MATH-4960, and STAT-3960.
d) Economics 2 courses: ECON-1100, ECON-1110
e) Computer Science 2 courses: COMP-1400, COMP-1410
f) For Thesis students: BUSR-4950 (3 credits) and BUSR-4990 (6 credits)

Note: to be eligible for Supply Chain and Business Analytics specialization, students must receive a minimum grade of 65% in each of the gate-in courses MSCI-2200 and MSCI-2130; a minimum grade of 67% in the capstone course MSCI-4230 or MSCI-4310 or MSCI-4980 and any 4 of MSCI-2230, MSCI-3050, MSCI-3110, MSCI-3120, MSCI-3200, MSCI-3230, MSCI-3310, , MSCI-4230, MSCI-4310, MSCI-4910, MSCI-4950, MSCI-4980, and MKTG-3390 including at least two of MSCI-3050, MSCI-3200, MSCI-3310, MSCI-4310, MSCI-4980, MKTG-3390, and at least two of MSCI-2230, MSCI-3110, MSCI-3120, MSCI-3230, , MSCI-4230; and a minimum grade of 67% in the capstone course MSCI-4230 or MSCI-4310 or MSCI-4980.

Courses used to calculate the major average are: courses listed under requirements (a)-(c), (e), and (f), and any courses taken in the major area(s) of study.

Graduands of Honours Business Administration and Mathematics with Specialization in Supply Chain and Business Analytics (with/without Thesis) in fall 2020 or earlier may follow fall, 2018 or earlier calendar requirements.

Graduands of Honours Business Administration and Mathematics with Specialization in Supply Chain and Business Analytics (with/without Thesis) in spring 2021 will be required to take MSCI-3410 as stated in fall, 2019 or later calendar requirements.

## Honours Business Administration and Mathematics with Specialization in Finance (with/without Thesis)

**Degree Requirements**

Total courses: forty-one (123 credits) or forty-four (132 credits) for Thesis Option.

a) Business 15 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, FINA-2700, MGMT-3000, FINA-2710, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980;
b) Business 6 courses towards Specialization in Finance: FINA-3710, FINA-4740 and any 4* of FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910
c) Mathematics and Statistics 16 courses: MATH-1250 or MATH-1260, MATH-1720 or MATH-1760, MATH-1730, MATH-1020, MATH-2780, MATH-2790, MATH-2250, MATH-2251, MATH-3580, MATH-3581, MATH-3590, MATH-3200, STAT-2920, STAT-2950; plus two courses from ACSC-3980, MATH-4960, and STAT-3960.
d) Economics 2 courses: ECON-1100, ECON-1110
e) Computer Science 2 courses: COMP-1400, COMP-1410
f) For Thesis students: BUSR-4950 (3 credits) and BUSR-4990 (6 credits)

Note: to be eligible for Finance specialization, students must receive a minimum grade of 65% in the gate-in course FINA-2710, a minimum average grade of 67% in FINA-3710, FINA-4740 and any 4* of FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910 and a minimum grade of 67% in the capstone course FINA-4740.

*Students who successfully complete the CSC exam (1 & 2) will be able to substitute this completion for one of the 5 specialization courses FINA-3710, FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910. Students who successfully complete the CFA Level 1 exam will be able to substitute this completion for 2 of the 5 specialization courses FINA-3710, FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910. The substitutions above only apply toward the finance specialization and do not apply in any way toward their Bachelor of Commerce degree requirements. It is the student's responsibility to bring forward the appropriate documentation in a timely manner in order to receive the above noted substitutions.

Courses used to calculate the major average are: courses listed under requirements (a)-(c), (e), and (f), and any courses taken in the major area(s) of study.

## Honours Mathematics with Finance Concentration

This is a joint offering between the Department of Mathematics and Statistics and the Odette School of Business. See Department of Mathematics and Statistics for details.

# Honours Business Administration and Political Science (with/without thesis)

**Degree requirements**

Total courses: 40 courses or 120 credits

a. Business - 16 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-1000, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980.
b. Business Non-Thesis stream: 7 additional Business courses.
   OR
   Business Thesis stream: BUSR-4950 (3 credits) and BUSR-4990 (6 credits) and 4 additional Business courses.
c. Political Science - 8 courses: POLS-1000, POLS-1300, POLS-1600, POLS-2200, POLS-2210, POLS-2520, POLS-2750, and POLS-3230
d. Two of POLS-3540, POLS-3550, POLS-3350, POLS-3560
e. Political Science Non-Thesis stream: Three of POLS-4110, POLS-4120, POLS-4210, POLS-4220, POLS-4640, POLS-4650
   OR
   Political Science Thesis Stream*: POLS-4970, POLS-4980, and one of POLS-4110, POLS-4120, POLS-4210, POLS-4220, POLS-4640, POLS-4650
f. Economics 2 courses: ECON-1100, ECON-1110
g. Mathematics 1 course: MATH-1980/1250/1720/1760 (or equivalents)
h. Statistics 1 course: SOSC-2500 or MSCI-2020 or equivalent

*Students maintaining a minimum cumulative 80% average and a minimum 80% average in Political Science courses upon beginning semester 7 may complete a Political Science undergraduate thesis under the supervision of a faculty member in the department. The thesis requires successful completion of the courses POLS-4970 and POLS-4980 during semesters 7 and 8 of the program.

Students in the Honours Business Administration and Political Science (with/without thesis) may also choose to specialize in any other Business specialization, but this may require more than 40 courses. Students are advised to see the calendar for specialization requirements and meet a student advisor.

Courses used to calculate the major average are: The courses listed in sections (a)-(e) and any courses taken in the major areas of study will be used to calculate the major average.

**Suggested Course Sequencing**

YEAR 1

First Term
ECON-1100
MATH-1980/1250/1720/1760 (or equivalents)
POLS-1000
MGMT-1000
STEN-1000

Second Term
ECON-1110
POLS-1600
ACCT-1510
MKTG-1310
MSCI-1000

YEAR 2

First Term
SOSC-2500 or MSCI-2020 or equivalent
ACCT-2550
MGMT-2400
FINA-2700
POLS-1300

Second Term
POLS-2750 or POLS2520
MGMT-2430
FINA-2710
MSCI-2130
MSCI-2200

YEAR 3

First Term
POLS-2750 or POLS2520
POLS-2200 or POLS-2210 or POLS-3230
One of POLS-3540, POLS-3550, POLS-3350, POLS-3560
MGMT-3000
STEN-3970

Second Term
Two of POLS-2200 or POLS-2210 or POLS-3230
MSCI-3310 or MSCI-3410
One Business course
One Political Science course

YEAR 4

First Term
POLS-4970 (if accepted into thesis stream) and one of POLS-4110, POLS-4120, POLS-4210, POLS-4220, POLS-4640, POLS-4650
Two of POLS-4110, POLS-4120, POLS-4210, POLS-4220, POLS-4640, POLS-4650 (if in non-thesis stream)
Three Business courses

Second Term
STEN-4980
POLS-4980 (if accepted into thesis stream)
One of POLS-4110, POLS-4120, POLS-4210, POLS-4220, POLS-4640, POLS-4650 (if in non-thesis stream)
Three Business courses

## Honours Business Administration and Political Science with Specialization in Human Resources) (with/without thesis)

**Degree requirements**

Total courses: 40 courses or 120 credits

a. Business - 23 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-1000, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980; MGMT-3420, MGMT-3440, MGMT-4410, MGMT-4510, MGMT-4520, MGMT-4850 plus any 1 of MGMT-3830, MGMT-4450, MGMT-4480, MGMT-4490, and MGMT-4810.
b. Political Science - 8 courses: POLS-1000, POLS-1300, POLS-1600, POLS-2200, POLS-2210, POLS-2520, POLS-2750, and POLS-3230
c. Two of POLS-3540, POLS-3550, POLS-3350, POLS-3560
d. Political Science Non-Thesis stream: Three of POLS-4110, POLS-4120, POLS-4210, POLS-4220, POLS-4640, POLS-4650
   OR
   Political Science Thesis stream*: POLS-4970, POLS-4980, and one of POLS-4110, POLS-4120, POLS-4210, POLS-4220, POLS-4640, POLS-4650
e. Economics 2 courses: ECON-1100, ECON-1110
f. Mathematics 1 course: MATH-1980/1250/1720/1760 (or equivalents)
g. Statistics 1 course: SOSC-2500 or MSCI-2020 or equivalent

* Students maintaining a minimum cumulative 80% average and a minimum 80% average in Political Science courses upon beginning semester 7 may complete a Political Science undergraduate thesis under the supervision of a faculty member in the department. The thesis requires successful completion of the courses POLS-4970 and POLS-4980 during semesters 7 and 8 of the program.

Courses used to calculate the major average are: The courses listed in sections (a)-(d) and any courses taken in the major areas of study will be used to calculate the major average.

## Honours Business Administration and Psychology (with/without thesis)

**Degree Requirements**

Total courses: 40 courses or 120 credits

a) Business 23 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-2130, MSCI-1000, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980, and 7 additional Business courses
b) Psychology 13 courses, including PSYC-1150, PSYC-1160, PSYC-2300, PSYC-3200, PSYC-3700. The total number of Psychology courses must include at least four 3000-level Psychology courses and two 4000-level Psychology courses.
c) Economics 2 courses: ECON-1100, ECON-1110
d) Mathematics 1 course: MATH-1980/1250/1720/1760 (or equivalents);
e) Statistics 1 course: SOSC-2500 or MSCI-2020

A thesis option is available through the Odette School of Business or the Department of Psychology. For Business thesis option, students will complete BUSR-4950 (3 credits) and BUSR-4990 (6 credits). For Psychology thesis option, students will complete PSYC-4960 and PSYC-4970.

Courses used to calculate the major average are: courses listed in under (a) and (b) and any courses taken in the major area(s) of study.

**Suggested Course Sequencing**

YEAR 1

First Term
ECON-1100
MATH-1980/1250/1720/1760 (or equivalents);
PSYC-1150
MGMT-1000
STEN-1000

Second Term
ECON-1110
PSYC-1160
ACCT-1510
MKTG-1310
MSCI-1000

YEAR 2

First Term
SOSC-2500 or MSCI-2020
ACCT-2550
MGMT-2400
FINA-2700
One Psychology course

Second Term
PSYC-2300
MGMT-2430
FINA-2710
MSCI-2130
MSCI-2200

YEAR 3

First Term
PSYC-3200
MGMT-3000
MSCI-3310 or MSCI-3410
Two Psychology courses

Second Term
PSYC-3700
STEN-3970
Two Psychology courses
One Business course

YEAR 4

First Term
Two Psychology courses
Three Business courses

Second Term
STEN-4980
One Psychology course
Three Business courses

Students in the Honours Business Administration and Psychology (with/without thesis) also may choose to concentrate in Finance, Supply Chain and Business Analytics, or Strategy and Entrepreneurship. See calendar for concentration requirements.

## Honours Business Administration and Psychology with Specialization in Human Resources Management and Industrial Organizational Psychology (with/without thesis)

**Degree Requirements**

Total courses: 40 courses or 120 credits

a) Business 23 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710,-MSCI-2130, MSCI-1000, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980; MGMT-3420, MGMT-3440, MGMT-4410, MGMT-4510, MGMT-4520, MGMT-4850, and 1 additional course from MGMT-3830, MGMT-4450, MGMT-4480, MGMT-4490, MGMT-4810 and MGMT-4910
b) Psychology 13 courses, including PSYC-1150, PSYC-1160, PSYC-2300, PSYC-3200, PSYC-3700. The total number of Psychology courses must include at least four 3000-level Psychology courses and two 4000-level Psychology courses.
c) Economics 2 courses: ECON-1100,-ECON-1110
d) Mathematics 1 course: MATH-1980/1250/1720/1760 (or equivalents);
e) Statistics 1 course: SOSC-2500 or MSCI-2020

Note: students must receive a minimum average grade of 65% in the gate in course MGMT-2430, a minimum average grade of 70% in MGMT-3420, MGMT-3440, MGMT-4410, MGMT-4510, MGMT-4520, MGMT-4850 plus any 1 of MGMT-3830, MGMT-4450, MGMT-4480, MGMT-4490, MGMT-4810 and MGMT-4910 and a minimum average grade of 70% in the capstone course MGMT-4850.

A thesis option is available through the Department of Psychology.
For Psychology thesis option, students will complete PSYC-4960 and PSYC-4970.

Courses used to calculate the major average are: courses listed in under (a) and (b) and any courses taken in the major area(s) of study.

## Honours Business Administration and Women's and Gender Studies (with/without thesis)

**Degree Requirements**

Total courses: 40 courses or 120.00 credits

(a) Business 23 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-2130, MSCI-1000, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980, and 7 additional Business courses
(b) Women's and Gender Studies 13 courses: WGST-1000, WGST/HIST-2510, WGST/WORK-2400, WGST/WORK-2600, WGST-3050, WGST-3060; 2 of WGST/SACR-2100, WGST-2200, WGST-2800; 2 of WGST-4000, WGST-4100, WGST/PSYC/SACR/SJST/SOSC/SWRK-4500; 3 of WGST-3100, WGST-3300, WGST/PSYC/SACR/SOSC/SWRK-3500, WORK-2000, WORK/PSYC/SJST-2180, WORK/CMAF/DRAM/SJST-2700.
(c) Economics 2 courses: ECON-1100, ECON-1110
(d) Mathematics 1 course: MATH-1980/1250/1720/1760 (or equivalents);
(e) Statistics 1 course: SOSC-2500 or MSCI-2020

A thesis option is available through the Odette School of Business.
For Business thesis option, students will complete BUSR-4950 (3 credits) and BUSR-4990 (6 credits).

Courses used to calculate the major average are: courses listed in under (a) and (b) and any courses taken in the major area(s) of study.

Students in the Bachelor of Commerce (Honours Business Administration and Women's and Gender Studies) (with/without thesis) also may pursue an area of specialization in Business. See calendar for requirements. However this may require the completion of more than the minimum requirement of 40 courses or 120 credits.

Courses used to calculate the major average are: courses listed in under (a) and (b) and any courses taken in the major area(s) of study.

Note: Experiential Learning is available for students who complete the Bystander Initiative course WGST/PSYC/SACR/SJST/SOSC/SWRK-4500 which is one of three options needed to satisfy the fourth-year requirement in Women's and Gender Studies.

# Honours Business Administration for Baccalaureate Degree Holders

**Admission Requirements**
Students may obtain the degree of Bachelor of Commerce having previously completed a baccalaureate degree with a cumulative average of 67% or better in an area other than Business Administration. Normally this average will be calculated based on the grades achieved in the last 20 courses of that degree.

Advanced standing may be granted to a maximum of four 100 or 200 level Business Administration courses provided that such courses were passed with a minimum grade of 60% and are beyond the student's initial degree requirements. If the courses were part of the initial degree, the student must substitute for such courses by taking additional Business courses.

Applicants to the Honours Business Administration for Baccalaureate Degree Holders must have completed at least one university-level mathematics course prior to entry into the program. Applicants who do not present a university mathematics course will be required to take MATH-1980 (Mathematics for Business) as indicated in the Recommended Sequence for this program. Applicants who do not possess a Grade 12“U” or equivalent mathematics course prior to entry to this program will be required to complete a Grade 12“U” mathematics course, or its equivalent, prior to graduation from the program.

Students with degrees from universities and colleges outside Canada may be required to complete additional courses.

**Degree Requirements**

Total courses: twenty-four courses

(a) ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-1000, MSCI-2020, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970 and STEN-4980; plus four additional business courses.
(b) ECON-1100, ECON-1110, and MATH-1980/1250/1720/1760 (or equivalents). (Students who have not previously completed these requirements prior to entry into the program, should do so as early as possible to meet the prerequisites for various business courses.)

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

This program cannot be completed through Distance Education.

**Recommended Course Sequencing**

First Term
ECON-1100
MATH-1980/1250/1720/1760 (or equivalents)
MGMT-1000
STEN-1000
MSCI-1000

Second Term
ECON-1110
ACCT-1510
MGMT-2430
MKTG-1310
MSCI-2020

Third Term
ACCT-2550
MGMT-2400
FINA-2700
MSCI-2130
MSCI-2200

Fourth Term
MGMT-3000
FINA-2710
MSCI-3310 or MSCI-3410
STEN-3970
One other Business courses

Fifth Term
STEN-4980
Three other Business courses. (Consult a faculty advisor).

Notes:
1)For the purpose of the above recommended sequence, Intersession and Summer Session are treated as one term.2). The maximum load for students in this program is six courses in each of the Fall and Winter terms and five courses over both Intersession and Summer Session.

# DEGREE COMPLETION PATHWAY FOR COLLEGE OF APPLIED ARTS AND TECHNOLOGY GRADUATES

**Admissions Requirements**
Students are admissible to the Honours Business Administration degree completion pathways following degree of a CAAT college (or equivalents) diploma program previously completed with a cumulative average of 80% (A- or 3.5/4) or better for the fast-track or 70% (B-) or better for the non-fast track option.

## Honours Business Administration for 3-year CAAT (or equivalent) Diploma Holders in any area other than Business

Degree requirements (list remaining courses required for completion of degree program):

Total courses: 28*

(a) 25 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-1000, MSCI-2020, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980; and 8 additional business courses or BUSR-4950, BUSR-4990 (6 credits) and 5 additional business courses.
(b) 3 courses: ECON-1100, ECON-1110, and MATH-1980/1250/1720/1760 (or equivalents).

*Possible Additional Course Requirements:
- Applicants who do not possess a Grade 12"U" or equivalent mathematics course prior to entry to this program will be required to complete MATH-1780.
- Students with diplomas from colleges outside Canada may be required to complete additional courses.

Courses used to calculate the major average are: The courses listed in (a) will be used to calculate the major average

**Suggested Course Sequence**

Year 1
Fall: ECON-1100, MATH-1980/1250/1720/1760 (or equivalents), MGMT-1000, MSCI-1000, STEN-1000
Winter: ECON-1110, ACCT-1510, MGMT-2400, MSCI-2020, MKTG-1310
Summer: MGMT-2430, MSCI-2130, MSCI-2200, FINA-2700

Year 2
Fall: ACCT-2550, MGMT-3000, FINA-2710, MSCI-3310 or MSCI-3410, STEN-3970
Winter: STEN-4980, 4 Business courses
Summer: 4 business courses

## Honours Business Administration for 3-year CAAT (or equivalent) Diploma Holders in any area in Business

**Degree Requirements**

Total courses: 20*

(a) 19 courses: ACCT-1510, ACCT-2550, MGMT-3000, FINA-2700, FINA-2710, MSCI-2130, MSCI-2020, MSCI-2200, MSCI-3310 or MSCI-3410, STEN-3970, STEN-4980; and 8 additional business courses or BUSR-4950, BUSR-4990 (6 credits) and 5 additional business course.
(b) MATH-1980/1250/1720/1760 (or equivalents);

*Possible Additional Course Requirements:
- Students with diplomas from colleges outside Canada may be required to complete additional courses.

- Students enrolled in this program will not be given credit towards the Bachelor of Commerce degree for the following 8 courses: courses ECON-1100, ECON-1110, MGMT-1000, MGMT-2400, MGMT-2430, MSCI-1000, MKTG-1310, STEN-1000 from the University of Windsor.

Courses used to calculate the major average are: The courses listed in (a) will be used to calculate the major average

**Suggested Course Sequence**

Year 1
Fall: MATH-1980/1250/1720/1760 (or equivalents), ACCT-1510, MGMT-3000, MSCI-2020, MSCI-2130
Winter: ACCT-2550, FINA-2700, MSCI-2200, STEN-3970, 1 business course
Summer: MSCI-3310 or MSCI-3410, FINA-2710, 3 Business courses

Year 2
Fall: STEN-4980, 4 Business courses

## Honours Business Administration for 2 year CAAT (or equivalent) Diploma Holders in any area in Business

**Degree Requirements**

Total courses: 30*

(a) 25 courses: ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-2130, MSCI-1000, MSCI-2020, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980; and 8 additional business courses or BUSR-4950, BUSR-4990 (6 cr.) and five additional business course.
(b 3 courses: ECON-1100, ECON-1110, and MATH-1980/1250/1720/1760 (or equivalents)
(c) 2 courses from any area of study including Business.

*Possible Additional Course Requirements:
- Students with diplomas from colleges outside Canada may be required to complete additional courses.

**Suggested Course Sequence**

Year 1
Fall: ECON-1100, MATH-1980/1250/1720/1760 (or equivalents), MGMT-1000, MSCI-1000, STEN-1000
Winter: ECON-1110, ACCT-1510, MGMT-2400, MSCI-2020, MKTG-1310

Year 2
Fall: ACCT-2550, MGMT-2430, MSCI-2130, MSCI-2200, FINA-2700,
Winter: MGMT-3000, FINA-2710, MSCI-3310 or MSCI-3410, STEN-3970, 1 business course

Year 3

Fall: 4 Business courses, 1 course from any area of study
Winter: STEN-4980, 3 Business courses, 1 courses from any area of study

Courses used to calculate the major average are: The courses listed in (a) will be used to calculate the major average and all courses in the major area of study.

## Bachelor of Commerce (Honours Business Administration) Program for 3-year Diploma Holders in Accounting from St. Clair College

**Degree Requirements**

Total courses: 20*

(a) 20 courses: ACCT-2550, FINA-2700, FINA-2710, MGMT-3000, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, STEN-3970, STEN-4980; and 11 additional business courses.

Note: to be eligible for the Accounting Specialization, students must receive a minimum average grade of 67% in ACCT-2510, ACCT-2520, ACCT-3520, ACCT-3560, ACCT-3580, ACCT-3600, ACCT-3610, and a minimum grade of 70% in the capstone course ACCT-4570.

Students completing the CPA track must also complete ACCT-4590, ACCT-4600, and ACCT-4610.

*Possible Additional Course Requirements:

- To be eligible for the program, students must complete a 3-year Diploma in Accounting with a cumulative average of B (70%, 3.0-3.49/4).
- Students enrolled in this program will not be given credit towards the Bachelor of Commerce degree for the following 11 courses: MATH-1980, ECON-1100, ECON-1110, ACCT-1510, MGMT-1000, MGMT-2400, MGMT-2430, MSCI-1000, MSCI-2020, MKTG-1310, STEN-1000.

**Suggested Sequence (Accounting Specialization with CPA Track)**

Year 1
Summer: ACCT-2510*, ACCT-2550, MSCI-2130, MSCI-2200, MGMT-3000
Fall: ACCT-2520*, ACCT-3560*, ACCT-3580*, ACCT-3600*, FINA-2700
Winter: ACCT-3520*, ACCT-3610*, FINA-2710, MSCI-3310 or MSCI-3410, STEN-3970

Year 2
Fall: ACCT-4570*, ACCT-4590*, ACCT-4600*, ACCT-4610*, STEN-4980

* For students not following the accounting specialization pathway, accounting courses must be replaced with alternate business courses.

Courses used to calculate the major average are: The courses listed in (a) will be used to calculate the major average and all courses in the major area of study.

# Fast-Track Honours Business Administration Program for 3-year CAAT (or equivalent) Diploma Holders in any area in Business

**Degree Requirements**

Total courses: 17*

(a) 16 courses: ACCT-2550, MGMT-3000, FINA-2700, FINA-2710, MSCI-2130, MSCI-2020, MSCI-2200, MSCI-3310 or MSCI-3410, STEN-3970, STEN-4980; and 6 additional business courses.
(b MATH-1980/1250/1720/1760 (or equivalents)..

*Possible Additional Course Requirements:

- To be eligible for the fast-track program, students must complete 3-year Diploma in Business with a cumulative average of A- (80%, 3.5/4) or better.
- Students with diplomas from colleges outside Canada may be required to complete additional courses.
- Students enrolled in this program will not be given credit towards the Bachelor of Commerce degree for the following 9 courses: courses ECON-1100, ECON-1110, ACCT-1510, MGMT-1000, MGMT-2400, MGMT-2430, MSCI-1000, MKIG-1310, STEN-1000 from the University of Windsor.

Courses used to calculate the major average are: The courses listed in (a) will be used to calculate the major average and all courses in the major area of study.

**Suggested Course Sequence**

Year 1
Summer: MATH-1980/1250/1720/1760 (or equivalents), FINA-2700, MSCI-2020 or equivalents, ACCT-2500, MGMT-3000
Fall: FINA-2710, MSCI-2130, MSCI-2200, STEN-3970, 1 business course
Winter: MSCI-3310 or MSCI-3410, 4 Business courses

Year 2
Fall: STEN-4980 and 1 Business courses

# Fast-Track (Honours Business Administration) Program for 3-year Diploma Holders in Accounting from St. Clair College

**Degree Requirements**

Total courses: 17*

(a) 17 courses: FINA-2700, FINA-2710, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, STEN-3970, STEN-4980; and 10 additional business courses.

Note: to be eligible for the Accounting Specialization, students must enroll in and receive a minimum average grade of 67% in ACCT-2520, ACCT-3520, ACCT-3560, ACCT-3580, ACCT-3610, ACCT-3600, and ACCT-4570 and a minimum grade of 70% in the capstone course ACCT-4570.

Students completing the CPA track must also complete ACCT-4600, ACCT-4610, and ACCT-4590.

*Possible Additional Course Requirements:

- To be eligible for the fast-track program, students must complete a 3-year Diploma in Accounting with a cumulative average of A- (80%, 3.5/4) or better.
- Students enrolled in this program will not be given credit towards the Bachelor of Commerce degree for the following 14 courses: MATH-1980, ECON-1100, ECON-1110, ACCT-1510, ACCT-2510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, MSCI-1000, MSCI-2020, MKTG-1310, STEN-1000.

**Suggested Course Sequence (Accounting Specialization with CPA Track)**

Year 1
Summer: MSCI-2130 or equivalents, ACCT-2520*, ACCT-3560*, MSCI-2200, STEN-3970,Fall: FINA-2700, ACCT-3520*, ACCT-3580*, ACCT-3610*, MSCI-3310 or MSCI-3410
Winter: ACCT-3600*, FINA-2710, ACCT-4570*, ACCT-4590*, ACCT-4610*

Year 2
Fall: ACCT-4600*, STEN-4980

* For students not following the accounting specialization pathway, accounting courses must be replaced with alternate business courses.

Courses used to calculate the major average are: The courses listed in (a) will be used to calculate the major average and all courses in the major area of study.

## Fast-Track Honours Business Administration Program for 3-year Diploma Holders in Human Resources from St. Clair College

**Degree Requirements**

Total courses: 17*

(a) 16 courses: FINA-2700, FINA-2710, MSCI-2020, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, STEN-3970, STEN-4980; and 8 additional Business courses
(b) MATH-1980/1250/1720/1760 (or equivalents)

Note: to be eligible for Human Resources specialization, students must receive a minimum average grade of 70% in MGMT-4850, and one of MGMT-3830, MGMT-4450, MGMT-4480, MGMT-4810, and MGMT-4910 and a minimum grade of 70% in the capstone course MGMT-4850.

*Possible Additional Course Requirements:

- To be eligible for the fast-track program, students must complete a 3-year Diploma in Business with a cumulative average of A- (80%, 3.5/4) or better.
- Students enrolled in this program will not be given credit towards the Bachelor of Commerce degree for the following 17 courses:: ECON-1100, ECON-1110, ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MGMT-3000, MGMT-3420, MGMT-3440, MGMT-4410, MGMT-4490, MGMT-4510, MGMT-4520, MSCI-1000, MKTG-1310, STEN-1000.

**Suggested Course Sequence (With Human Resources Specialization)**

Year 1
Summer: MATH-1980/1250/1720/1760 (or equivalents), FINA-2700, MSCI-2020 or equivalents, MSCI-2130, 1 MGMT- course
Fall: FINA-2710, MSCI-2200, STEN-3970, 1 MGMT- course, 1 business course
Winter: MSCI-3310 or MSCI-3410, 4 business courses

Year 2
Fall: MGMT-4850, STEN-4980

* For students not following the human resources specialization pathway, human resources courses must be replaced with alternate business courses.

Courses used to calculate the major average are: The courses listed in (a) will be used to calculate the major average and all courses in the major area of study.

## Fast-Track Honours Business Administration Program for 3-year Diploma Holders in Marketing from St. Clair College

**Degree Requirements**

Total courses: 17*

(a) 16 courses: ACCT-2550, MGMT-3000, FINA-2700, FINA-2710, MSCI-2020, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, STEN-3970, STEN-4980, and 6 business courses.
(b) MATH-1980/1250/1720/1760 (or equivalents).

Note: to be eligible for Marketing specialization, students must receive a minimum average grade of 67% in MKTG-3320, MKTG-3340 and a minimum grade of 67% in the capstone course MKTG-4390.

*Possible Additional Course Requirements:

- To be eligible for the fast-track program, students must complete 3-year Diploma in Marketing with a cumulative average of A- (80%, 3.5/4) or better.
- Students enrolled in this program will not be given credit towards the Bachelor of Commerce degree for the following 14 courses: ECON-1100, ECON-1110, ACCT-1510, MGMT-1000, MGMT-2400, MGMT-2430, MSCI-1000, MKTG-1310, MKTG-2320, MKTG-3380, MKTG-3390, MKTG-4360, MKTG-4370, STEN-1000.

**Suggested Course Sequence (with Marketing Specialization)**

Year 1
Summer: MATH-1980/1250/1720/1760 (or equivalents), MSCI-2130, MSCI-2020 or equivalents, ACCT-2550 FINA-2700
Fall: MGMT-3000, FINA-2710, MSCI-2200, MKTG-3320, 1 marketing course
Winter: MSCI-3310, or MSCI-3410, MKTG-3340, STEN-3970, 2 business courses

Year 2
Fall: STEN-4980, MKTG-4390

* For students not following the marketing specialization pathway, marketing courses must be replaced with alternate business courses.

Courses used to calculate the major average are: The courses listed in (a) will be used to calculate the major average and all courses in the major area of study.

## Fast-Track Honours Business Administration Program for 3-year CAAT (or equivalent) Diploma Holders in Finance

**Degree Requirements**

Total courses: 17*

(a) 16 courses: MGMT-3000, FINA-2700, FINA-2710, MSCI-2130, MSCI-2020, MSCI-2200, MSCI-3310 or MSCI-3410, STEN-3970, STEN-4980 and 7 business courses.
(b) MATH-1980/1250/1720/1760 (or equivalents)

Note: to be eligible for Finance specialization, students must receive a minimum average grade of 65% in the gate-in course FINA-2710, a minimum average grade of 67% in FINA-3710, FINA-4740 and any 4* of FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910 and a minimum grade of 67% in the capstone course FINA-4740.

*Students who successfully complete the CSC exam (1 & 2) will be able to substitute this completion for one of the 5 specialization courses FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910. Students who successfully complete the CFA Level 1 exam will be able to substitute this completion for 2 of the 4 specialization courses FINA-3720, FINA-3730, FINA-3780, FINA-3790, FINA-4720, FINA-4770, FINA-4780 and FINA-4910. The substitutions above only apply toward the finance specialization and do not apply in any way toward their Bachelor of Commerce degree requirements. It is the student's responsibility to bring forward the appropriate documentation in a timely manner in order to receive the above noted substitutions.

*Possible Additional Course Requirements:

- To be eligible for the fast-track program, students must complete 3-year Diploma in Finance with a cumulative average of A- (80%, 3.5/4) or better.
- Students enrolled in this program will not be given credit towards the Bachelor of Commerce degree for the following 10 courses: ECON-1100, ECON-1110, ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, MSCI-1000, MKTG-1310, STEN-1000.

Courses used to calculate the major average are: The courses listed in (a) will be used to calculate the major average and all courses in the major area of study.

**Suggested Course Sequence (with Finance Specialization)**

Year 1
Summer: MATH-1980/1250/1720/1760 (or equivalents), FINA-2700, MSCI-2020 or equivalents, MSCI-2130, MGMT-3000
Fall: FINA-2710, MSCI-2200, STEN-3970, one business course
Winter: MSCI-3310 or MSCI-3410, FINA-3710, three FINA courses.

Year 2
Fall: FINA-4740, STEN-4980 and one FINA course.

* For students not following the finance specialization pathway, finance courses must be replaced with alternate business courses

## Honours Business Administration for Students from Southwestern University Finance and Economics, China

**Admission Requirements:**

1. Academic Standard
Through this agreement, Southwestern University of Finance and Economics (SWUFE) and the University of Windsor offer a 1+3 collaborative program for undergraduate students. Students will study one year at SWUFE followed by a three years of study or six (6) semesters at the University of Windsor. Students shall earn the required credit at SWUFE, and study at least one year at the Study Abroad Institute of SWUFE. Students must achieve a minimum of 70% average (or equivalent) of the required courses to be eligible for admission to the University of Windsor BComm; transfer credits will only be granted for courses with grades of 70% (or equivalent) and higher.

2. Language Skills
Students must provide proof of required minimum grade on an accepted English language test by one of the options below:

- IELTS: a minimum of 6.5 for undergraduate programs
- TOEFL (IBT): 83 with 20 for writing, 220 computer-based test
- ELIP: 75% in level 3 in English Language Improvement Program administered by UW.

3. Submission of Documents

- Completed application for admission
- Official transcript from SWUFE
- Proof of English Proficiency
- Recommendation Letter from SWUFE
- a Certificate from SWUFE representing that SWUFE has reviewed the application package and that the materials are complete and accurate to the best of their information

**Degree Requirements**

Total courses: Forty courses, consisting of a minimum of thirty (30) University of Windsor courses that must be completed and up to 10 University of Windsor courses that can be awarded transfer credits for Southwestern University of Finance and Economics courses taken.

If the student receives all 10 transfer credits, the following is the list of remaining courses required for completion of University of Windsor Honours Bachelor of Commerce in Business Administration program:

ACCT-1510 Principles of Financial Accounting
ACCT-2550 Principles of Managerial Accounting
MGMT-1000 Business Communications
MGMT-2400 Management and Organizational Life
MGMT-2430 Human Resources Management
FINA-2700 Business Finance I
MGMT-3000 Business Ethics in a Global Context
FINA-2710 Business Finance II
MSCI-1000 Intro to Bus Data Analysis Using Spreadsheet
MSCI-2020 Business Data Analysis
MSCI-2130 Introduction to Management Information Systems
MSCI-2200 Quantitative Decision Models I
MSCI-3310 Operations Management I or MSCI-3410 Supply Chain Management I: Introductions and Fundamentals
MKTG-1310 Principles of Marketing
STEN-1000 Introduction to Business
STEN-3970 The Law and Business Administration
STEN-4980 Strategic Management
Eight additional business courses
MATH-1760 Functions and Differential Calculus or MATH-1980
Four courses from any area of study, including Business

Courses used to calculate the major average are: ACCT-1510,ACCT-2550, MGMT-1000, MGMT-2400, GMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-1000, MSCI-2020, MSCI-2130, MSCI-2200, MSCI-3310 or MSCI-3410, MKTG-1310, STEN-1000, STEN-3970, STEN-4980, plus the eight additional business courses, and any courses taken in the major area(s) of study.

For information on Course Equivalencies contact the Deans Office in the Odette School of Business.

## Honours Business Administration (with/without thesis; with/without co-op, and with any specialization) for students from the Global Institute of Management and Economics (GIME) of Dongbei University of Finance and Economics

**Admissions Requirements**
Students will study one and a half years at the Global Institute of Management and Economics (GIME) of Dongbei University of Finance and Economics, followed by a two and a half academic-year or five (5)

semesters at the University of Windsor. Students will normally study 5 courses each semester for a total of 10 courses for one academic year at the University of Windsor. Upon completing the study at the University of Windsor and achieving the required academic standards for graduation, students will receive the University of Windsor's Bachelor of Commerce degree.

For Students from the Global Institute of Management and Economics (GIME) of Dongbei University of Finance and Economics to be accepted into the 2nd year of the Program at University of Windsor, they must meet the following requirements:

1. Academic Standard

Students shall complete the required courses as specified in Appendix A, earn the required credit at GIME of DUFE, and study at least one and a half year at the GIME of DUFE. Students must achieve a minimum of 73% or B average (or equivalent) of the required courses to be eligible for admission to the Program at UW; transfer credits will only be granted for courses with grades of 70% or B - (or equivalent) and higher.

2. Language Skills

Students must provide a proof of required minimum grade on an accepted English language test by one of the options below:

- IELTS: a minimum of 6.5 for undergraduate programs
- TOEFL (IBT): 83 with 20 for writing, 220 computer-based test
- ELIP: 75% in level 3 in English Language Improvement Program administered by UW.

3. Submission of Documents

- Completed application for admission
- Official transcript from GIME of DUFE
- Proof of English Proficiency
- Recommendation Letter from GIME of DUFE
- a Certificate from GIME of DUFE representing that DUFE has reviewed the application package and that the materials are complete and accurate to the best of their information

**Degree Requirements**

Total courses: Forty courses, consisting of twenty-five (25) University of Windsor courses that must be completed and fifteen (15) University of Windsor courses that can be awarded transfer credits for GIME of DUFE courses taken.

Total courses: twenty-five (75 credits) or twenty-eight (84 credits) for Co-op Option.

(a) ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2430, MGMT-3000, FINA-2700, FINA-2710, MSCI-1000, MSCI-2200, MSCI-3310 or MSCI-3410, STEN-1000, STEN-3970, STEN-4980; six additional business courses or BUSR-4950, BUSR-4990 (6.0 credit course), and three additional business courses.
(b) One additional courses from outside of the Odette School of Business Administration; five courses from any area of study including Business.
(c) For Co-op Students: STEN-2050, STEN-3050, and STEN-4050.

*GIME students are eligible for admission to specializations in Accounting, Human Resources, Finance, Supply Chain, Business Analytics, Marketing, Strategy, Entrepreneurship and any other specialization

offered by the Bachelor of Commerce Program. Students interested in such specializations may consult a student advisor for guidance.

## Honours Business Administration for students from Chitkara University, Punjab

**Admissions Requirements**
Students will study two years at the Chitkara University followed by four (4) semesters at the University of Windsor. Students will normally study 5 courses each semester for a total of 10 courses for one academic year at the University of Windsor. Upon completing the study at University of Windsor and achieving the required academic standards for graduation, students will receive the University of Windsor's Bachelor of Commerce degree.

For Students to be accepted into the 3rd year of the Program at UW, they must meet the following requirements:

1. Academic Standard

Students shall complete the required courses as specified in Appendix A, earn the required credit at Chitkara, and study at least two years at the Chitkara University. Students will only be eligible for admission to the program pathway at the University of Windsor if they have successfully completed the required courses at Chitkara University each with a minimum B average (or equivalent).

2. Language Skills

Students must provide a proof of required minimum grade on an accepted English language test by one of the options below:

- IELTS: a minimum of 6.5 for undergraduate programs
- TOEFL (IBT): 83 with 20 for writing, 220 computer-based test
- ELIP: 75% in level 3 in English Language Improvement Program administered by UW.

3. Submission of Documents

- Completed application for admission
- Official transcript from the Chitkara University
- Proof of English Proficiency
- Recommendation Letter from the Chitkara University
- a Certificate from the Chitkara University representing that the Chitkara University has reviewed the application package and that the materials are complete and accurate to the best of their information

**Degree Requirements**

Total course equivalents: Forty courses, consisting of twenty (20) University of Windsor courses (60 credits) that must be completed and twenty (20) University of Windsor courses awarded as block transfer credit following successfully completion of all required courses at Chitkara University each with a minimum B average (or equivalent).

(a) Business 7 courses: MGMT-1000, MGMT-2400, MGMT-2430, MSCI-3310 or MSCI-3410, STEN-1000, STEN-3970, STEN-4980;
(b) Non-Business (6 courses): Six additional courses from outside of the Odette School of Business Administration;
(c) Business (5 course equivalents): five Business courses at the 2000 level or above; or two Business courses at the 2000 level or above, BUSR-4950, and BUSR-4990 (6.0 credit course) for thesis option;
(d) Business or Non-Business: 2 course equivalents from any area of study including Business.

**Suggested Course Sequence**

Year 1
Fall: MGMT-1000, STEN-1000, one of MSCI-3310 or MSCI-3410; two non-business courses
Winter: MGMT-2400, MGMT-2430, one business course, two non-business courses

Year 2
Fall: STEN-3970, three business courses, one non-business course
Winter: STEN-4980, three business courses, one non-business course

Courses used to calculate the major average are:
Courses listed under requirement (a) and (c), and any courses taken in the major area(s) of study.

**NOTE: the following courses CANNOT be taken for credit in this program:**

Business Courses: ACCT 1510, ACCT 2550, FINA 2000, FINA 2700, FINA 2710, MGMT 3000, MSCI 2020, MKTG 1310, STEN 2900, MSCI 1000, MSCI 2130, MSCI 2200

Non-Business Courses: ECON 1100, ECON 1110, ECON 2010, MATH 1980

## Post Graduate Certificate in Accounting

**Admission Requirements**
Students entering the program must hold a baccalaureate degree from a recognized institution in any discipline, including Business, and must have obtained a cumulative average of 67% in the prior degree. Normally this average will be calculated based on the grades achieved in the last 20 courses of that degree.

**Certificate Requirements**

Total courses: Nineteen

(a) ECON-1100, ECON-1110, FINA-2700, FINA-2710, MSCI-2020, STEN-3970, ACCT-1510, ACCT-2510, ACCT-2520, ACCT-2550, ACCT-3520, ACCT-3560, ACCT-3580, ACCT-3600, ACCT-3610, ACCT-4570, ACCT-4590, ACCT-4600 and ACCT-4610.

*With permission of the Odette School of Business, students will be allowed to substitute another third- or fourth-year accounting course for any of the specified required accounting courses.

(b) Due to course prerequisites, students must have completed ECON-1100 Introduction to Economics I before ECON-1110, and MATH-1980 Mathematics for Business and FINA-2700 Business Finance I and any university-level Statistics course (such as MSCI-2020 Business Data Analysis) before taking FINA-2710 Business Finance II.

Note: A student who has previously completed the following course(s) or their equivalents, will be exempted from taking the corresponding courses, and will not be required to substitute for the exempted course(s). The courses are:
ECON-1100. Introduction to Economics I
ECON-1110. Introduction to Economics II
ACCT-1510.Principles of Financial Accounting
ACCT-2550. Principles of Managerial Accounting
ACCT-3580. Accounting Information Systems
FINA-2700. Business Finance I
FINA-2710. Business Finance II
MSCI-2020. Business Data Analysis
STEN-3970. The Law and Business Administration
ACCT-2510. Intro to Financial Accounting Theory
ACCT-2520. Accounting Theory I
ACCT-3520. Accounting Theory II
ACCT-3560. Advanced Managerial Cost Accounting and Analysis
ACCT-3600. Auditing I
ACCT-3610. Taxation I
ACCT-4570. Advanced Accounting I

## Certificate in Business Administration

**Admission Requirements**
Minimum admission requirements for undergraduate degrees.

This program is intended for part-time students. Courses are regular University credit courses and may be applied toward the Bachelor of Commerce degree.

**Certificate Requirements**

Total courses: 10

Required courses: ACCT-1510, ACCT-2550, MGMT-2400, FINA-2700, MKTG-1310, STEN-1000, plus 4 additional business courses.*

To be eligible to receive the Certificate in Business, a student must obtain a cumulative average of 60% or better.

In the event that an applicant has completed equivalent courses elsewhere, other courses may be substituted by the applicant with the consent of the Dean of the Odette School of Business Administration.

* NB: The Certificate in Business Administration is open to any student. Please note however that students must obtain the required prerequisite courses such as math and economics for some of the courses within the Certificate.

This program cannot be completed through Distance Education

## Certificate in Organizational Management

**Admission Requirements**
Admission requirements are the same as those for the Honours Business Administration degree. See Policy on Admission Requirements (Undergraduate) at www.uwindsor.ca/policies.

**Certificate Requirements**

Total courses: 8

a) Seven courses ACCT-1510, ACCT-2550, MGMT-2400, MGMT-2430, MGMT-3440, MGMT-4850 and STEN-1000
b) One course from MGMT-3420, MGMT-4410, MGMT-4510 and MGMT-4520

Also required: 65% in MGMT-2430, 70% in MGMT-4850 and an average of 70% over all courses in the program.

Courses used to calculate the major average are: All the 8 courses required by the program.

## Minor in Business Administration

The Minor shall consist of: ACCT-1510, ACCT-2550, MGMT-2400, FINA-2700, MKTG-1310, STEN-1000. Students must obtain a minimum average grade of 60% in the courses applied to the Minor and a minimum grade of 60% in each business course applied to the minor.

*NB: The Minor in Business will be open to any undergraduate student. Please note however that students must obtain the required prerequisite courses such as math and economics for some of the courses within the Minor. This program cannot be completed through Distance Education.

## Minor in Entrepreneurship

Total Courses: 6

STEN-1000, STEN-2900, STEN-3910, STEN-4930, STEN-4910 (STEN-4910 should be taken twice with different topics)

# ODETTE SCHOOL OF BUSINESS COURSES

**Non-Business Students**
- Business courses are restricted to Business students only, with the following exceptions:

- All students must have successfully completed STEN-1000 before being allowed to register in any 2000-level (or above) Business courses unless specifically stated otherwise in the course description or with the permission of the Odette School of Business.
- Business courses listed as part of the Business Minor are open to all students, as long as the student has completed the associated prerequisite courses.
- Specific Business courses required as part of a non-Business program are open only to students registered in that program unless approved by the Odette School of Business.
- Non-specific Business courses required or allowed as part of a non-Business program are open only to students registered in that program unless approved by the Odette School of Business.
- In addition to specific course prerequisites, non-Business students must be in semester 3 or above before taking any 2000-level Business courses, and are eligible to take 3000 or 4000-level Business courses only if they are in semester 5 or above, or unless specific arrangements have been made between the student's department and the Odette School of Business.
- Students registered in non-Business programs may have different course prerequisites or requirements as listed in the Business course descriptions. These students should consult with a Business School advisor before registering in Business courses.
- Under no circumstances will non-Business students be allowed to complete more than nine (9) Business courses.

**Business Students**

- Students registered in a four-year Business program must have successfully completed MGMT-1000 and-STEN-1000 before being allowed to register in any 2000-level (or above) Business courses.
- Before being allowed to take any 3000-level Business courses, students registered in a four-year Business program must be in semester 4 or above, and have successfully completed all first-year core courses (ECON-1100, ECON-1110, MATH-1980, ACCT-1510, MGMT-1000, MSCI-1000, MSCI-2020, MKTG-1310 and STEN-1000)
- Before being allowed to take any 4000-level Business courses, students registered in a four-year Business program must be in semester 5 or above, and have successfully completed all first and second-year core courses (ECON-1100,ECON-1110, MATH-1980, ACCT-1510, ACCT-2550, MGMT-1000, MGMT-2400, MGMT-2430, FINA-2700, FINA-2710, MSCI-1000, MSCI-2020, MSCI-2130, MSCI-2200 and MKTG-1310 and STEN-1000) before being allowed to take any 4000-level Business courses
- Students registered in other than four year Business programs may have different course prerequisites or requirements. These students should consult with a Business School advisor before registering in Business courses.

Pursuant to a grading policy set by the Odette School of Business: all first and second year Business courses will be graded to an average in the 60-70% range: all third year Business courses will be graded to an average of 65-75%; and, all fourth year Business courses will be graded to an average of 67-77%.

Courses below are listed according to the informal administrative units of the Faculty.

Not all courses listed will necessarily be offered in a particular term or year.

Special permission to enter courses without the stated prerequisites must be arranged with the Undergraduate Programs Office and the instructor involved.

Except as otherwise noted, there will be a minimum of thirty-six hours of class contact for all courses. All courses will be three hours a week unless otherwise indicated.

The following course descriptions list only the most advanced prerequisites for that course. It is assumed that students have also successfully completed the requirements for these prerequisites. Courses considered to be equivalent to the listed prerequisites will satisfy the prerequisite requirements.

# BUSINESS RESEARCH AND THESIS COURSES

**BUSR-4950. Research Based Independent Study**
This course will cover methodology, application areas, and software training required to carry out independent research. Working one-on-one with an instructor in one of the current business disciplines of the Undergraduate Program e.g., accounting, management, labor studies, finance, management science, information systems, marketing, strategy, and entrepreneurship, the course will require a written critique of a research methodology from journal articles selected by the instructor; a written review of research methodology and a written literature review. (May be taken for credit twice before BUSR-4990 and once after a successful completion of BUSR-4990 with at least 85% grade if content is different.) (Pre-requisite: Semester 4 standing, and at least 75% cumulative average, 78% major average, and permission of the instructor and the Undergraduate Program Director.) (3.0 credit course)

**BUSR-4990. Business Research Seminar and Thesis**
In this cumulative 2-term course, the students will work closely with an individual faculty supervisor and receive training in the methods and skills of research in one of accounting, management, labour studies, finance, management science, information systems, marketing, strategy, and entrepreneurship. In the first term of this course, the students will identify a research topic, perform a review of the relevant scholarly literature, develop a research plan, write a research proposal and make an oral presentation in an open research seminar. In the second term of this course, the students will implement the research plan, write the thesis and revise the thesis according to the comments of the instructor and a faculty reader assigned by the Undergraduate Program Director. The reader will attend seminars, give comments and suggestions, and give opinions on the final grade on seminars in the first term and read the first revision and the final version of the thesis, give comments and suggestions, and give opinions on the final grade on thesis in the second term. (Prerequisite: At least Semester 6 standing, 75% cumulative average, 78% major average, 85% average in BUSR-4950 offered by the instructor, and permission of the instructor and the Undergraduate Program Director.)

# ACCOUNTING COURSES

**ACCT-1510. Principles of Financial Accounting**
An introduction to the theory and concepts of financial accounting including generally accepted accounting principles and issues as to classification, recognition, realization, measurement and reporting. The emphasis of the course is from the perspective of the user of accounting information, allowing the student to become familiar with the information available and its content value. (Prerequisites: ECON-1100, MATH-1980/MATH-1250/ MATH-1720/ MATH-1760 (or equivalent) and STEN-1000).

**ACCT-2510. Intro to Financial Accounting Theory**
This is the first of 3 courses of intermediate accounting that presents the current developments in the theory of generally accepted accounting principles and CICA (Canadian Institute of Chartered

Accountants) standards are introduced. An in-depth, theoretical examination of the determination, measurement, classification and reporting of assets is presented. The conceptual framework of accounting is stressed.(Prerequisites: ACCT-1510. Business students must also have completed MGMT-1000).

**ACCT-2520. Accounting Theory I**
This is the second of three courses of intermediate accounting theory that provides an in-depth examination of the determination, measurement, classification and reporting of liabilities and owners' equity. Emphasis is given to the accounting use of the actuarial techniques in the accounting for bonds, pensions, and leases. Where applicable, the interpretation of accounting theory and concepts is presented for transaction analysis, measurement, and classification. The conceptual framework of accounting is stressed. (Prerequisite: ACCT-2510.

**ACCT-2550. Principles of Managerial Accounting**
An introduction into management's use of internal accounting information for planning, managing, controlling and evaluation of business operations. Topics include cost concepts and costing techniques (including activity based costing), budgeting, cost-volume-profit analysis, standard costing, performance evaluation and product pricing. (Prerequisite ACCT-1510 or consent of instructor).

**ACCT-3520. Accounting Theory II**
This is the final course in the intermediate accounting theory sequence covering various special topics in financial accounting such as EPS, interperiod tax allocation, a rigorous study of accounting changes and error analysis and of the statement of cash flows, interim and segmented reporting. Financial statement analysis including business valuations will be covered, both from a quantitative and qualitative viewpoint and the concept and techniques of earnings management are also explored. Cases are used to integrate theory and practice. The conceptual framework of accounting is stressed (Prerequisite: ACCT-2520 or consent of the instructor.)

**ACCT-3560. Advanced Managerial Cost Accounting and Analysis**
This course is designed to focus on the role and use of accounting information in management decision making, and for formulating policy and strategy. The application of some of the advanced techniques for planning, controlling and performance evaluation will be discussed. Behavioural and ethical issues will be considered. (Prerequisite: ACCT-2550 with a minimum grade of 65%.)

**ACCT-3580. Accounting Information Systems**
The design and operation of manual and computerised accounting systems. The study of control environment, management and control of transactions and accounts, such as, accounts receivable, accounts payable and inventory. Emphasis will be given to the acquisition and input of information into accounting information systems; modes and methods of file structures and storage of accounting information; retrieval inquiry and report creation of information in files as well as financial statement preparation, analysis, and managerial decision making. Related issues such as audit trail, data retrieval, and data security will also be covered. (Prerequisite: ACCT-2550 and MSCI-2130.)

**ACCT-3600. Auditing I**
An introductory course designed to provide a broad foundation for all major aspects of auditing. This course focuses on objectives, concepts, standards, strategies, processes, and communications relating to external audits. Other services provided by public accountants and current developments affecting auditing and the auditing profession are considered. (Pre-requisite ACCT-2510, Pre or co-requisite ACCT-3580.)

**ACCT-3610. Taxation I**
This is the first of two courses designed to examine the Income Tax Act. This course focuses on the determination of residency and of income for tax purposes. Other tax related topics such as tax planning concepts, and concepts underlying the Act will be discussed. (Prerequisite: ACCT-2510)

**ACCT-4570. Advanced Accounting I**
A study of concepts, standards and procedures underlying intercorporate investments including portfolio investments, investments involving significant influence, and investments involving control. The preparation of consolidated financial statements under a variety of circumstances is studied in detail. Other topical areas, such as foreign currency transactions and translation, governmental accounting and accounting for not-for-profit organisations will also be covered. (Prerequisite: ACCT-3520.)

**ACCT-4580. Advanced Accounting II**
This course examines various theoretical perspectives in financial theory such as decision model approach, information economics, capital markets theory, agency theory, economic consequences, management incentives for financial reporting, earnings management, and accounting policy choice. Standard setting issues and other current and emerging issues in financial accounting theory and practice are discussed. Cases and readings are used to further integrate theory and practice and concepts from previous accounting courses. (Prerequisite or co-requisite ACCT-3520) (Open to Business students only.)

**ACCT-4590. Advanced Topics in Managerial Accounting**
An elective advanced topics course that explores the different types of organizational controls. It focuses on the key decisions that must be made in using controls, such as choices of performance measures, performance standards and targets, and performance-based incentives. Limitations of traditional financial performance measures are discussed (e.g., their tendency to make managers excessively short-term oriented) and recently developed approaches to deal with these shortcomings are analyzed (e.g., EVA, Balanced Scorecard). The course is designed to develop skills that are desirable in managers, management consultants, compensation consultants, financial specialists, or human resource specialists. The course is taught by the case method of instruction. The cases allow for the exploration of the management control issues in a broad range of settings such as start up firms, manufacturing firms, service organizations of different sizes. (Prerequisite: 4th year students only, or by permission of the instructor.)

**ACCT-4600. Auditing II**
This course is designed to provide an in-depth knowledge of the major aspects of auditing. It will examine topics such as audit sampling; public accountants' communications to users of accounting and non-accounting information; and emerging issues in auditing. (Prerequisites: ACCT-3580 and ACCT-3600.)

**ACCT-4610. Taxation II**
This course will focus on the computation of taxable income for individuals and corporations, and determination of tax. Tax planning techniques in business in a variety of situations will be discussed and other topics such as the Goods and Services Tax will also be considered. (Prerequisite: ACCT-3610.)

**ACCT-4620. EDP Auditing**
This course is designed to focus on the integration of auditing concepts, standards and procedures in a computerized environment. It will examine EDP general and application controls, the similarities and differences between manual and EDP systems from the auditor's perspective, and will introduce

computer-assisted audit techniques, and emerging technologies in EDP auditing. (Prerequisites: ACCT-3580 and ACCT-3600.)

**ACCT-4910. Special Topics in Accounting**
This is a seminar course covering major concepts or current problems or issues in the area of Accounting. The topic to be covered in a particular semester will vary and will be announced in the previous semester. Interested students should consult the Area Chair of Accounting. (May be taken for credit twice if content is different.) (Prerequisite: consent of the instructor.)

**ACCT-4950. Independent Study in Accounting**
This course must be taken under the direct supervision of an accounting faculty member. (May be taken for credit twice if content is different.) (Prerequisite: consent of the instructor and Area Chair.)

## FINANCE COURSES

**FINA-2000. Personal Finance**
This course provides an introduction to personal financial planning to non-Business students. Topics covered include: the planning process and goal setting, personal budgeting, spending and saving, assessing alternative sources of credit, debt management, basic tax planning, the fundamentals of investing, and financial planning information sources. The goals of the course are i) improving financial literacy and ii) empowering students to improve their personal financial security. (Pre-requisite: Grade 11 math or equivalent.) (May not be used for credit in any Business program.)

**FINA-2700. Business Finance I**
This course serves as an introduction to the area of business finance. The primary objective is to understand the fundamental concepts and principles of financial management of the business enterprise. After an introduction to the goal financial management, the course will cover the valuation of financial and real investments, risk and return, financial analysis, planning and control, and working capital management. International financial management will also be introduced. (Prerequisites: ACCT-1510, MATH-1980/MATH-1980/MATH-1250/ MATH-1720/ MATH-1760 or equivalent, and STEN-1000. Additional prerequisites for Business students: MGMT-1000 and MSCI-1000.)

**FINA-2710. Business Finance II**
This course focuses on long-term corporate financial decisions. The goal is to develop an understanding of the concepts and principles of the management of capital assets and resources. Topics include capital budgeting, cost of capital, capital structure, sources of long-term financing, and corporate risk management. (Prerequisites: MSCI-2020 (or equivalent) and FINA-2700.)

**FINA-3710. Intermediate Finance**
This is a recommended course for students wishing to continue in finance and compulsory for those aiming for a finance concentration. The course covers key topics in capital markets and corporate finance that lay the foundation for material to be covered in advanced finance courses. Areas covered include: fixed income markets and interest rate determination; raising funds in equity markets; the cost of capital; derivatives markets and applications to business finance; and the market for corporate control. (Prerequisite: FINA-2710.)

**FINA-3720. Investments**
Appraising bonds, preferred, and common stocks as vehicles for investment. The course also involves the study of alternative investments, the market setting, technical analysis, and securities legislation in Canada. (Prerequisite: FINA-2710.)

**FINA-3730.Working Capital Management**
A seminar in working capital management using case studies. Emphasis is placed on domestic and international cash management, control of accounts receivable, principles of inventory management, short and intermediate term financing. (Prerequisite: FINA-2710.)

**FINA-3780. Financial Markets and Institutions**
A central theme of this course is the management of Canadian financial institutions through the analysis of their assets and liabilities. This course examines different types of risk exposures faced by these institutions. With real-world examples, this course will also address the current institutional issues in the context of domestic and international financial markets. (Pre-requisite or co-requisite: FINA-3710.)

**FINA-3790. International Financial Management**
A study of international corporate financial management, international banking, and financial markets. Emphasis is placed on foreign exchange and exposure management. The financial problems and risks faced by multinational corporations and banks are also discussed. (Co-requisite: FINA-3710.)

**FINA-4240. Financial Technologies**
This course examines the business opportunities, challenges, and risks presented by current and emerging financial technologies (FinTech). An emphasis is placed on understanding the nature of these technologies and their implications for finance and for other disciplines being impacted by the growing importance of FinTech. Students will be challenged to explore course topics in some depth, develop their capacity to explain the nature of financial technologies, and improve their ability to guide organizations in the use of FinTech. (Prerequisite: one of MSCI-2230, FINA-3710, MSCI-3110, MSCI-3120, or MSCI-3230.) (Cross-listed with MSCI-4240)

**FINA-4720. Portfolio Management**
The shaping of portfolios to fulfill the needs of individuals and institutions including risk-return concepts, diversification, beta analysis, and market efficiency. (Prerequisite: FINA-3710.)

**FINA-4740. Corporate Financial Strategy**
A seminar course in long-term financial management. Particular attention is directed toward long-term sources of funds, the firm's capital structure, and the cost of the various sources of long-term funds. Principles are illustrated by means of case studies. (Prerequisite: FINA-3710.)

**FINA-4770. Derivatives and Risk Management**
An introduction to the use of options and futures with an emphasis on managing risk. Review of the markets and trading of equity and currency options; forwards and futures contracts; and options on futures. Principles of the valuation of options and futures. Application of hedging techniques under a variety of circumstances such as for personal investments, portfolio management, corporate risk management, foreign exchange risk management and agriculture. (Prerequisite: FINA-3710.)

**FINA-4780. Pension Finance and Management**
The course provides an introduction to the principles of fiduciary management of pensions. Important concepts in pension finance such as asset liability management; tactical asset allocation; performance evaluation and risk management will be discussed. The course will also provide an overview of the management and regulatory framework of pensions in Ontario and Canada. (Prerequisite: FINA-3710.)

**FINA-4910. Special Topics in Finance**

This is a seminar course covering major concepts or current problems or issues in the area of Finance. The topic to be covered in a particular semester will vary and will be announced in the previous semester. Interested students should consult the Area Chair of Finance. (May be taken for credit twice if content is different.) (Prerequisite: consent of the instructor.)

**FINA-4950. Independent Study in Finance**
The student, with the agreement of the instructor, will select, research and report on a topic. (Prerequisite: consent of the instructor and Area Chair.) (May be taken twice for credit if content is different.)

# MANAGEMENT AND LABOUR STUDIES COURSES

**MGMT-1000. Business Communications**
Research has shown that effective communication skills are as necessary to career advancement as technical competence, work experience and academic qualifications. The importance of communication skills is not surprising when you consider that the average business manager spends 75-80% of the day communicating in one form or another. Thus, the focus of this course is to help you to sharpen your ability to communicate and manage conflict effectively - with individuals, within small groups, and with large audiences. This course stresses practical skill building for leaders. Time is spent on communication concepts and techniques, planning, organizing and making presentations, as well as the application of behavioural science theory to business communication and leadership. (Prerequisite or corequisite: STEN-1000) (Not open to non-Business students.)

**MGMT-2400. Management and Organizational Life**
This course provides an overview of the basics of management theory, coupled with a more applied view of how that theory may work in an organizational setting. It will build upon the understanding of strategic positioning and context provided by its new prerequisite Introduction to Business (STEN-1000) where stakeholders, the environment, and business issues provide the background for understanding the challenges facing today's manager. The course will provide some experiential opportunities to develop team and leadership skills, while looking at what affects the role of the individual and the group within the structure of the organization. An understanding of the influences upon and ways to motivate behaviour in organizations will be developed. (Prerequisite: STEN-1000. Business students must also have completed MGMT-1000)

**MGMT-2430. Human Resources Management**
Human Resources Management (HRM) is concerned with the management of people at work - a key responsibility of people at work - a key responsibility of every manager within an organization. Topics include: integrating HRM decision making within a business strategy, recruiting and selecting qualified employees, developing and evaluating human resources and retaining and motivating employees through compensation systems, labour relations, and quality of work life initiatives. In recognition of the importance of the increasingly global context to Canadian organizations, the course incorporates a continuing international focus. (Prerequisite: STEN-1000. Business students must also have completed MGMT-1000.)

**MGMT-3000. Business Ethics in a Global Context**
This required third year course examines ethical issues encountered in the management of business organizations operating domestically and globally. The course is designed to increase student awareness of the ethical dimension of business and to provide a decision-making model for resolving ethical dilemmas encountered in business operations. The course begins with an examination of the basic philosophical perspectives on ethical behaviour and then focuses on issues such as discrimination

and employee equity, environmental effects of business activities and advertising ethics. The overall goal of the course is to contribute to the development of the moral manager. (Prerequisites: MGMT-2430.)

**MGMT-3420. Compensation Management**
This course is intended to give an understanding of the power of organizational rewards and managing this power for organizational effectiveness. This course entails an outline of the major concepts and principles of equitable reward design within organizations. Topics include the planning of salary and wages, pay equity, incentive pay, benefits, non-financial rewards, and the clarification of the linkages between rewards and desired behaviours. Special emphasis is given to reward system design and the evaluation of compensation program effectiveness. (Prerequisite: MGMT-2430.)

**MGMT-3440. Labour-Management Relations**
A comprehensive introduction to the dynamic world of labour and management relations focusing on the unionized sector. The problems, issues, and challenges growing out of the labour-management relationship are examined against a broad background of information, including: the differences between union and non-union workplaces; the development and operation of labour unions; the impact of labour legislation; the negotiation and administration of collective agreements; and the resolution of industrial conflict. Given the size and importance of this unionized workforce in Canada, the knowledge and skills developed in this course have wide application. (Prerequisite: MGMT-2430 or Semester 3 or above standing for students in the Labour Studies program.)

**MGMT-3830. International Human Resources Management**
The focus of this course is the management of people in the international context. Issues covered include culture, communication, and differences in the economic, social and legal environments as they affect people in organizations. Particular attention is paid to staffing, training, and compensating parent country nationals, host country nationals and third country nationals. (Prerequisites: MGMT-2430)

**MGMT-4410. Training and Development**
This course has an experiential focus: student teams are responsible for developing and presenting their own training programs. The focus of this course is on the three major aspects of training and development efforts: (1) needs assessment, (2) program development, and (3) evaluation. Course topics include the design of training programs, adult learning models, development managerial skills, and the design of effective workshops. This course has an experiential focus; student teams are responsible for development and presenting their own training programs. (Prerequisite: MGMT-2430.)

**MGMT-4450. Organization Design**
This course is designed to provide the student with an understanding of the importance of structure and processes in the analysis of modern complex organizations. It addresses how the internal structures should be changed, renewed, and adapted in view of external environmental threats and opportunities emanating from political, economic, social, legal, technological, and demographic changes. Topics include: organizational goals and effectiveness, structure and design, bureaucracy and life cycle, structural archetypes, information and
control, power and politics, intergroup relations and conflict, structure-strategy relations and organizational renewal. This course utilizes the case method and other applied problem-solving skills in analyzing and evaluating organizational structures and processes. (Prerequisite: MGMT-2400.)

**MGMT-4480. Labour Relations Law and Employment Legislation**
Legislation, administrative agencies and courts play a significant role in shaping employer-employee relationships. this course aims to increase the knowledge and provide analytical skills to students who

are interested in employment relationships in union and non-union workplaces. The course includes an analysis of labour relations law, employment standards law, the occupational health and safety law. Emphasis will be placed on Ontario laws. Lectures and case discussions will be used. (Prerequisite: MGMT-3440.)

**MGMT-4490. Negotiations**
Various aspects of union-management negotiations in the private and public sector will be discussed. A key aspect of the course is a bargaining simulation played by students assuming the role of union and management negotiators. Grievance arbitration and other dispute settlement procedures will also be discussed. Students will learn negotiation and conflict resolution skills relating to the union-management relations. (Prerequisite: MGMT-2430 or Semester 3 or above standing for students in the Labour Studies program.)

**MGMT-4510. Organizational Staffing**
At the heart of the organizational staffing process is the forming of matches between people and jobs that will result in an effective workforce for the organization. The course identifies the key influences upon, and components of staffing and overviews such support activities as job analysis, external and internal recruitment, selection and the assessment of staffing effectiveness. The course goes on to examine the deployment processes that represent the end pont of the person/job match. This match does may not be permanent, and so the course does go on to give consideration to equitable termination and outplacement practices which are required when people leave the organization. (Prerequisite: MGMT-2430.)

**MGMT-4520. The Management of Organization Health, Wellness and Safety**
Health and safety plays a prominent role in the development of a strong organizational culture and a productive workforce. This course emphasizes the key goal of managers and HR professionals to create, develop and nurture a culture that is fully aware of the importance of safety and the advantages of a proactive employee wellness culture, and is willing to take the necessary steps to achieve it. Students will evaluate practices in the areas of health, safety, security and Workers' Compensation and the importance of due diligence and meeting safety legislation. An emphasis in the course is the adoption of proactive programs of employee wellness and assistance, careful medical and safety testing and the implementation of strategies to minimize compensation costs and maximize compliance with safety guidelines. (Prerequisite: MGMT-2430.)

**MGMT-4810. Diversity in the Workplace**
This course will address the knowledge and skills managers must develop in meeting the opportunities and challenges created by the diversity in the labour force. It will draw on the literature from a number of disciplines in focussing on interpersonal relationships as managers interact with and work with persons who are different from themselves. The human rights legislation will provide the framework for discussions on managing and valuing diversity in terms of gender, age, race, religion, ability and other groups. The course will use lectures and case discussions on the role of union and management in implementing equity in the workplace. (Prerequisite: MGMT-2430 or Semester 3 or above standing for students in the Labour Studies program.)

**MGMT-4850. Human Resources Planning**
This course is concerned with planning of the human resources needs of organizations, focusing, in particular, on the role of the Human Resources Management function in this task. The objective is to provide an understanding of how the essential elements of the human resources planning process, in both unionized and non-unionized organizations, can be designed to match the wider organizational context. Topics include the assessment of human resources strategy and the application of planning

principles to the different activity areas of human resources management, such as staffing, development and the management of diversity. An ongoing theme is the evaluation of how strategic human resources management contributes to organizational effectiveness. (Prerequisite: MGMT-3440.)

**MGMT-4910. Special Topics in Management and Labour Studies**
This is a seminar course covering major concepts or current problems or issues in the area of Management and Labour Studies. The topic to be covered in a particular semester will vary and will be announced in the previous semester. Interested students should consult the Area Chair of Management and Labour Studies. (Prerequisite: consent of the instructor.) (May be taken twice for credit if content is different.)

**MGMT-4950. Independent Study in Management and Labour Studies**
The student, with the agreement of the instructor, will select, research and report on a topic. (Prerequisite: consent of the instructor and Area Chair). (May be taken for credit twice if content is different.)

# MANAGEMENT SCIENCE COURSES

**MSCI-1000. Introduction to Business Data Analysis**
This course focuses on giving students the knowledge and skills to be used in a world in which spreadsheets are an integral part and which requires graduating business students to be proficient in its use. It also provides students with the knowledge and skills to be used in other courses in which spreadsheets' powers can play an important role in analyzing data and presenting information in a professional manner. This knowledge and skills include: effectively entering data on spreadsheets so that they can be efficiently manipulated and converted into relevant information, both numerical and graphical; and, creating and interpreting this relevant information in a professional manner. To accomplish this, students will learn how to create professional looking graphs and charts and how to use and apply various Excel functions and capabilities including pivot tables, filtering, sorting, merging, lookup formulas, conditional formulas, relative and absolute formulas, range labelling, descriptive statistics functions, probability functions and financial functions. (Corequisites: MATH-1980MATH-1980/MATH-1250/ MATH-1720/ MATH-1760 (or equivalent)

**MSCI-2020. Business Data Analysis**
Statistical inference in a business environment. Topics include one population inferences, two population inferences, analysis of variance, Chi-Square tests, linear regression and correlation. (Prerequisites: STEN-1000, MSCI-1000 and MATH-1980/ MATH-1250/ MATH-1720/ MATH-1760 (or equivalent).) (Cannot obtain credit for both MSCI-2020 and STAT-2910 if MSCI-2020 is taken after STAT-2910.)

**MSCI-2130. Introduction to Management Information Systems**
This course provides an overview of Management Information Systems (MIS). Topics include: various types of MIS such as Information Reporting Systems, Decision Support Systems, and Office Automation Systems; introduction to hardware and software technology; personal, functional and enterprise information systems; and the value added to an organization by MIS.(Prerequisite: STEN-1000. Business students must also have completed MGMT-1000 and MSCI-1000. Non-Business students must have completed COMP-1047 or COMP-1400 or its equivalent)

**MSCI-2200. Quantitative Decision Models I**
An introduction to the use of quantitative approaches to decision making. Topics include linear programming (model formulation and applications, computer solution, sensitivity analysis, and

interpretation), transportation model, project management; PERT/CPM, inventory control. (Prerequisites: MSCI-2020 (or equivalent), and MATH-1980/ MATH-1250/ MATH-1720/ MATH-1760 (or equivalent). Business students must also have completed MGMT-1000.)

**MSCI-2230. Introduction to Data Science for Business**
This course provides an overview of the basic principles and approaches used to analyze and extract key insights from business data. All phases of the data science process will be examined in some depth including problem formulation, data acquisition, data modeling, model evaluation, and model deployment. Particular emphasis will be placed on expressing business problems in forms that can be addressed using data science tools and techniques. As an introduction to data science, this course focuses on providing a broad survey of the field as a foundation for more advanced level courses. (Prerequisite: MSCI-2130 or COMP-1400.)

**MSCI-2250. Introduction to Project Management**
This course focuses on introducing students to the organizational, managerial, and technical constructs associated with program management. The PMI (Project Management Institute) specified knowledge areas of project management are explored, while introducing students to a wide array of tools and techniques that seasoned project managers use. Students are introduced to popular IT and analytical tools and explore how these tools help managers to more effectively manage projects. (Prerequisites: STEN-1000, Business students must also have completed MGMT-1000 and MSCI-1000. Non-Business students must have completed COMP-1047 or COMP-1400 or an equivalent).

**MSCI-3050. Statistical Quality Design and Control**
The course discusses some of the important statistical concepts and methods for quality design and improvement. Topics include: statistical process control, development and interpretation of different kinds of control charts for variable and attribute data, designs of experiment for product/process improvement. A software package may be required to simulate the operation of an actual process, and to illustrate the methodology. (Prerequisites: MSCI-2020 (or equivalent))

**MSCI-3110. Introduction to Data Base Management**
A study of the planning and design of data base systems in a business organization. Topics include: data concepts and modelling, data base planning, data structure and storage techniques, and data base design. A micro-computer-based data base software package will be used for regular assignments and team projects. (Prerequisite: MSCI-2130 or COMP-1400.)

**MSCI-3120. Business Process and Data Analytics**
This course integrates the macro (processes) and micro (data analysis) view of businesses. The first half of this course focuses on the concept and evolution of business process management (BPM) and its impact on organizations. Topics will include how organizations benefit from BPM to enhance its competitiveness, sustainability, innovation and growth; techniques and evolution of process mapping; workflow management; and enterprise applications. The second half of this course focuses on the data underlying business processes. Topics will include data visualization and predictive modeling techniques using state-of-the-art data analysis software. (Prerequisites: MSCI-2130 or COMP-1400.)

**MSCI-3200. Quantitative Decision Models II**
An introduction to the use of quantitative approaches to decision making under uncertainty. Topics include: inventory management under probabilistic demand, waiting line models or queues, computer simulation, decision analysis, multi-criteria decision making. (Prerequisite: MSCI-2200.)

**MSCI-3230. Data Science Tools and Methods**

This course offers an in-depth exploration of key tools and techniques used to assemble, analyze, and evaluate large business datasets obtained from diverse sources. Techniques for communicating the results of this analysis and techniques for introducing analytical models into business processes will also be examined. Students will develop the practical skills needed to acquire, manage, and analyze business data using current methodologies and software applications. (Prerequisite: MSCI-2230)

**MSCI-3310. Operations Management I**
An introduction to the problems and techniques encountered in the production of goods and services. Topics include: forecasting, capacity planning, facility location and layout, aggregate planning, inventories and materials requirement planning. (Prerequisite: MSCI-2200.)

**MSCI-3410. Supply Chain Management I: Introduction and Fundamentals**
This course introduces problems and techniques encountered in the management of supply chain. Topics include: supply chain performance, drivers, and metrics, design of distribution networks, uncertainties along the supply chain and demand forecasting, aggregate production planning, managing inventory under uncertainty, product availability and supply chain profitability. (Prerequisite: MSCI-2200.)

**MSCI-4230. Business Analytics in Practice**
In this course students will apply their business analytics knowledge and skills to the resolution of practical business problems in marketing, human resource management, supply chain management, accounting, finance, and other business related domains. Students will be challenged to analyze and understand business problems in these areas, formulate and evaluate data analytic models that can address these problems, acquire the data needed to support their models, and then refine and deploy these models within business settings. Emphasis will be placed on linking business analytic knowledge and skills to the problems encountered in specific business domains. (Prerequisites: MSCI-3110, MSCI-3120, and MSCI-3230)

**MSCI-4240. Financial Technologies**
This course examines the business opportunities, challenges, and risks presented by current and emerging financial technologies (FinTech). An emphasis is placed on understanding the nature of these technologies and their implications for finance and for other disciplines being impacted by the growing importance of FinTech. Students will be challenged to explore course topics in some depth, develop their capacity to explain the nature of financial technologies, and improve their ability to guide organizations in the use of FinTech. (Prerequisite: one of MSCI-2230, FINA-3710, MSCI-3110, MSCI-3120, or MSCI-3230.) (Cross-listed with FINA-4240)

**MSCI-4310. Operations and Supply Chain Management II**
The course explores other substantive and analytical issues in the planning and control of operations and supply chain management. Topics include: sales and operations scheduling; and supply chain decisions. Team or individual presentations on selected topics may be required. (Prerequisite: MSCI-3310 or MSCI-3410.)

**MSCI-4910. Special Topics in Management Science**
(May be taken for credit twice if content is different.) (Prerequisite: consent of the instructor.)

**MSCI-4950. Independent Study in Management Science**
(Prerequisite: consent of the instructor and Area Chair.) (May be taken for credit twice if content is different.) The student, with the agreement of the instructor, will select, research and report on a topic.

**MSCI-4980. Modeling and Analysis in Management Science and Systems**
This course is concerned with modelling, analysis and presentation of results using tools and techniques developed in the areas operations management, operations research, statistics and information systems. Problems are selected from case studies, simulation and real-life projects. A major part of the evaluation is based on team and individual reports and presentations. (Prerequisite: MSCI-3310)

# MARKETING COURSES

**MKTG-1310. Principles of Marketing**
An introduction to the principles, concepts and techniques of marketing. A significant objective of the course is the development of a basic understanding of the marketing process and its role in the organization, in the economy, and in global markets.

**MKTG-2320. Marketing Problems-Applications and Decisions**
The application of concepts and techniques in marketing through the use of cases and simulation gaming. The course will apply the concepts learned in MKTG-1310, Principles of Marketing, in a managerial, decision-making format. (Prerequisites: MGMT -1000 and MKTG-1310 Pre or corequisite: FINA-2700.)

**MKTG-3320. Research Methods in Marketing**
The use of analytical methods to improve the efficiency of the marketing operations of companies and other organizations with emphasis on the development of a broad understanding of the uses and methods of research as applied to marketing. (Prerequisite: MSCI-2020 and MKTG-1310.)

**MKTG-3340. Consumer Behaviour**
An analysis of consumer and buyer behaviour and their implications for marketing decisions. The course examines theories of, and research in, consumer behaviour through cases and group projects. (Prerequisite: MKTG-1310.)

**MKTG-3350. Distribution and Marketing Channels**
The subject of marketing channels deals with the flow of ownership of a product from manufacturer to final user. Major topics include principles of marketing channel design, the types and roles of wholesalers and retailers, the impact of the other elements of the marketing mix, and issues in marketing channel management, such as power, conflict and legal concerns. (Prerequisite: MKTG-2320).

**MKTG-3370. Quantitative Analysis for Marketing Decisions**
The application of quantitative techniques to marketing problems and strategy. (Prerequisite: MSCI-2020 and MKTG-1310.)

**MKTG-3380. Retail Marketing Management**
An introduction to retailing concepts and the examination of various managerial issues related to retailing, including retail marketing strategy formulation, customer care and service, product assortments, retailer-supplier relations, pricing, inventory control, and location and layout decisions. (Prerequisite: MKTG-2320.)

**MKTG-3390. Logistics and Supply Chain Management**
The planning, implementing and controlling of logistics activities associated with the flow of goods and related information, from the raw materials stage to the end user. This course discusses the fundamentals of business logistics and supply chain management, including transportation, order

management, warehousing, reverse distribution, logistics information technology, and the impacts of product, price and promotion. (Prerequisite: MKTG-1310 or permission of instructor.)

**MKTG-4320. Product Planning for Marketing Management**
An overall view of the product planning function (including the planning of services) in a company or institution, including the development and appraisal of product ideas, optimal organization of the planning process, product audits, financial and legal aspects of product planning, and intra-organizational factors. (Prerequisite: MKTG-2320.)

**MKTG-4330. Internet Marketing**
This course explores the impact of the Internet on traditional marketing strategy and actions. Specific emphasis will be placed on customer segmentation/targeting, consumer behaviour and issues of on-line/off-line consistency. Students will be expected to develop an understanding of web site design and basic html coding. Classes consist of lectures, lab work, case analysis, and student discussions/presentations. The course requires both qualitative and quantitative treatment of issues. (Prerequisites: MSCI-2130 and MKTG-2320.)

**MKTG-4350. International Marketing**
This course is concerned with the problems and opportunities of marketing in foreign environments. It will focus on the cultural, economic, and geographical problems encountered in managing the marketing function from a Canadian manager's perspective. (Prerequisite: MKTG-2320.)

**MKTG-4360. Advertising Management**
A study of how to approach the management of advertising in business enterprises. The focus will be on making advertising decisions (e.g., setting advertising objectives, creating advertising campaigns, developing media strategies, and measuring advertising results) in relation to the overall marketing strategy of the business or non-business enterprise. (Prerequisite: MKTG-2320.)

**MKTG-4370. Sales Management**
The study of the personal selling area, including an examination of the role and responsibilities of the salesperson, the sales management, and sales management functions. (Prerequisite: MKTG-2320.)

**MKTG-4380. International Logistics**
This is an applied course discussing the physical movement of products across international borders. The course examines the decisions that a logistics manager must make when shipping products internationally and the background knowledge that a logistics manager should possess to make these decisions. Topics include international ocean and international air transportation; customs duties; government influences on international logistics; international terms of carriage; and international cargo insurance and documentation. (Prerequisite: MKTG-1310 or permission of the instructor.).

**MKTG-4390. Marketing Strategy and Planning**
An advanced course in the management of the marketing function. The course will include an appraisal of the key issues in the management of the marketing function with major emphasis on the development, formulation, implementation, and control of the firm's marketing plan. Emphasis will also be placed on current key issues in the marketing area and global marketing considerations. (Prerequisites: MKTG-2320 and any 4 of MKTG-3340, MKTG-3320, MKTG-3350, MKTG-3370, MKTG-3380, MKTG-3390, MKTG-4320, MKTG-4330, MKTG-4350, MKTG-4360, MKTG-4370, MKTG-4910 and MKTG-4950)

**MKTG-4450. Services Marketing**

This course will be of particular interest to students who wish to explore marketing and management issues related to service industries (such as travel, hospitality, financial, sports, and other service related businesses). The course recognizes that service organizations require a distinctive approach to marketing and operations strategy, both in their development and execution. This course explores ways that goods-producing and -selling firms might use and market "service" as a source of competitive advantage. Topics include the service dominant logic; the systems perspective; research; branding; e-service principles; overlap of marketing/operations/human resource systems in service organizations (i.e., internal marketing); service blueprinting; service recovery; and service customer relationship management (CRM). Throughout, heavy emphasis will be placed on understanding the service consumer experience. (Prerequisites: MKTG-2320, MKTG-3340)

**MKTG-4910. Special Topics in Marketing**
This course examines major concepts, industries, ideas, issues or current problems in Marketing. Topics, and the method of delivery, may vary from semester to semester. Please contact the instructor for further information. (May be taken for credit twice if content is different.) (Prerequisite: Consent of instructor.)

**MKTG-4950. Independent Study in Marketing**
This course is of varying content dealing with topical issues in marketing. The course might focus on a specific functional area or a particular environment for the application of marketing concepts. Administration of the course will vary as appropriate with its content and might involve a literary survey, research project, experiential exercise, or other format. (Prerequisites: MKTG-2320 and consent of the instructor and Area Chair.) (May be taken for credit twice if content is different.)

## STRATEGY AND ENTREPRENEURSHIP COURSES

**STEN-1000. Introduction to Business**
This course takes a holistic approach in helping students develop an understanding of their future places, as entry-level managers, in business and other forms of organizations. Functional business learning is undertaken using the lecture method. In parallel, the basic elements of strategic management are introduced in order to develop students' strategic thinking capabilities. Project work focuses on adapting students' career strategies to the employment environment, and on adapting companies' strategies to their competitive environments. Finally, the case method is used to emphasize ethical self-management, group dynamics and organizational governance, and entrepreneurial processes involved in starting and managing a small business. The course demands that students: use their initiative; develop their analytical, decision-making and interpersonal management skills; and take responsibility for achieving success.

**STEN-2050. Co-op Work Term I**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course can not continue in the co-op program.)

**STEN-2900. Fundamentals of Entrepreneurship**
This is a survey course designed to introduce students from all faculties to entrepreneurship as a career option. The entrepreneurial process will be explored through a mix of lectures and case studies. Topics include the identification of profitable business ideas, assessment of business opportunities, entry

strategies, marshalling resources, and the start-up process. (Prerequisite: STEN-1000. Business students must also have completed MGMT-1000.)

**STEN-3050. Co-op Work Term II**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course can not continue in the co-op program.)

**STEN-3900. Entrepreneurial Resource Management**
This course covers the strategic issues involved in attracting and managing resources - financial, human, and intellectual capital - in the entrepreneurial firm. The course is taught from two distinct perspectives - from the point of the view of the resource provider (angel investor, venture capitalist, bank, corporation, talent) and from the point of view of the resource seeker (the entrepreneur). The course focuses on the strategic implications, rather than financial techniques, associated with both attracting resources and valuing new and growing ventures. The course is suitable for any student wishing to pursue an entrepreneurial career path, including a career in venture capital. Pre-requisites: FINA-2710 (Business Finance II) and MKTG-1310 (Principles of Marketing).

**STEN-3910. New Venture Formation**
Designed for students who choose entrepreneurship as a career option, this course is an in-depth study of the process of drawing the blueprints for a new enterprise including: developing business ideas, developing business concepts, conducting feasibility studies, choosing a legal form or business, writing business plans, identifying and approaching sources of money, raising funds, and putting together a package of resources to start an enterprise. (Prerequisites: STEN-2900.)

**STEN-3930. International Business**
This course is designed to provide students with the tools to think globally and manage internationally. This survey course covers a wide range of topics including, the global trade and investment environment, the international firm's cultural, political, and competitive environment, and the management and operations of international firms. The focus throughout the course is on the changes that occur when a firm moves from a domestic focus to a global one. (Prerequisites: FINA-2710 and MKTG-1310.)

**STEN-3970. The Law and Business Administration**
A survey of the law pertaining to business administration. Topics include: the legal approach to business problems, contracts, sale of goods, bills of exchange, agency, bailment, real property, partnerships, corporations, and bankruptcy. (Prerequisite: MGMT-2430.)

**STEN-4050. Co-op Work Term III**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course cannot continue in the co-op program.)

**STEN-4900. Strategy in the Global Business Environment**
This course builds on the basic knowledge provided in STEN-3930 to provide students with an in-depth appreciation of global management issues. The course focuses on developing and implementing global strategies. This includes a detailed analysis of the international environment and the forces that determine global effectiveness, as well as consideration of different forms of entry available to firms and the specific factors that must be addressed to implement global strategies successfully. (Prerequisite: STEN-3930.)

**STEN-4910. Special Topics in Strategic Management and Entrepreneurship**
This is an advanced course designed to examine, in-depth, the strategic issues facing business decision makers. Coverage will vary to reflect the contemporary issues and concerns of today's executives. (May be taken for credit twice if content is different.) (Prerequisite: STEN-3910, fourth year standing or consent of the instructor.)

**STEN-4930. Field Study in Strategic Management and Entrepreneurship**
In this course, teams of students study an actual firm focusing on identifying the strategic issues facing the firm, the needed strategic plans for addressing them, and the implementation of such plans. Students pursuing the entrepreneurial option can also take this course to finalize the prototype for the business they intend to start. (Prerequisite: STEN-3910, fourth year standing or consent of the instructor.)

**STEN-4950. Independent Study in Strategic Management and Entrepreneurship**
Under faculty supervision, students undertake an individualized program of independent study to pursue, in great depth, a topic in strategic management or entrepreneurship where they can apply the knowledge gained in prior courses. (Prerequisite: consent of instructor and Area Chair.) (May be taken for credit twice if content is different.)

**STEN-4960. Enterprise Development Consulting**
Students will perform business consulting and market research for local organizations, giving them opportunities to network while applying skills and knowledge learned in the classroom to real life business situations. Semester-long projects covering different business areas are performed in small supervised teams. Weekly class time is a round-table discussion format used for collaboration of ideas and strategy with the rest of the class. Students will be evaluated on participation along with formal reports and presentations regarding the projects. Highly motivated students from a variety of business-related disciplines will make-up the consulting team. (Prerequisites: Approval of instructor.) (Open to Semester 7 and above students only).

**STEN-4980. Strategic Management**
Taught from the perspective of the CEO, this is the capstone course of the B.Comm. Program. It is designed to integrate the knowledge gained in all business courses and focus such knowledge on the central task of managing the firm in its entirety. (Prerequisites: All other required Business courses and Semester 7 or 8 standing for B. Comm. students, or Semester 5 or 6 standing for B. Comm. for University Graduates students.) (Not open to non-Business students.)

# FACULTY OF EDUCATION

## GENERAL INFORMATION

**History**

The Faculty of Education, University of Windsor, was established on July 1, 1970, thus becoming the seventh Faculty in the University. Its predecessor, Windsor Teachers' College, founded in 1962, trained its students to teach in the elementary schools of Ontario. Integration with the University opened the way to the development of new programs of study designed to prepare candidates for teaching in both elementary and secondary schools.

**The Role and Mission of the Faculty of Education**

The Faculty of Education, University of Windsor, promotes the professional and scholarly growth of teachers at all levels as reflective, caring, competent and innovative educators. We advance knowledge and contribute to the improvement of pedagogical practice through our teaching, our research and scholarly activities, and our community service and development. Our undertakings are informed and shaped by a commitment to equity and social justice.

We approach teaching and learning primarily from a constructivist perspective, which builds upon the philosophical principles of progressive education. Some key elements include student-centred active learning, authentic activity, and integration of prior experiences. We are focused on providing prospective teachers with what they need to know in order to teach diverse student bodies. We value teaching in ways that emphasize the understanding of differences that may arise from diverse cultures, family experiences, multiple intelligences, and learning styles. Informing the design of our pre-service program are the following beliefs:

- effective teachers are able to work with students with a wide range of learning needs, including those with exceptionalities;
- teacher candidates learn best by doing and reflecting, collaborating with skilled professionals, and by sharing their experiences; and
- teacher candidates should be provided opportunities to develop a professional sense of accountability, which includes an understanding of the social and moral responsibilities that underlie the practice of the teaching profession.

The ultimate purpose of the Faculty of Education is to enable teacher candidates to prepare their students to be responsible and productive citizens. We stress to our teacher candidates the importance of recognizing the enormous influence they will have on students. They must continuously evaluate what students are thinking and modify their plans to take into account what they discover. In this regard, we promote the notion that teachers are powerful classroom ethnographers with the ability to analyse and explain to themselves and to others why they do the things they do. We believe teacher candidates should internalize the dispositions and skills needed to study their teaching and take responsibility for their own professional development and lifelong learning.

# GENERAL REGULATIONS AND ENROLMENT LIMITATIONS

Students who have completed a degree in Education through the consecutive pre-service program, or who have completed Education courses in a Concurrent program, may not count any of the Education courses toward another degree.

The Faculty of Education reserves the right to limit enrollments in any program or individual course of instruction described in this Calendar in cases where the Faculty's teaching and other resources cannot accommodate all of the qualified applicants. In addition, not all courses listed may be offered.

# PROGRAMS

## Consecutive Bachelor of Education (2 year program)

**APPLICATION**

Candidates wishing to enter the two-year, pre-service program of study must apply through the Ontario Universities' Application Centre using the on-line application form (www.ouac.on.ca/teas/).

Applications must be received by the Centre by the announced date.

Applicants select one of three possible levels of teaching specialization: Primary-Junior (Junior Kindergarten to Grade 6), Junior-Intermediate (Grades 4 to 10), and Intermediate-Senior (Grades 7 to 12). Pertinent theory and exemplary teaching practices are supplemented by directed observation and field experience.

**SELECTION OF CANDIDATES**
Candidates will be selected for admission to the Pre-Service program on the basis of superior academic qualifications and experience profiles.

The Faculty of Education also offers an Equity Admissions Program.

**ADMISSION REQUIREMENTS**
1) A candidate for admission to the two-year, pre-service program of study leading to the Bachelor of Education (General) Degree and the Ontario College of Teacher’s Certificate of Qualification and Registration must submit proof of graduation with an approved degree from an accredited postsecondary institution. The candidate's degree program must include at least three years of full-time study or ninety academic credits or equivalent beyond the Ontario School Secondary Diploma (OSSD) or its equivalent.

2) A candidate who wishes to qualify for the Ontario Certificate of Qualification, Intermediate-Senior concentration, will be required to select two teachable subjects from the following: Business Studies - General, Biology, Chemistry, Dramatic Arts, English, French as a Second Language, Geography, History, Mathematics, Music-Instrumental, Music-Vocal, Physical and Health Education, Physics, Science (General), Social Sciences General, and Visual Arts.

Junior-Intermediate candidates will be required to select one teachable subject from the same list, excluding Biology, Chemistry, Physics and Social Sciences-General, Business Studies-General.

A candidate for the Intermediate-Senior level must have as prerequisites for the major teachable subject at least ten semester courses or equivalent (thirty credits) and for the second teachable subject at least six semester courses or equivalent (eighteen credits). Prerequisites for the Social Sciences General include courses in Anthropology, Political Science, Psychology, Women's Studies and/or Sociology. Candidates for the Junior-Intermediate area should have as prerequisites for their teachable subject at least six semester courses or equivalent (eighteen credits). Additional requirements apply for Music and French as a Second Language teachable subjects. Please see the Faculty of Education website.

3) The following are required of all accepted applicants:
(a) completed application form with the documents noted on form;
(b) birth certificate and Social Insurance Number (S.I.N.);
(c) proof of Canadian Citizenship or permanent residency as defined by the Immigration Act (Canada), or of eligibility for employment in Canada (if the Ontario Certificate of Qualification or a Temporary Letter of Standing is to be awarded);
(d) legal proof of change of name must be submitted where the name being used differs from that shown on the birth certificate.

4) Additional requirements:
(a) Prior to September 15, the candidate must present proof of a tuberculin test as required by the Ontario Ministry of Health. The test must have been administered during the previous twelve months.
(b) An official police criminal record check. The check must have been obtained within the previous six months.
(c) After acceptance, students are required to submit to the Faculty a recent photograph (passport-size) for identification purposes within the Faculty of Education.
(d) Candidates are advised that they are responsible for their own transportation to and from field placements.

**STANDING REQUIRED FOR CONTINUATION**

**Faculty Courses:**
Teacher Candidates, who obtain three or more final grades below a 60-62.9% in any course in the program, or one or more final grades of 0-49.9% in any course in the program, over the duration of the program, will have failed the Bachelor of Education (BEd) Degree and will not be eligible for recommendation to the Ontario College of Teachers for certification. In all such cases, upon a cumulative academic record as defined above, Teacher Candidates will be required to meet with the Associate Dean Pre-Service immediately to review their academic standing, which may lead to the requirement to withdraw from the program. Teacher Candidates may be provided with an opportunity to return to the Faculty of Education to fulfill outstanding requirements for the completion of the BEd Degree. Conditions of reinstatement are the sole prerogative of the Dean or her/his designate.

**Practicum:**
Each teacher candidate receives a final Pass/Fail grade for Practice Teaching (EDUC-5499). A pass is an essential prerequisite for both the BEd degree and recommendation for certification to the Ontario College of Teachers. The Pass/Fail determination is based on the Faculty Advisor's Final Summative

Practicum Report/Portfolio Assessment, which documents the overall field experience using a range of criteria. Satisfactory performance in practice teaching is essential for success.

Generally, in order to pass, a teacher candidate will have received “Satisfactory” Summative assessments from the Associate/Mentor Teacher at the end of each placement. However, in cases where a teacher candidate receives a “Borderline” Summative assessment in the first placement, but receives “Satisfactory” Summative evaluations in all subsequent placements, the teacher candidate’s status will be reviewed by the Associate Dean, Pre-Service. A teacher candidate who receives a “Borderline” assessment in either of the final two placements will be required to complete an additional placement and obtain a “Satisfactory” Summative assessment.

A teacher candidate who receives a Summative “Borderline” assessment will be notified in writing that he/she is in danger of not meeting the standard required in order to obtain a Pass. Teacher candidates who receive either two Summative “Borderline” assessments or one Summative “Unsatisfactory” assessment have not met the standard required to obtain a Pass in EDUC-5499. All such cases will be reviewed by the Associate Dean, Pre-Service, who will determine the next steps in the process. Placements which are terminated by the school will be considered “Unsatisfactory.”

**Practicum Failure**
It should be noted that failure may result from any serious contravention of the Ontario College of Teachers Standards of Practice and Ethical Standards for the Teaching Profession, including, but not limited to:

- Professional misconduct during the practicum component of the Faculty of Education program;
- Academic misconduct during the practicum component of the Faculty of Education program; and/or
- Neglect of teaching responsibilities and/or poor teaching performance during the practicum.

Failure due to issues related to performance in teaching practice, include, but are not limited to:

- Unsatisfactory performance in teaching practice (2 borderline or 1 unsatisfactory summative assessment); and/or
- An unsatisfactory portfolio assessment by the Faculty Advisor.

**Failure for Cause**
In certain circumstances a candidate may be deemed to have failed the Practice Teaching course, EDUC-5499, for cause. Failure for cause may result from professional misconduct during the practicum and/or gross neglect of teaching duties. All cases of this kind are referred for investigation and decision to the Associate Dean, Pre-Service Education, who may refer the matter to the Professional Standards Committee.

**Sessional records**
Sessional records include term assignments, oral and written tests, and practical work. The general attitude of the candidate to his or her work, adaptability to teaching, and the probability of future success as a teacher may be taken into consideration in determining sessional standing.

**Final grades**
Final grades awarded are based upon the accumulated evaluation of the candidate. Formal final examinations may be held; however, no formal supplemental examinations will be allowed.

**STANDING REQUIRED FOR GRADUATION**

To complete the Bachelor of Education (BEd) Degree and be recommended to the Ontario College of Teachers for certification, teacher candidates must meet the expectations in all areas of the pre-service education program. This means that candidates must successfully complete their course work, field experience (Each teacher candidate must receive a pass in EDUC-5499 as a prerequisite for both the BEd degree and recommendation for certification to the Ontario College of Teachers), professional learning series activities and the Professional Growth Portfolio.

**TEACHER CERTIFICATION**

The Faculty of Education provides programs and courses in teacher education but does not issue a teaching certificate. The responsibility for teacher certification lies with the Ontario College of Teachers. Upon successful completion of the requirements for teacher certification in Ontario, a recommendation will be made by the Dean of the Faculty to the Ontario College of Teachers indicating eligibility for the Ontario Certificate of Qualification. Candidates who successfully complete either the Consecutive or the Concurrent Programs of Study including Practice Teaching will be awarded the BEd degree of the University of Windsor, and will be recommended to the Ontario College of Teachers indicating eligibility for an Ontario Certificate of Qualification.

**Degree Requirements**

Total courses: 60 credits (20 course equivalencies)

(a) For all Divisions (P/J, J/I, I/S):
EDUC-5201. Foundations of Practice Pt. I (1.5)
EDUC-5202. Foundations of Practice Pt. II (1.5)
EDUC-5203. Educational Psychology (3)
EDUC-5204. Differentiated Instruction (3)
EDUC-5206. Aboriginal Ways of Knowing: Cultural, Political & Linguistic Contexts (1.5)
EDUC-5207. Service Learning Specialization (3)
EDUC-5208. Assessment and Evaluation (1.5)
EDUC-5209. Critical Analysis of Social, Global & Cultural Issues in Education (1.5)
EDUC-5210. Foundations of Practice (III) Law and Ethics - School Governance (1.5)
EDUC-5499. Practicum

Professional Development: Professional Learning Series (approximately 10 days during the Fall/Winter) (non-credit)

(i) Primary/Junior Stream

General Methodology Courses:
EDUC-5215. Mathematics Foundations (3)
EDUC-5311. Visual Arts Methodology (3)
EDUC-5312. Digital Technology and Social Media Applications (3)
EDUC-5313. Health and Physical Education (3)
EDUC-5314. Language Arts (3)
EDUC-5315. Mathematics Methodology (3)
EDUC-5316. Music Methodology (3)
EDUC-5317. Science (3)
EDUC-5318. Social Studies (3)
EDUC-5411. Drama Methodology (1.5)
EDUC-5412. Dance Methodology (1.5)

EDUC-5414. Language and Media Literacy (1.5)

For students who wish to teach in the Catholic school system in Ontario:EDUC-5200. Religious Education in Roman Catholic Schools (1.5)

(ii) Junior/Intermediate Stream

General Methodology Courses:
EDUC-5221. Pedagogy of the Arts (1.5)
EDUC-5225. Mathematics Foundations (1.5)
EDUC-5321.Visual Arts Methodology (3.0)
EDUC-5322. Digital Technology and Social Media Applications (3)
EDUC-5323. Health and Physical Education (1.5)
EDUC-5324. Language Arts (1.5)
EDUC-5325. Mathematics Methodology (1.5)
EDUC-5326. Music Methodology (1.5)
EDUC-5327. Science (3)
EDUC-5328. Social Studies (1.5)
EDUC-5421. Drama Methodology (1.5)
EDUC-5422. Dance Methodology (1.5)
EDUC-5424. Language and Media Literacy (1.5)

Specialised Methodology Courses:
One Teachable (6) to be selected from the following:
EDUC-5352. Art (6)
EDUC-5356. English (6)
EDUC-5358. French (6)
EDUC-5362. History (6)
EDUC-5366. Mathematics (6)
EDUC-5367. Music (Vocals) (6)
EDUC-5368. Music (Instruments) (6)
EDUC-5369. Health and Physical Education (6)
EDUC-5379. Drama (6)
EDUC-5380. General Science (6)

For students who wish to teach in the Catholic school system in Ontario: EDUC-5200. Religious Education in Roman Catholic Schools (1.5)

(ii) Intermediate/Senior Stream

General Methodology Courses:
EDUC-5231. Pedagogy of the Arts (1.5)
EDUC-5331. Visual Arts Methodology (1.5)
EDUC-5332. Digital Technology and Social Media Applications (3)
EDUC-5333. Health and Physical Education (1.5)
EDUC-5334. Language across the Curriculum (1.5)
EDUC-5335. Mathematics (1.5)
EDUC-5336 Music Methodology (1.5)
EDUC-5337. Science (1.5)
EDUC-5338. Social Studies (1.5)

EDUC-5339. Career and Guidance Education (1.5)
EDUC-5431 Drama Methodology (1.5)

Specialised Methodology Courses:

Two Teachables (6 each) to be selected from the following:
EDUC-5352. Art (6)
EDUC-5356. English (6)
EDUC-5358. French (6)
EDUC-5360. Media Arts (6)
EDUC-5362. History (6)
EDUC-5366. Mathematics (6)
EDUC-5367. Music (Vocals) (6)
EDUC-5368. Music (Instruments) (6)
EDUC-5369. Health and Physical Education (6)
EDUC-5370. Business Studies (6)
EDUC-5373. Biology (6)
EDUC-5374. Chemistry (6)
EDUC-5376. Physics (6)
EDUC-5377. Social Sciences (6)
EDUC-5379. Drama (6)
EDUC-5380. General Science (6)

For students who wish to teach in the Catholic school system in Ontario: EDUC-5200. Religious Education in Roman Catholic Schools (1.5)

Professional Development: Professional Learning Series (approximately 10 days during the Fall/Winter) (non-credit)

## Bachelor of Education in Technological Studies/Diploma in Education - Technological Studies

The Faculty of Education, in partnership with the Windsor-Essex Catholic School Board and the Greater Essex County District School Board, offers Technological Studies to those wanting to teach this subject in Ontario High Schools. The program is offered over the course of fourteen months, with course work being held during two semesters (July and August) in both Summer I and Summer II and over the two semesters (fall and winter) between each summer. A practicum (minimum 80 days) at an Ontario High School and a service learning internship incorporating broad based technology skills are offered between September to June. This program provides the preparation required for certification by the Ontario College of Teachers for teaching Technological Education in Ontario High Schools. Candidates may enter the program via one of four different pathways:

- Trade (3 years wage-earning) + 2 year College degree/diploma
- Trade (2 years wage-earning) + 3 year College degree/diploma
- Trade (X years wage-earning) + University degree (for a total of 5 years)
- Trade (at least 5 years wage-earning experience) + Ontario School Secondary Diploma (OSSD) or its equivalent

Those candidates who enter the program with an acceptable university degree or college diploma will receive, upon successful completion of the program, a Bachelor of Education in Technological Studies.

Those candidates who enter the program on the basis of 5 years wage-earning experience will receive, upon successful completion of the program, a Diploma in Education - Technological Studies. Graduates of the Diploma in Education – Technological Studies who later obtain an acceptable degree can apply to Registrar's to have the Diploma converted to a B.Ed. Successful completion of Summer I and a practicum of a minimum of ten days will qualify candidates to apply to the Ontario College of Teachers (OCT) for a Transitional Certificate of Qualification and Registration. Upon successful completion of the entire program, candidates are qualified to apply to the OCT for a Certificate of Qualification and Registration.

Candidates are required to make their application to one of the following broad-based technological education subjects.

**BROAD-BASED TECHNOLOGICAL EDUCATION SUBJECTS – Intermediate (Grades 9-10) and Senior (Grades 11-12)**

Communications Technology
Computer Technology
Construction Technology
Green Industries
Hairstyling and Aesthetics
Health Care
Hospitality and Tourism
Manufacturing Technology
Technological Design
Transportation Technology

**Application and Admission:**
Applications are made through the Teacher Education Application Services (www.ouac.on.ca/teas/)

Technological Competency Requirements (as *per OCT Registration Guide for Technological Education*)

**Documents required:**
1. A resume providing an overview of your academic background and work experience. The resume should provide a clear and concise overview of your work experience, including employer, start and end dates, and a brief description of the position. A record of secondary and postsecondary education should be provided, including start and end dates, degrees, diplomas, certificates and/or trade licences. It is important that the resume reflect experience in the Broad-Based Technological Education subject area to which application is being made.

2. Copies of your Ministry of Training, Colleges and Universities Certificate of Qualification (C of Q) and/or certificate(s) of apprenticeship (if applying to teach to a regulated trade). To be a teacher in automotive (Transportation), electrical (Construction) or hairstyling, the applicant must hold a valid trade license. As applicable, candidates must submit a Ministry of Training, Colleges and Universities Certificate of Qualification (C of Q) accompanied by a Certificate of Apprenticeship (C of A) and the details of the examination showing at least 70% (B-) standing.

3. Letters of wage-earning experience.
You will need to show that you have accumulated the required number of years of work experience, outside of teaching, in your trade (1,700 hours equals one year). The number of years must correspond the appropriate pathway for admission:

- Trade (3 years wage-earning) + 2 year College degree/diploma

- Trade (2 years wage-earning) + 3 year College degree/diploma
- Trade (X years wage-earning) + University degree (for a total of 5 years)
- Trade (at least 5 years wage-earning experience) + Ontario School Secondary Diploma (OSSD) or its equivalent.
  a) If you worked for an employer or through a union hall, submit a copy of a signed letter on official company or union letterhead. It must be written by a supervisor familiar with your work and must include the supervisor's name, title, address and contact information provided. The letter(s) must include your name, your position(s) in the company, the length of work experience(s), with start and end dates, typical hours of work per week, indication as to full or part-time employment, a brief description of the work, a detailed description of duties and skills used in the position. If you acquired experience as a manager or supervisor, specific statements of the knowledge and skills used in the position must be in the letter. We cannot return letters to you, so it is recommended that you ask for additional original copies for your future use.

  b) Self-employed applicants or applicants employed in a family business are required to submit an original sworn statement, signed by a commissioner of oaths, that indicates the applicant was self-employed or employed in a family business. The statement should include the duration of employment, the actual start and end dates and the nature of duties (providing specific statements of the skills used in the position). In addition, to validate the applicant's sworn statement, the following supporting documentation must be submitted: ii) a copy of business license or registration supporting the duration of employment noted in the sworn statement; iii) copies of income tax assessments (which indicate self-employment/family business employment) supporting the duration of employment noted in the sworn statement, or a statement from an accountant, confirming income, or an annual report; iv) At least one letter from a major supplier attesting to materials purchased and/or a client attesting to the work completed. It is important that these documents reflect work experience in the Broad-Based Technological Education subject area to which application has been made.

We recognize that it is sometimes impossible to provide original and appropriate documentation for wage-earning experience, for instance in cases of bankruptcy or the death or retirement of an owner, or where you have worked in a family business or when you do not want to reveal that you may be leaving your place of employment. In these exceptional circumstances you must provide: i) a sworn statement or solemn affirmation made before a commissioner of oaths indicating the reason(s) why this information is not available; ii) copies of T-4 tax forms or a statement from an accountant to confirm the income and dates of employment.
Please visit the Ontario College of Teachers website regarding wage-earning work experience requirements.

4. Official secondary and postsecondary academic transcripts.
Official postsecondary academic transcripts/diploma, bearing the original seal and/or signature of the institution, must be sent directly by the issuing institution. Photocopies and student copies are not acceptable. Applicants applying for the Diploma in Education - Technological Studies are required to submit evidence of the Ontario School Secondary Diploma (OSSD) or its equivalent.

**Required Documentation prior to receiving a practicum:**

*The following are required of all accepted applicants:*
(a) birth certificate and Social Insurance Number (S.I.N.);(b) proof of Canadian Citizenship or permanent residency as defined by the Immigration Act (Canada), or of eligibility for employment in Canada (if the Ontario Certificate of Qualification or a Temporary Letter of Standing is to be awarded);(c) legal proof of

change of name must be submitted where the name being used differs from that shown on the birth certificate.

*Additional requirements:*
(a) Prior to September, the candidate must present proof of a tuberculin test as required by the Ontario Ministry of Health. The test must have been administered during the previous twelve months.(b) An official police criminal record check. The check must have been obtained within the previous six months.(c) A recent photograph (passport-size) for identification purposes within the Faculty of Education.(d) Candidates are advised that they are responsible for their own transportation to and from field placements.

**Degree Requirements**

Credits Required for the program: 60

*Required courses:*
EDUC-5203 Educational Psychology (3.0); EDUC-5204 Differentiated Instruction (3.0); EDUC-5205 Educational Foundations, Law and Ethics (3.0); EDUC-5206 Aboriginal Ways of Knowing (1.5); EDUC-5208 Assessment and Evaluation (1.5); EDUC-5332 Digital Technology (3.0); EDUC-5334 Language Across the Curriculum (1.5); EDUC-5339 Career and Guidance (1.5); EDUC-5386 Curriculum Development for Technological Studies Pt. 1 (4.5); EDUC-5387 Principles & Methods of Teaching Technological Studies Pt. 1 (4.5); EDUC-5388 Curriculum Development for Technological Studies Pt. II (4.5); EDUC-5389 Principles and Methods of Teaching Technological Studies Pt. II (4.5); EDUC-5497 Internship (7.5); EDUC-5498 Practicum (12.0) plus three additional courses: EDUC-5201 Foundations of Practice Part I (philosophical orientation) (1.5), EDUC-5202 Foundations of Practice Part II (classroom practice) (1.5) and, EDUC-5209 Critical Analysis of Social, Global and Cultural Issues in Education (1.5).

*Course used to calculate the major average are:* all required courses.

**Standing Required for Continuation in Program**
70% major average. Candidates who obtain a grade below 50% in any course will be required to withdraw from the program.

**Standing Required for Graduation**
70% major average.

The Faculty of Education does not issue a teaching certificate. The Ontario Certificate of Qualification and Registration is issued by the Ontario College of Teachers upon recommendation of the Dean of the Faculty of Education. To teach technological education you need to satisfy the Ontario College of Teachers' academic, professional, technological, language proficiency, Ontario Mathematics Proficiency Test and professional suitability requirements. The OCT's requirements may change without notice and it is your responsibility to be informed of such changes: https://www.oct.ca/becoming-a-teacher/requirements.

Candidates who obtain three or more final course grades below 65% will not be recommended for certification. Candidates who are unsuccessful in the internship or the practicum will not be recommended for either a diploma/degree or certification

## Minor in Organizational Learning and Teaching

NOTE: Courses that lead to the Minor in Organizational Learning and Teaching cannot be counted towards a Bachelor of Education.

Total Courses: 6 courses
EDUC-4200 Theories of Individual and Collective Learning
EDUC-4100 Learning-Centred Teaching: Planning, Delivery, Assessment and Evaluation
EDUC-4150 Learning Organizations: Management and Leadership
EDUC-4050 Instructional Technology
EDUC-4000 Diversity and Inclusion in the Learning Organization
EDUC-4800 Experiential Learning Field Placement

## Concurrent Bachelor of Music (Honours Music Education)/ Bachelor of Education

**Degree Requirements**

Total course equivalents: Forty

**Bachelor of Music Requirements**

All students are required to complete the requirements of the Bachelor of Education degree program, in addition to the following Bachelor of Music course requirements:
(a) History and Literature (Musicology/Ethnomusicology): three courses, consisting of MUSC-1260, MUSC-1270 and one of MUSC-3460 MUSC-2270, MUSC-3260, MUSC-3270, MUSC-3170, MUSC-3460, MUSC-4260, MUSC-4270, MUSC-4370, MUSC-4470, MUSC-2490.
(b) Theory and Composition: six courses, consisting of MUSC-1120, MUSC-1130, MUSC-2120, MUSC-2130; and the 1.50 credit hour courses MUSC-2220, MUSC-2230, MUSC-3220, and MUSC-3230.
(c) Performance Studies: eight courses, consisting of one course from the series MUSP-3470 to MUSP-3690, or MUSP-3710 (taken eight times).
(d) Ensembles: four courses, consisting of eight 1.50 credit hour courses (one in each of eight terms) of MUSP-2100, MUSP-2200, or MUSP-3100. Up to 7.5 Units of this requirement may be completed with the MUSP-2400 course.
(e) Methods and Pedagogy: five courses, consisting of MUSC-2390, MUSC-2480, MUSC-2550, MUSC-2690, and MUSC-2790.
(f) Music Education: four courses, consisting of MUSC-2850, MUSC-4840, MUSC-4850 and MUSC-4940.
(g) two additional courses in History and Literature (Musicology) or Theory and Composition, or one course in the above areas plus two 1.50 courses in Ensembles.
(h) GART-1500, GART-1510;
(i) six courses from any area of study, excluding Music and Music Therapy, that are required for the student's second teachable.

Courses used to calculate the major average are: courses listed under requirements (a) to (g), and any courses taken in the major area(s) of study.

**Bachelor of Education Requirements**

Total course equivalents: Twenty

All students are required to complete the requirements of the Bachelor of Music-Music Education (Honours) degree program, in addition to the following Education courses: EDUC-5201 (1.5), EDUC-5202 (1.5), EDUC-5203 (3.0), EDUC-5204 (3.0), EDUC-5206 (1.5), EDUC-5207 (3.0), EDUC-5208 (1.5), EDUC-5209 (1.5), EDUC-5210 (1.5), EDUC-5231 (1.5), EDUC-5331 (1.5), EDUC-5332 (3.0) EDUC-5333 (1.5), EDUC-5334 (1.5), EDUC-5335 (1.5), EDUC-5336 (1.5), EDUC-5337 (1.5), EDUC-5338 (1.5), EDUC-5339 (1.5), EDUC-5431 (1.5), EDUC-5367 or EDUC-5368, (6.0) plus one additional teachable subject selected from the Education Calendar and, EDUC-5499 (12.0) Students planning on teaching in the Roman Catholic School Board must also take EDUC-5200 (1.5).

**Concurrent Bachelor of Music (Honours Music Education)/Bachelor of Education – Recommended Course Sequence**

First Year: Ten courses as per Music Education Calendar.
Second Year: Twelve courses as per Music Education Calendar.
Third Year: Eleven Courses as per Music Education Calendar.
Fourth Year: In the fourth year, students will take the entire Year 1 of the B.Ed. program, and Lessons (consisting of one course from the series MUSP-3470 to MUSP-3690, or MUSP-3710, taken twice [once in each semester]) and Ensemble (consisting of two courses of MUSP-2100, MUSP-2200, or MUSP-3100, taken once in each semester) from Music.
Fifth Year: In the fifth year, students will take the entire Year 2 of the B.Ed. program, and Ensemble (consisting of two courses of MUSP-2100, MUSP-2200, or MUSP-3100, taken once in each semester) from Music.
Summer: Students will take three second teachable courses in summer term, at any point in the degree, but prior to the final Education year (Year 5).

**Standing required for continuation and graduation from the concurrent program:**
70% major average and 60% cumulative in the Bachelor of Music-Music Education (Honours).
70% major average in the Bachelor of Education.

Teacher candidates, who obtain three or more final grades below 70%, or one or more final grade of 49% in any course, will have failed the Bachelor of Education Degree and will not be eligible for recommendation to the Ontario College of Teachers for certification. In all such cases, teacher candidates may immediately be withdrawn from the B.Ed. Program. All cases will be reviewed by the Dean of Education or her/his designate. Teacher candidates may be provided an opportunity to return to the Faculty of Education to fulfill outstanding requirements for the completion of the B.Ed. Degree. Under certain circumstances, conditions of reinstatement are the sole prerogative of the Dean or her/his designate.

Unprofessional conduct by teacher candidates is investigated by the Professional Standards Committee (PSC). The Mandate of the PSC is to review the performance of all teacher candidates who have been deemed to have failed for cause or failed Practice Teaching for issues related to inadequate teaching performance. The PSC makes recommendations of a teacher candidate's status in the program and communicates this in writing to the Dean and the teacher candidate. Candidates have the right to appeal the decision, first, to the Dean of Education and then, through the Office of the Registrar, University of Windsor, if necessary. In all cases, teacher candidates are provided due process with opportunity to hear and respond to the case against them. It should be noted that failure may be the result of any serious contravention of the Ontario College of Teachers Standards of Practice and Ethical Standards of Practice for the teaching profession, including, but not limited to:

- Professional misconduct during any component of the Faculty of Education program;
- Academic misconduct during any component of the Faculty of Education program; and/or
- Neglect of teaching responsibilities and/or poor teaching performance during the practicum.

## Concurrent Honours Modern Languages with Second Language Education (Intercultural Stream)/Bachelor of Education

**Application and Admission**
Normally, admission will be to first year only, with a minimum high school (or equivalent) average of 75%. Alternatively, students will be able to apply to transfer into the program with a minimum high school (or equivalent) average of 75%, at the sole discretion of the Associate Dean, Pre-Service. In order to be considered, applicants will need to present six Grade 12 "U" or "M" courses, including Grade 12 "U" English, or equivalent. Admission to this program will be limited.

**Degree Requirements**

**Honours Modern Languages with Second Language Education (Intercultural Stream) Requirements**

Total courses: forty
(a) INCS-1200; INCS-2200; INCS-3200; INCS-3210; INCS-4200;
(b) Intercultural stream: 18 course equivalents including: GRMN-2600 or ASIA-2620; GRMN-2610; ITLN-2600 or ASIA-2640; ITLN-2610; SPAN-2600; SPAN-2610; JWST-1200; ARAB-2610; ARAB-2620; GRMN-2480; ITLN-2480; SPAN-2480; INCS-4990 (6.0 credits); plus one of the following language pairs: GRMN-1020 (6.0 credits) and GRMN-2020 (6.0 credits); or ITLN-1020 (6.0 credits) and ITLN-2020 (6.0 credits); or SPAN-1020 (6.0 credits) and SPAN-2020 (6.0 credits);
(c) two courses from Social Sciences;
(d) two courses from Arts or Science;
(e) two courses from any area of study, excluding Arts.
(f) GART-1500; GART-1510;
(g) four courses from any area of study, including Modern Languages (for example INCS-1370; INCS-2370; INCS-3370; INCS-4370);
(h) five courses from any area of study, excluding Modern Languages;

Courses used to calculate the major average are: courses listed under requirements (a) to (c), and any courses taken in the major area(s) of study.

**Bachelor of Education Requirements**

Total course equivalents: Twenty in the Primary/Junior Division ONLY

All students are required to complete the requirements of the Bachelor of Arts: Modern Languages and Second Language Education degree program (Honours), in addition to the following Education courses:EDUC-1199, EDUC-2299, EDUC-3399, EDUC-5201 (1.5), EDUC-5202 (1.5), EDUC-5203 (3.0), EDUC-5204 (3.0), EDUC-5206 (1.5), EDUC-5207 (3.0), EDUC-5208 (1.5), EDUC-5209 (1.5), EDUC-5210 (1.5), EDUC-5311 (3.0), EDUC-5312 (3.0), EDUC-5313 (3.0), EDUC-5314 (3.0), EDUC-5315 (3.0), EDUC-5316 (3.0), EDUC-5317 (3.0),EDUC-5318 (3.0), EDUC-5215 (1.5), EDUC-5411 (1.5), EDUC-5412 (1.5), EDUC-5414 (1.5),EDUC-5499.

Courses used to calculate the Education major average are: All required Education courses.

**Standing Required for Continuation and Graduation**
70% major average and 60% cumulative average in the Honours BA in Modern Languages and Second Language Education. 70% major average in the Bachelor of Education.

Teacher Candidates, who obtain three or more final grades below a 60-62.9% in any Education course in the program, or one or more final grades of 0-49.9% in any course in the Education program, over the duration of the program, will have failed the Bachelor of Education (BEd) Degree and will not be eligible for recommendation to the Ontario College of Teachers for certification. In all such cases, upon a cumulative academic record as defined above, Teacher Candidates will be required to meet with the Associate Dean Pre-Service immediately to review their academic standing, which may lead to the requirement to withdraw from the program. Teacher Candidates may be provided with an opportunity to return to the Faculty of Education to fulfill outstanding requirements for the completion of the BEd Degree. Conditions of reinstatement are the sole prerogative of the Dean or her/his designate. Teacher candidates must pass the practice teaching course.

**Suggested Sequencing for Students who want to complete in five years:**
First Year: Ten courses from the Honours BA in Modern Languages and Second Language Education and EDUC-1199.
Second Year: Twelve courses towards the Honours BA in Modern Languages and Second Language Education and EDUC-2299.
Third Year: In the third year, students will take the entire Year 1 of the BEd program.
Fourth Year: Eleven Courses towards the Honours BA in Modern Languages and Second Language Education and EDUC-3399.
Fifth Year: In the fifth year, students will take the entire Year 2 of the BEd program.
Summer: Seven courses towards the Honours BA in Modern Languages and Second Language Education, in a summer term, at any point in the degree, but prior to the final Education year (Year 5).

## Concurrent General Bachelor of Arts (Communication, Media and Film)/Bachelor of Education

The Concurrent Communication, Media and Film BA/Bachelor of Education Program is offered jointly over five years by the Communication, Media and Film Department and the Faculty of Education.

**Application and Admission**
Admission is to first-year only with a minimum high school average of 75% in six Grade 12 "U" or "M" courses including Grade 12 "U" English. Candidates not enrolling directly from secondary school may apply for the first year of the concurrent program and will be considered for admission on a case-by-case basis.

Students must successfully complete the Bachelor of Arts degree program to be eligible to graduate with a Bachelor of Education degree.

**Degree Requirements**

**General Bachelor of Arts in Communication, Media and Film**

Total course equivalents: Thirty

(a) ten courses, including CMAF-1010, FILM-1100, CMAF-2340, CMAF-2750, plus one of CMAF-2010, CMAF-2250, CMAF-3340 or CMAF-3750, plus five additional CMAF or FILM courses, at least two of which must be at the 3000 level or above (excluding CMAF-3990);
(b) GART-1500, GART-1510;
(c) two courses from Arts;
(d) two courses from Languages or Science;
(e) two courses from any area of study, excluding Social Sciences;
(f) six courses from any area of study, including CMAF and FILM;
(g) six courses from any area of study, excluding CMAF and FILM.
Courses used to calculate the major average are: All courses taken in CMAF and FILM.

**Bachelor of Education**

Total course equivalents: Twenty

All students are required to complete the requirements of the Bachelor of Arts: Communication, Media and Film degree program (General), in addition to the following Education courses: EDUC-1199, EDUC-2299, EDUC-3399, EDUC-5201 (1.5), EDUC-5202 (1.5), EDUC-5203 (3.0), EDUC-5204 (3.0), EDUC-5206 (1.5), EDUC-5207 (3.0), EDUC-5208 (1.5), EDUC-5209 (1.5), EDUC-5210 (1.5), EDUC-5231 (1.5), EDUC-5331 (1.5), EDUC-5332 (3.0) EDUC-5333 (1.5), EDUC-5334 (1.5), EDUC-5335 (1.5), EDUC-5336 (1.5), EDUC-5337 (1.5), EDUC-5338 (1.5), EDUC-5339 (1.5), EDUC-5431 (1.5), EDUC-5360 (6.0), plus one additional teachable subject selected from the Education Calendar. Students planning on teaching in the Roman Catholic School Board must also take EDUC-5200 (1.5).

Courses used to calculate the Education major average are: All required Education courses.*A student may complete the requirements for an honours degree in Communication, Media and Film by completing additional courses during the summer term and/or completing a Sixth Year.

**Standing Required for Continuation and Graduation**
70% major average and 60% cumulative average in the General BA in Communication, Media and Film.
70% major average in the Bachelor of Education.

In Addition: Teacher Candidates, who obtain three or more final grades below a 60-62.9% in any Education course in the program, or one or more final grades of 0-49.9% in any course in the Education program, over the duration of the program, will have failed the Bachelor of Education (BEd) Degree and will not be eligible for recommendation to the Ontario College of Teachers for certification. In all such cases, upon a cumulative academic record as defined above, Teacher Candidates will be required to meet with the Associate Dean Pre-Service immediately to review their academic standing, which may lead to the requirement to withdraw from the program. Teacher Candidates may be provided with an opportunity to return to the Faculty of Education to fulfill outstanding requirements for the completion of the BEd Degree. Conditions of reinstatement are the sole prerogative of the Dean or her/his designate

## Concurrent General Bachelor of Arts (Drama)/Bachelor of Education

The Concurrent General Bachelor of Arts (Drama)/Bachelor of Education Program is offered jointly over five years by the School of Dramatic Art and the Faculty of Education. The program prepares individuals to teach at the intermediate and senior levels (grades 7 – 12), with a particular emphasis on teaching Drama and a second teachable Intermediate Senior candidates choose two teaching subjects. Applicants must complete at least ten semester undergraduate courses (30 semester hours) in the first teachable subject and at least six semester undergraduate courses (18 semester hours) in the second teachable subject.

Graduates of this program will receive two degrees and will acquire the necessary skills and knowledge for teaching Drama in the English language school system (Public or Roman Catholic school system) and fulfill the requirements for recommendation for certification to the Ontario College of Teachers. It offers students the opportunity to begin working towards teaching certification early in their academic careers. Students can qualify for the General Bachelor of Arts (Drama) degree while concurrently studying education and doing practice teaching in schools. Practice Teaching begins in Year One of the program. All students should see an advisor in the School of Dramatic Art and in the Faculty of Education, on a regular basis, to discuss course selection and academic progress.

Students must successfully complete the Bachelor of Arts degree program to be eligible to graduate with a Bachelor of Education degree.

**Application and Admission**
Admission is to first-year only with a minimum of 75%. Applicants from high school must present six Grade 12 "U" or "M" courses including Grade 12 "U" English. Enrolment in this program is limited.

For Admission to the General BA in Drama, students will be selected based on a successful workshop/ interview process.

**Degree Requirements**

**General Bachelor of Arts in Drama**

Total course equivalents: Thirty

All Students are required to complete the requirements of the Education program, in addition to the following requirements of the Bachelor of Drama (General) degree program:
(a) DRAM-1000, DRAM-2000, DRAM-1600, DRAM-1610, DRAM-2600, DRAM-2610, DRAM-2770, DRAM-2840, DRAM-3600, DRAM-2250, DRAM-2350, plus two from the following: DRAM-3710, DRAM-3780, DRAM-4700, DRAM-4710; two from the following: DRAM-1300, DRAM-2300, DRAM-3350, DRAM-3330; two from the following: DRAM-2110, DRAM-2130, DRAM-2150, DRAM-2170, DRAM-2500, DRAM-3150, DRAM-3170, DRAM-3190,;
(b) GART-1500, and GART-1510
(c) 8 courses from any area of study excluding Drama
(d) 3 courses from anywhere including Drama.

Courses used to calculate the Drama major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Bachelor of Education**

Total course equivalents: Twenty

All students are required to complete the requirements of the Bachelor of Arts: Drama degree program (General), in addition to the following Education courses: EDUC-1199, EDUC-2299, EDUC-3399, EDUC-5201 (1.5), EDUC-5202 (1.5), EDUC-5203 (3.0), EDUC-5204 (3.0), EDUC-5206 (1.5), EDUC-5207 (3.0), EDUC-5208 (1.5), EDUC-5209 (1.5), EDUC-5210 (1.5), EDUC-5231 (1.5), EDUC-5331 (1.5), EDUC-5332 (3.0) EDUC-5333 (1.5), EDUC-5334 (1.5), EDUC-5335 (1.5), EDUC-5336 (1.5), EDUC-5337 (1.5), EDUC-5338 (1.5), EDUC-5339 (1.5), EDUC-5431 (1.5), EDUC-5379, (6.0) plus one additional teachable subject selected from the Education Calendar and, EDUC-5499 (12.0) Students planning on teaching in the Roman Catholic School Board must also take EDUC-5200 (1.5).

Courses used to calculate the Education major average are: All required Education courses.

**Suggested Course Sequence**

First Year: 10 courses from the General BA in Drama, plus Education EDUC-1199 'Community Service Education' (50 hours over two semesters).
Second Year: Ten courses from the General BA in Drama, plus Education EDUC-2299 'Teaching and Learning Part I' (50 hours over two semesters).
Third Year: In the third year, students will take the entire Year 1 of the BEd program.
Fourth Year: 10 Courses from the General BA in Drama – completing the requirements of a 3-year general degree in Drama, plus Education EDUC-3399 'Teaching and Learning Part II (50 hours over two semesters)
Fifth Year: In the fifth year, students will take the entire Year 2 of the BEd program.

*A student may complete the requirements for an honours degree in Drama and Education by completing additional courses during the summer term and/or completing a Sixth Year. See calendar for course requirements for the Honours BA in Drama and Education.

**Standing Required for Continuation in the Concurrent Program**
70% major average and 60% cumulative average in the General BA in Drama.
70% major average in the Bachelor of Education.

**Standing Required for Graduation from the Concurrent Program**
70% major average and 60% cumulative average in the General BA in Drama.
70% major average in the Bachelor of Education.

## Concurrent General Bachelor of Arts (English)/Bachelor of Education

The Concurrent General Bachelor of Arts (English)/Bachelor of Education Program is offered jointly over five years by the Department of English and the Faculty of Education. The program prepares individuals to teach at the intermediate and senior levels (grades 7 – 12), with a particular emphasis on teaching English and a second teachable Intermediate Senior candidates choose two teaching subjects. Applicants must complete at least ten semester undergraduate courses (30 semester hours) in the first teachable subject and at least six semester undergraduate courses (18 semester hours) in the second teachable subject.

Graduates of this program will receive two degrees and will acquire the necessary skills and knowledge for teaching English in the English language school system (Public or Roman Catholic school system) and

fulfill the requirements for recommendation for certification to the Ontario College of Teachers. It offers students the opportunity to begin working towards teaching certification early in their academic careers. Students can qualify for the General Bachelor of Arts (English) degree while concurrently studying education and doing practice teaching in schools. Practice Teaching begins in Year One of the program. All students should see an Advisor in the Department of English and in the Faculty of Education on a regular basis to discuss course selection and academic progress.

Students must successfully complete the Bachelor of Arts degree program to be eligible to graduate with a Bachelor of Education degree.

**Application and Admission**
Admission is to first-year only with a minimum of 75%. Applicants from high school must present six Grade 12 "U" or "M" courses including Grade 12 "U" English. Enrolment in this program is limited.

**Degree Requirements**

General Bachelor of Arts in English

Total courses: thirty.
(a) ENGL 1002, ENGL 1003, and ENGL 1004;
(b) one of ENGL 2010, ENGL 2020, ENGL 2030, or ENGL 2040;
(c) one of ENGL 2110, ENGL 2120, or ENGL 2130;
(d) one of ENGL 2210, ENGL 2220, or ENGL 2230;
(e) one of ENGL 2310, ENGL 2320, or ENGL 2330;
(f) one of ENGL 2410, ENGL 2420, or ENGL 2430;
(g) any four ENGL courses at 3000-level or 4000-levell;
(h) two courses from Social Sciences;
(i) two courses from Languages or Science;
(j) two courses from any area of study, excluding Arts;
(k) GART-1500;
(l) four courses from any area of study, including English;
(m) seven courses from any area of study, excluding English

Note: Five (5) 1000-level English courses may count toward the major.

Courses used to calculate the major average are: courses listed under requirements (a) to (g), and any courses taken in the major area of study.

**Bachelor of Education**

Total course equivalents: Twenty

All students are required to complete the requirements of the Bachelor of Arts: English General degree program , in addition to the following Education courses: EDUC-1199, EDUC-2299, EDUC-3399, EDUC-5201 (1.5), EDUC-5202 (1.5), EDUC-5203 (3.0), EDUC-5204 (3.0), EDUC-5206 (1.5), EDUC-5207 (3.0), EDUC-5208 (1.5), EDUC-5209 (1.5), EDUC-5210 (1.5), EDUC-5231 (1.5), EDUC-5331 (1.5), EDUC-5332 (3.0) EDUC-5333 (1.5), EDUC-5334 (1.5), EDUC-5335 (1.5), EDUC-5336 (1.5), EDUC-5337 (1.5), EDUC-5338 (1.5), EDUC-5339 (1.5), EDUC-5431 (1.5), EDUC-5356, (6.0) plus one additional teachable subject selected from the Education Calendar and, EDUC-5499 (12.0) Students planning on teaching in the Roman Catholic School Board must also take EDUC-5200 (1.5).

Courses used to calculate the Education major average are: All required Education courses.

**Suggested Course Sequence**

First Year: 10 courses from the General BA in English, plus Education EDUC-1199 'Community Service Education' (50 hours over two semesters).
Second Year: Ten courses from the General GA in English, plus Education EDUC-2299 'Teaching and Learning Part I' (50 hours over two semesters).
Third Year: In the third year, students will take the entire Year 1 of the BEd program.
Fourth Year: 10 Courses from the General BA in English – completing the requirements of a 3-year general degree in English, plus Education EDUC-3399 (50 hours over two semesters).
Fifth Year: In the fifth year, students will take the entire Year 2 of the BEd program.

*A student may complete the requirements for an honours degree in English by completing additional courses during the summer term and/or completing a Sixth Year. See calendar for course requirements for the Honours BA in English.

**Standing Required for Continuation in the Concurrent Program**
70% major average and 60% cumulative average in the General BA in English.
70% major average in the Bachelor of Education.

**Standing Required for Graduation from the Concurrent Program**
70% major average and 60% cumulative average in the General BA in English.
70% major average in the Bachelor of Education.

## Concurrent General Bachelor of Arts (French Studies)/Bachelor of Education

The Concurrent General Bachelor of Arts in French Studies/Bachelor of Education Program is offered jointly over years by the French Studies Program and the Faculty of Education. The program prepares individuals to teach with a particular emphasis on teaching French as a Second Language at the intermediate and senior levels (grades 7 to 12), with a minimum of 16 credits in French and, normally, 6 credits in a second teachable.

Teachables: Intermediate Senior candidates choose two teaching subjects. Applicants must have at least ten semester undergraduate courses (30 semester hours) in the first teachable subject and normally six semester undergraduate courses (18 semester hours) in the second teachable subject. Students should consult the Faculty of Education website for a list of teachables. Students should also seek Academic Advising from the department of the second teachable to ensure that there are sufficient courses available to non-majors.

Graduates of this program will receive two degrees and will acquire the necessary skills and knowledge for teaching French as a Second Language (Core French or Immersion) in the English language school system (Public or Roman Catholic) and fulfill the requirements for recommendation for certification to the Ontario College of Teachers. It offers students the opportunity to begin working towards teaching certification early in their academic career. Students can qualify for the Bachelor of Arts (General) degree in French Studies while concurrently studying education and doing practice teaching in schools. Practice teaching courses begin in Year One of the program. All students should see an advisor in the

French Studies Program and in the Faculty of Education on a regular basis to discuss course selection and academic progress.

Students must successfully complete the Bachelor of Arts degree program to be eligible to graduate with a Bachelor of Education degree.

**Application and Admission**
Admission is to first-year only with a minimum of 75%. Applicants from high school must present six Grade 12"U" or "M" courses including Grade 12"U" English I, Grade 12"U" French, or their equivalents (such as College Boreal High School equivalency French courses) to be accepted. In addition, a minimum 75% in Grade 12U French (or equivalent) is required.

**Degree Requirements**

**Bachelor of Arts in French Studies**

Total course equivalents: thirty

(a) six Language Training courses: FREN-1210, FREN-1220, FREN-2150 (or FREN-3150), FREN-2210, FREN-2220, FREN-3250;
(b) five Literature courses: FREN-1410, FREN-3570, plus one of FREN-2840, FREN-3830, FREN-3850, plus one 2000-level course (excluding FREN-2840), and one 300 or 4000-level course (excluding FREN-3830 and FREN-3850)(students are strongly encouraged to choose a range of Literature courses from France, Francophone Canada and the Francophone World);
(c) three Linguistics courses: FREN-2300 and FREN-2310, plus one of FREN-3300, FREN-3330;
(d) one Translation course: FREN-3280 or FREN-3290;
(e) one Culture courses: FREN-2600, FREN-2700, FREN-2810 or FREN-2830.
(f) two courses from Social Sciences;
(g) two courses from Arts or Science;
(h) two courses from any area of study, including French Studies.
(i) GART-1500, GART-1510:
(j) six courses from any area of study, excluding French Studies courses.

Courses used to calculate the French Studies major average are: courses listed under requirements (a) to (e), and any courses taken in the major area(s) of study.

**Bachelor of Education**

Total course equivalents: Twenty

EDUC-5201 (1.5), EDUC-5202 (1.5), EDUC-5203 (3.0), EDUC-5204 (3.0), EDUC-5206 (1.5), EDUC-5207 (3.0), EDUC-5208 (1.5), EDUC-5209 (1.5), EDUC-5210 (1.5), EDUC-5231 (1.5), EDUC-5331 (1.5), EDUC-5332 (3.0) EDUC-5333 (1.5), EDUC-5334 (1.5), EDUC-5335 (1.5), EDUC-5336 (1.5), EDUC-5337 (1.5), EDUC-5338 (1.5), EDUC-5339 (1.5), EDUC-5431 (1.5), EDUC-5358 (6.0) plus one additional teachable subject selected from the Education Calendar and, EDUC-5499 (12.0) Students planning to teach in the Roman Catholic School Board must also take EDUC-5200 (1.5).

Courses used to calculate the Education major average are: All required Education courses.

**Suggested Course Sequence**

First Year: Ten courses from the General BA in French Studies, plus Education EDUC-1199 'Community Service Education' (50 hours over two semesters)

Second Year: Ten courses towards the General BA in French Studies, plus Education EDUC-2299 'Teaching and Learning Part I' (50 hours over two semesters)

Third Year: In the third year, students will take the entire Year 1 of the BEd program.

Fourth Year: Ten Courses towards the General BA in French Studies – completing the requirements of a 3-year general degree in French Studies, plus Education EDUC-3399 'Teaching and Learning Part II' (50 hours over two semesters)

Fifth Year: In the fifth year, students will take the entire Year 2 of the BEd program.

*A student may complete the requirements for an honours degree in French Studies by completing additional courses during the summer term and/or completing a Sixth Year. See calendar for course requirements for the Honours BA in French Studies.

**Standing Required for Continuation in the Concurrent Program**
70% major average and 60% cumulative average in the General BA in French Studies.
70% major average in the Bachelor of Education.

**Standing Required for Graduation from the Concurrent Program**
70% major average and 60% cumulative average in the General BA in French Studies.
70% major average in the Bachelor of Education.

## Concurrent General Bachelor of Arts (History)/Bachelor of Education

The Concurrent General Bachelor of Arts (History)/Bachelor of Education Program is offered jointly over five years by the Department of History and the Faculty of Education. The program prepares individuals to teach at the intermediate and senior levels (grades 7 – 12), with a particular emphasis on teaching History and a second teachable.

Teachables: Intermediate Senior candidates choose two teaching subjects. Applicants must complete at least ten semester undergraduate courses (30 semester hours) in the first teachable subject and normally six semester undergraduate courses (18 semester hours) in the second teachable subject. Students should consult the Faculty of Education website for a list of teachables. Students should also seek Academic Advising from the department of the second teachable to ensure that there are sufficient courses available to non-majors.

Graduates of this program will receive two degrees and will acquire the necessary skills and knowledge for teaching History in the English language school system (Public or Roman Catholic) and fulfill the requirements for recommendation for certification to the Ontario College of Teachers. It offers students the opportunity to begin working towards teaching certification early in their academic careers. Students can qualify for the General Bachelor of Arts (History) degree while concurrently studying education and practice teaching in schools. Practice Teaching begins in Year One of the program. All students should see an advisor in the Department of History and in the Faculty of Education on a regular basis to discuss course selection and academic progress.

Students must successfully complete the Bachelor of Arts degree program to be eligible to graduate with a Bachelor of Education degree.

**Application and Admission**
Admission is to first-year only with a minimum of 75%. Applicants from high school must present six Grade 12 "U" or "M" courses, including Grade 12 "U" English. Enrolment in this program is limited.

**Degree Requirements**

**General Bachelor of Arts in History**

Total course equivalents: Thirty

(a) HIST-1030, HIST-2030;
(b) 7 more History courses at the 100 or 200 Level, up to 2 of which may be 100 Level;
(c) 3 more History courses at the 300 Level or higher.
(d) two courses from Arts;
(e) two courses from Languages, Science, or one of each;
(f) two courses from any area of study, excluding Social Sciences.
(g)GART-1500, GART-1510;
(h) four courses from any area of study, including History, but of which only one may be an additional 1000-level History course;
(i) six courses from any area of study, excluding History. Up to four of the following courses may be used to satisfy the requirements under (b) and (c): GRHS-2100, GRHS-2101, GRHS-2200, GRHS-2201, DRAM-1300, DRAM-2300, CMAF-2400, CMAF-2410, KINE-2400. (Please note, instructor's permission may be required.)

Courses used to calculate the History major average are: courses listed under requirements (a) to (c), and any courses taken in the major area(s) of study.

**Bachelor of Education**

Total course equivalents:  Twenty

All students are required to complete the requirements of the Bachelor of Arts: History degree program (General), in addition to the following Education courses: EDUC-1199, EDUC-2299, EDUC-3399, EDUC-5201 (1.5), EDUC-5202 (1.5), EDUC-5203 (3.0), EDUC-5204 (3.0), EDUC-5206 (1.5), EDUC-5207 (3.0), EDUC-5208 (1.5), EDUC-5209 (1.5), EDUC-5210 (1.5), EDUC-5231 (1.5), EDUC-5331 (1.5), EDUC-5332 (3.0) EDUC-5333 (1.5), EDUC-5334 (1.5), EDUC-5335 (1.5), EDUC-5336 (1.5), EDUC-5337 (1.5), EDUC-5338 (1.5), EDUC-5339 (1.5), EDUC-5431 (1.5), EDUC-5362, (6.0) plus one additional teachable subject selected from the Education Calendar and, EDUC-5499 (12.0) Students planning on teaching in the Roman Catholic School Board must also take EDUC-5200 (1.5).

Courses used to calculate the Education major average are: All required Education courses.

**Recommended Course Sequence**

First Year: 10 courses as per requirements for History (General) (see calendar requirements above), Education EDUC-1199 'Community Service Education' (50 hours over two semesters).
Second Year: Ten courses as per History (General) calendar, Education EDUC-2299 'Teaching and Learning Part I' (50 hours over two semesters).
Third Year: In the third year, students will take the entire Year 1 of the B.Ed. program.
Fourth Year: 10 courses from the General BA in – completing the requirements of a 3-year general degree in History, Education EDUC-3399 'Teaching and Learning Part II' (50 hours over two semesters).
Fifth Year: In the fifth year, students will take the entire Year 2 of the B.Ed. program.

*A student may complete the requirements for an honours degree in History by completing additional courses during the summer term and/or completing a Sixth Year. See calendar for course requirements for the Honours BA in History.

**Standing Required for Continuation in the Concurrent Program**
70% major average and 60% cumulative average in the General BA in History.
70% major average in the Bachelor of Education.

**Standing Required for Graduation from the Concurrent Program**
70% major average and 60% cumulative average in the General BA in History.
70% major average in the Bachelor of Education.

## Concurrent General Bachelor of Arts (Political Science)/Bachelor of Education

**Application and Admission**
Admission is to first-year only with a minimum of 75%. Applicants from high school must present six Grade 12 "U" or "M" courses including Grade 12 "U" English. Admission to this program is limited.

**Degree Requirements**

**General Bachelor of Arts in Political Science**

Total course equivalents: Thirty

(a) POLS-1000, POLS-1300 and POLS-1600;
(b) nine additional courses Political Science including at least three at the 3000-level or above. (Note: students interested in switching to Honours Political Science should take SOSC-2500, POLS-2750, and one of POLS-2510 or POLS-2520
(c) two courses from Arts;
(d) two courses from Languages or Science;
(e) two courses from any area of study, excluding Social Sciences.
(f) GART-1500, GART-1510;
(g) five courses from any area of study, including Political Science;
(h) five courses from any area of study, excluding Political Science.
Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

As indicated on the Political Science and Faculty of Education websites, Law and the Global Studies teachable subjects include the following courses:

Law - two of: POLS-2140, POLS-3140, POLS-3630
Global Studies - two of: POLS-2320, POLS-2330, POLS-2350, POLS-2410, POLS-2440, POLS-2450, POLS-2490, POLS-2600, POLS-2610, POLS-2640, POLS-2680; two of: POLS-3460, POLS-3540, POLS-3550, POLS-3560, POLS-3600, POLS-3610, POLS-3650, POLS-3670, POLS-3720, POLS-4310, POLS-4340, POLS-4640, POLS-4650, POLS-4960.

**Bachelor of Education**

Total course equivalents: Twenty

All students are required to complete the requirements of the Bachelor of Arts: Political Science degree program (General), in addition to the following Education courses: EDUC-1199, EDUC-2299, EDUC-3399, EDUC-5201 (1.5), EDUC-5202 (1.5), EDUC-5203 (3.0), EDUC-5204 (3.0), EDUC-5206 (1.5), EDUC-5207 (3.0), EDUC-5208 (1.5), EDUC-5209 (1.5), EDUC-5210 (1.5), EDUC-5231 (1.5), EDUC-5331 (1.5), EDUC-5332 (3.0) EDUC-5333 (1.5), EDUC-5334 (1.5), EDUC-5335 (1.5), EDUC-5336 (1.5), EDUC-5337 (1.5), EDUC-5338 (1.5), EDUC-5339 (1.5), EDUC-5431 (1.5), EDUC-5377 (Social Sciences-General) (6.0), plus one additional teachable subject selected from the Education Calendar and, EDUC-5499 (12.0) Students planning on teaching in the Roman Catholic School Board must also take EDUC-5200 (1.5).

Courses used to calculate the Education major average are: All required Education courses.

*A student may complete the requirements for an honours degree in Political Science by completing additional courses during the summer term and/or completing a Sixth Year. See Undergraduate Calendar for course requirements for the Honours BA in Political Science.

**Standing Required for Continuation in the General BA in Political Science**
60% major average and 60% cumulative average in the General BA in Political Science.

**Standing Required for Continuation in the B.Ed. degree**
Teacher Candidates, who obtain three or more final grades below a 60-62.9% in any Education course in the program, or one or more final grades of 0-49.9% in any course in the Education program, over the duration of the program, will have failed the Bachelor of Education (BEd) Degree and will not be eligible for recommendation to the Ontario College of Teachers for certification. In all such cases, upon a cumulative academic record as defined above, Teacher Candidates will be required to meet with the Associate Dean Pre-Service immediately to review their academic standing, which may lead to the requirement to withdraw from the program. Teacher Candidates may be provided with an opportunity to return to the Faculty of Education to fulfill outstanding requirements for the completion of the BEd Degree. Conditions of reinstatement are the sole prerogative of the Dean or her/his designate.

**Standing Required for Graduation**
70% major average and 60% cumulative average in the General BA in Political Science.
70% major average in the Bachelor of Education.

# Concurrent General Bachelor of Arts (Psychology)/Bachelor of Education/Diploma in Early Childhood Education

The Concurrent General Bachelor of Arts (Psychology)/Bachelor of Education/Diploma in Early Childhood Education Program is offered jointly over five years by the Department of Psychology and the Faculty of Education, in co-operation with St. Clair College. The program prepares individuals to teach at the the preschool and Primary-Junior levels.

Graduates of this program will receive two degrees and a diploma and will acquire the necessary skills and knowledge to fulfill the requirements to be recommended for certification to the Ontario College of Teachers. It offers students the opportunity to begin working towards teaching certification early in their academic careers. Students can qualify for the General Bachelor of Arts (Psychology) degree while concurrently studying education and doing practice teaching in schools. All students should see an Advisor in the Department of Psychology and in the Faculty of Education on a regular basis to discuss course selection and academic progress.

**Application and Admission**
Admission is to first-year only with a minimum of 75%. Applicants from high school must present six Grade 12 "U" or "M" courses including Grade 12 "U" English. Enrolment in this program is limited.

**Degree Requirements**

All students are required to complete the thirty-course requirement of the University of Windsor General BA in Psychology, in addition to the Education courses: EDUC-5201 (1.5), EDUC-5202 (1.5), EDUC-5203 (3.0), EDUC-5204 (3.0), EDUC-5206 (1.5), EDUC-5207 (3.0), EDUC-5208 (1.5), EDUC-5209 (1.5), EDUC-5210 (1.5), EDUC-5311 (3.0), EDUC-5312 (3.0), EDUC-5313 (3.0), EDUC-5314 (3.0), EDUC-5315 (3.0), 316 (3.0), EDUC-5317 (3.0), 318 (3.0), EDUC-5215 (1.5), EDUC-5411 (1.5), EDUC-5412 (1.5), EDUC-5414 (1.5), EDUC-5491 (3.0), EDUC-5492 (3.0), EDUC-5493 (6.0) Students planning on teaching in the Roman Catholic School Board must also take EDUC-5200 (1.5). The St. Clair College Early Childhood Education component will consist ECE courses, including field placements.

Students who successfully complete the ECE program in Year 2 of the Concurrent program will receive 10 transfer credits towards their BA in Psychology. [Please contact the Registrar’s Office for the specific course equivalencies.]

Courses used to calculate the Education major average are: All required Education courses.
Courses used to calculate the Psychology major average are: courses listed under requirement (a) of the General Psychology Program, and any courses taken in the major area(s) of study.

**Recommended Course Sequence**

FIRST YEAR
Fall Term: five Psychology General BA courses: GART-1500 (3.0), PSYC-1150 (3.0), one Arts/Language (3.0), one Language/Science (3.0), one Social Science (3.0)
Winter Term: five Psychology General BA courses: GART-1510 (3.0), PSYC-1160 (3.0), one Art/Language (3.0), one Language/Science (3.0), one Social Science (3.0)

SECOND YEAR
ECE Program at St. Clair College

THIRD YEAR
In the third year, students will take the entire Year 1 of the BEd program.

FOURTH YEAR
In the fourth year, students will take the entire Year 3 of the Psychology General BA program.

FIFTH YEAR
In the fourth year, students will take the entire Year 2 of the BEd program.

*A student may complete the requirements for an honours degree in Psychology by completing additional courses during the summer term and/or completing a Sixth Year.

**Standing Required for Continuation in the Concurrent Program**
70% major average and 60% cumulative average in the General BA in Psychology.
70% major average in the Bachelor of Education.

**Standing Required for Graduation from the Concurrent Program**
70% major average and 60% cumulative average in the General BA in Psychology.
70% major average in the Bachelor of Education.

**Graduation**

Graduates of the program receive both the Bachelor of Arts Psychology degree (General) and the Bachelor of Education degree from the University of Windsor, and the Diploma in Early Childhood Education from St. Clair College.

The Faculty of Education does not issue a teaching certificate. The Ontario Certificate of Qualification is issued by the Ontario College of Teachers upon recommendation of the Dean of the Faculty of Education. Only Canadian citizens or Permanent Residents of Canada qualify for this certificate. Under certain conditions, the Ontario College of Teachers may grant a non-Canadian citizen an Interim Certificate of Qualification.

Students must successfully complete the Bachelor of Arts degree program to be eligible to graduate with a Bachelor of Education degree.

## Concurrent General Bachelor of Arts (Visual Arts)/Bachelor of Education

The Concurrent General Bachelor of Arts (Visual Art)/Bachelor of Education Program is offered jointly over five years by the Department of Visual Arts and the Faculty of Education. The program prepares individuals to teach at the intermediate and senior levels (grades 7 – 12), with a particular emphasis on teaching Visual Arts and a second teachable Intermediate Senior candidates choose two teaching subjects. Applicants must complete at least ten semester undergraduate courses (30 semester hours) in the first teachable subject and at least six semester undergraduate courses (18 semester hours) in the second teachable subject.

Graduates of this program will receive two degrees and will acquire the necessary skills and knowledge for teaching Visual Arts in the English language school system (Public or Roman Catholic school system)

and fulfill the requirements for recommendation for certification to the Ontario College of Teachers. It offers students the opportunity to begin working towards teaching certification early in their academic careers. Students can qualify for the Bachelor of Arts (Visual Arts) degree while concurrently studying education and doing practice teaching in schools. Practice Teaching courses begin in Year One of the program. All students should see an advisor in the School of Creative Arts and in the Faculty of Education on a regular basis to discuss course selection and academic progress.

Students must successfully complete the Bachelor of Arts degree program to be eligible to graduate with a Bachelor of Education degree.

**Application and Admission**
Admission is to first-year only with an average of a minimum of 75%. Applicants from high school must present six Grade 12 "U" or "M" courses including Grade 12 "U" English. Enrolment in this program is limited.

**Degree Requirements**

**General Bachelor of Arts in Visual Arts**

Total course equivalents: Thirty

(a) VSAR-1050, VSAR-1060, VSAR-1070 and VSAR-1080, and eight other studio courses numbered VSAR-2030 through VSAR-3900 plus MACS-1500, MACS-2140, MACS-2150 and either MACS-2450 or MACS-3450.
(b) two courses from Social Sciences;
(c) two courses from Languages or Science;
(d) two courses from any area of study, excluding Arts.
(e) GART-1500, GART-1510:
(f) INCS-2020, INCS-2030;
(g) four more courses from any area of study, excluding Visual Arts.

Courses used to calculate the Visual Arts major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Bachelor of Education**

Total course equivalents:  Twenty

All students are required to complete the requirements of the Bachelor of Arts: Visual Arts degree program (General), in addition to the following Education courses: EDUC-1199, EDUC-2299, EDUC-3399, EDUC-5201 (1.5), EDUC-5202 (1.5), EDUC-5203 (3.0), EDUC-5204 (3.0), EDUC-5206 (1.5), EDUC-5207 (3.0), EDUC-5208 (1.5), EDUC-5209 (1.5), EDUC-5210 (1.5), EDUC-5231 (1.5), EDUC-5331 (1.5), EDUC-5332 (3.0) EDUC-5333 (1.5), EDUC-5334 (1.5), EDUC-5335 (1.5), EDUC-5336 (1.5), EDUC-5337 (1.5), EDUC-5338 (1.5), EDUC-5339 (1.5), EDUC-5431 (1.5), EDUC-5352, (6.0) plus one additional teachable subject selected from the Education Calendar and, EDUC-5499 (12.0) Students planning on teaching in the Roman Catholic School Board must also take EDUC-5200 (1.5).

Courses used to calculate the Education major average are: All required Education courses.

**Recommended Course Sequence**
First Year: 10 courses from the General BA in Visual Arts, plus Education EDUC-1199 'Community Service Education' (50 hours over two semesters).
Second Year: 10 courses from the General BA in Visual Arts, plus Education EDUC-2299 'Teaching and Learning Part I' (50 hours over two semesters).
Third Year: In the third year, students will take the entire Year 1 of the BEd program.
Fourth Year: 10 courses from the General BA in Visual Arts – completing the requirements of a 3-year general degree in Visual Arts, plus Education EDUC-3399 'Teaching and Learning Part II' (50 hours over two semesters).
Fifth Year: In the fifth year, students will take the entire Year 2 of the BEd program.

*A student may, with the appropriate selection of courses, complete the requirements for a combined honours degree in Visual Arts or an honours BA in Media Art Histories and Visual Culture, by completing additional courses during the summer term and/or completing a Sixth Year. See calendar for course requirements for the honours programs.

**Standing Required for Continuation in the Concurrent Program**
70% major average and 60% cumulative average in the General BA Visual Arts.
70% major average in the Bachelor of Education.

**Standing Required for Graduation from the Concurrent Program**
70% major average and 60% cumulative average in the General BA in Visual Arts.
70% major average in the Bachelor of Education.

## Concurrent General Bachelor of Science (General Science)/ Bachelor of Education

The Concurrent Bachelor of Science (General Science) and Bachelor of Education Program is offered jointly over five years by the Faculty of Science and the Faculty of Education. The program prepares individuals to teach at the intermediate and senior levels (grades 7 – 12), with a particular emphasis on teaching one of Physics, Biology or Chemistry and a second teachable.

It is essential that students receive academic advising from the Faculty of Science before registering for each semester of studies in the Science component of the program. With appropriate course selection during the degree it may be possible to plan to obtain a four year Honours degree in the First Teachable area with one additional year of study.

Selection of First and Second Teachable: Normally, the Teachables are selected from the two areas of concentration in the Faculty of Science General Science degree program. Students should consult the Faculty of Education website for a list of teachables. All students should see an advisor in the Faculty of Science and in the Faculty of Education on a regular basis to discuss course selection and academic progress.

It may be possible to satisfy the requirements for Second Teachable in Health and Physical Education or General Arts and Social Sciences through careful course selection when fulfilling the requirements for courses from "any area of study".

Graduates of this program will receive two degrees and will acquire the necessary skills and knowledge for teaching one of Physics, Biology or Chemistry and one other subject in the English language school

system (Public or Roman Catholic) and fulfill the requirements to be recommended for certification to the Ontario College of Teachers. It offers students the opportunity to begin working towards teaching certification early in their academic careers. Students can qualify for the Bachelor of Science degree while concurrently studying education and doing practice teaching in schools. Practice Teaching courses begin in Year One of the program.

Students must successfully complete the Bachelor of Science (General Science) degree program to be eligible to graduate with a Bachelor of Education degree.

**Application and Admission**
Admission is to first-year only with a minimum of 80%. ENG4U, MHF4U, and two of SCH4U, SBI4U or SPH4U is required for applicants from high school. MCV4U is strongly recommended. A second science and math average of 70% is required.

**Degree Requirements**

**Bachelor of Science (General Science)**

Total courses: thirty

(a) two sets of six courses from two different Departments or School as listed:
First Science Subject satisfies six of ten requirements for the First Teachable (choose one of):

- Biological Sciences: BIOL-1111 and BIOL-1101; and *four BIOL-XXXX or BIOM-XXX courses at the 2000 level or above
- Chemistry and Biochemistry: CHEM-1100 and CHEM-1110; and *four CHEM-XXXX or BIOC-XXXX courses at the 2000 level or above
- Physics: PHYS-1400 and PHYS-1410; and *four PHYS-XXXX courses at the 200 level or above

Second Science Subject is normally used to satisfy the Second Teachable (choose one of):

- Biological Sciences: BIOL-1111 and BIOL-1101; and *four BIOL-XXXX courses at the 200 level or above
- Chemistry and Biochemistry: CHEM-1100 and CHEM-1110; and *four CHEM-XXXX or BIOC-XXXX courses at the 200 level or above
- Mathematics and Statistics: MATH-1720 (or MATH-1760) and MATH-1730; and *four MAT-XXXX or STAT-XXXX courses at the 200 level or above
- Physics: PHYS-1400 and PHYS-1410; and *four PHYS-XXXX courses at the 200 level or above

*NOTE: These courses must satisfy must be selected from the courses used to calculate the major average for a degree program in the Department or School.

(b) one set of two courses from a third Department or School chosen from the following pairs:

- Biological Sciences: BIOL-1111 and BIOL-1101
- Chemistry and Biochemistry: CHEM-1100 and CHEM-1110
- Computer Science: COMP-1400 and COMP-1410, or COMP-1047 and COMP-2057, or COMP-2067 and COMP-2057
- Environmental Science: ESCI-1111 and ESCI-1100
- Economics: ECON-1100 and ECON-1110
- Mathematics and Statistics: MATH-1720 (or MATH-1760) and MATH-1730 or STAT-2910
- Physics: PHYS-1400 and PHYS-1410 or PHYS-1300 and PHYS-1310

(c) four Science courses from the first teachable subject at the 3000-level or above selected from the courses used to calculate the major average for a degree program of the Department or School in the Faculty of Science that offers the courses. These courses complete the first teachable requirement.
(d) four courses from Arts/Languages and Social Sciences, with at least one from each.
(e) eight courses from any area of study excluding BIOM-1003, BIOL-1013, CHEM-1000, BIOC-1303, CHEM-2003, MATH-1780, MATH-1280, and MATH-1980. Students may choose to augment the second teachable with four more courses from the second teachable in this category.

**Calculation of Major Average**
The major average is calculated from the grades of all Science courses, excluding the grades obtained in the following courses: ECON-2000, ECON-2010, BIOM-1003, BIOL-1013, BIOM-2093, CHEM-1000, BIOC-1303, CHEM-2003, CHEM-2305, BIOC-2015, COMP-2077, COMP-2097, COMP-2707, COMP-3057, COMP-3077, ESCI-1000, ESCI-1010, ESCI-2300, ESCI-2010, ESCI-2630, MATH-1780, MATH-1280, MATH-1980, PHYS-1000, PHYS-1010, PHYS-2050, PHYS-2060 and ESCI-2000.

Note: COMP-1047 or COMP-2067 and COMP-2057 count as a 'science pair' (see requirement (b) above) and will be included in the calculation of the major average.

**Bachelor of Education**

Total course equivalents: Twenty

All students are required to complete the requirements of the Bachelor of Science [G] General Science degree program, in addition to the following Education courses: EDUC-1199, EDUC-2299, EDUC-3399, EDUC-5201 (1.5), EDUC-5202 (1.5), EDUC-5203 (3.0), EDUC-5204 (3.0), EDUC-5206 (1.5), EDUC-5207 (3.0), EDUC-5208 (1.5), EDUC-5209 (1.5), EDUC-5210 (1.5), EDUC-5231 (1.5), EDUC-5331 (1.5), EDUC-5332 (3.0) EDUC-5333 (1.5), EDUC-5334 (1.5), EDUC-5335 (1.5), EDUC-5336 (1.5), EDUC-5337 (1.5), EDUC-5338 (1.5), EDUC-5339 (1.5), EDUC-5431 (1.5), one of EDUC-5376 (6.0) or EDUC-5373 (6.0) or EDUC-5374 (6.0), plus one additional teachable subject selected from the Education Calendar and, EDUC-5499 (12.0). Students planning on teaching in the Roman Catholic School Board must also take EDUC-5200 (1.5).

Courses used to calculate the Education major average are: All required Education courses.

**Recommended Course Sequence**
First Year: 10 courses from the BSc General Science, plus Education EDUC-1199 'Community Service Education' (50 hours over two semesters).
Second Year: 10 courses in the BSc General Science, plus Education EDUC-2299 'Teaching and Learning Part I' (50 hours over two semesters).
Third Year: In the third year, students will take the entire Year 1 of the BEd program.
Fourth Year: 10 courses from the BSc General Science -- completing the requirements for the General Science degree, plus Education EDUC-3399 'Teaching and Learning Part II (50 hours over two semesters).
Fifth Year: In the fifth year, students will take the entire Year 2 of the BEd program.

Please note: With advising and appropriate course choices it may be possible to complete the requirements for an Honours degree in a Science discipline by completing the equivalent of Sixth Year.

**Standing Required for Continuation in the Concurrent Program**
70% major average and 60% cumulative average in the BSc General Science.

70% major average in the Bachelor of Education.

**Standing Required for Graduation from the Concurrent Program**
70% major average and 60% cumulative average in the BSc General Science.
70% major average in the Bachelor of Education.

## Concurrent General Bachelor of Mathematics/Bachelor of Education

The Concurrent General Bachelor of Mathematics and Bachelor of Education Program is offered jointly over five years by the Department of Mathematics and Statistics and the Faculty of Education. The program prepares individuals to teach at the intermediate and senior levels (grades 7 – 12), with a particular emphasis on teaching Mathematics and a second teachable.

It is essential that students receive academic advising from the Department of Mathematics and Statistics before registering for each semester of study in the Mathematics component of the program. With appropriate course selection during the degree it may be possible to plan to obtain a four-year Honours degree in Mathematics with one additional year of study.

Selection of Second Teachable: Students should consult the Faculty of Education website for a list of teachables. All students should see an advisor in the Department of Mathematics and Statistics and in the Faculty of Education on a regular basis to discuss course selection and academic progress.

Graduates of this program will receive two degrees and will acquire the necessary skills and knowledge for teaching Mathematics and one other subject in the English language school system (Public or Roman Catholic) and fulfill the requirements to be recommended for certification to the Ontario College of Teachers. This program offers students the opportunity to begin working towards teaching certification early in their academic careers. Students can qualify for the Bachelor of Mathematics degree while concurrently studying education and doing practice teaching in schools. Practice Teaching begins in Year One of the program.

Students must successfully complete the Bachelor of Mathematics degree program to be eligible to graduate with a Bachelor of Education degree.

**Application and Admission**
Admission is to first-year only with a minimum of 80%. ENG4U, MHF4U and MCV4U is required for applicants from high school. SPH4U is recommended. A minimum 70% average of math courses is also required.

All students are required to complete the requirements of the General Bachelor of Mathematics and the Bachelor of Education degree program as given below.

**Degree Requirements**

**General Bachelor of Mathematics**

Total courses: thirty

(a) MATH-1250 or MATH-1260, MATH-1720 or MATH-1760, MATH-1730, MATH-1020, MATH-2780, MATH-2790, MATH-3590, STAT-2920 and STAT-2950
(b) Four MATH, STAT or ACSC courses at the 200 level or above.
(c) COMP-1400 and COMP-1410;
(d) four courses from the Faculty of Arts, Humanities and Social Sciences;
(e) three courses from any area of study, including Mathematics and Statistics;
(f) eight courses from any area of study, excluding Mathematics and Statistics.

Courses used to calculate the Mathematics major average are: All MATH and STAT courses taken.

**Bachelor of Education**

Total course equivalents: Twenty

(a) EDUC-1199, EDUC-2299, EDUC-3399, EDUC-5201 (1.5), EDUC-5202 (1.5), EDUC-5203 (3.0), EDUC-5204 (3.0), EDUC-5206 (1.5), EDUC-5207 (3.0), EDUC-5208 (1.5), EDUC-5209 (1.5), EDUC-5210 (1.5), EDUC-5231 (1.5), EDUC-5331 (1.5), EDUC-5332 (3.0) EDUC-5333 (1.5), EDUC-5334 (1.5), EDUC-5335 (1.5), EDUC-5336 (1.5), EDUC-5337 (1.5), EDUC-5338 (1.5), EDUC-5339 (1.5), EDUC-5431 (1.5), EDUC-5366 (6.0)
(b) One additional teachable subject selected from the Education Calendar and, EDUC-5499 (12.0).
Students planning on teaching in the Roman Catholic School Board must also take EDUC-5200 (1.5).

Courses used to calculate the Education major average are: All required Education courses.

**Recommended Course Sequence**
First Year: 10 courses from Bachelor of Mathematics degree requirements, plus Education EDUC-1199 'Community Service Education' (50 hours over two semesters).
Second Year: 10 courses from Bachelor of Mathematics degree requirements, plus Education EDUC-2299 'Teaching and Learning Part I' (50 hours over two semesters).
Third Year: Year 1 of the BEd program.
Fourth Year: 10 courses from the General Bachelor of Mathematics – completing the requirements for a 3-year general degree in Mathematics, plus Education EDUC-3399 'Teaching and Learning Part II' (50 hours over two semesters).
Fifth Year: Year 2 of the BEd program.

With advising and appropriate course choices it may be possible to complete the requirements for an Honours degree in Mathematics by completing the equivalent of a Sixth Year.

**Standing Required for Continuation in the Concurrent Program**
70% major average and 60% cumulative average in the General BMath.
70% major average in the Bachelor of Education.

**Standing Required for Graduation from the Concurrent Program**
70% major average and 60% cumulative average in the General BMath.
70% major average in the Bachelor of Education.

# Concurrent Bachelor of Arts/Bachelor of Education/Diploma in Early Childhood Education - Pre-Service Program

As of Fall 2014, there are no new admissions to this program.

The Concurrent Bachelor of Arts Bachelor of Education/Diploma in Early Childhood Education Program is offered jointly over five years by the Faculty of Arts and Social Sciences, and the Faculty of Education, in co-operation with St. Clair College. The aim is to provide the opportunity and preparation to individuals who wish to teach at the preschool and Primary-Junior levels.
Graduates of this program will receive two degrees and a diploma and will acquire the necessary skills and knowledge to fulfill the requirements for certification by the Ontario College of Teachers.

**Degree Requirements**

All students are required to complete the thirty-course requirement of the University of Windsor General B.A. degree program, in addition to the Education courses EDUC-5203, EDUC-5204, EDUC-5205, EDUC-5209, EDUC-5311, EDUC-5312, EDUC-5313, EDUC-5314, EDUC-5315, EDUC-5316, EDUC-5317, EDUC-5318, and Practice Teaching (EDUC-5491, EDUC-5492, EDUC-5493, and EDUC-5494. The St. Clair College Early Childhood Education component will consist of the following courses, ECE 100C, ECE 106C, ECE 117C, ECE 120C, ECE 130C, ECE 209C, ECE 210C, ECE 216C, ECE 230C, ECE 310C, ECE 408C, ECE 409C, ECE 411C, and field placements. Requirements can also be met for teaching in the Roman Catholic school system by taking EDUC-5200.

**Suggested Course Sequence**
Course sequencing is subject to change. Contact the Faculty of Education each semester for details.

FIRST YEAR
Fall Term: five B.A. courses
Winter Term: five B.A. courses

SECOND YEAR
Fall Term: four B.A. courses; the B.Ed course EDUC-5203 (Educational Psychology), EDUC-5491 (full-year course)
Winter Term: ECE 100C, ECE 117C, ECE 120C, ECE 130C, ECE 210C, ECE 409C, and ECE 106; EDUC-5491 (full-year course)
Spring Term: two weeks of E.C.E. preschool field placement and two weeks of B.Ed. JK/SK practice teaching (EDUC-5491 (full-year course))

THIRD YEAR
Fall Term: three B.A. courses; the B.Ed courses EDUC-5314, and EDUC-5315; EDUC-5492 (full-year course)
Winter Term: three B.A. courses; the B.Ed courses EDUC-5311, EDUC-5313, EDUC-5316 and EDUC-5317; EDUC-5492 (full-year course)
Spring Term: four weeks of B.Ed. Junior grades practice teaching ( EDUC-5492 (full-year course))

FOURTH YEAR
Fall Term: ECE 209C, ECE 230C, ECE 310C, ECE 408C, ECE 411C, ECE 216C and 4 week field placement; EDUC-5493 (full-year course)
Winter: four B.A. courses; the B.Ed. course EDUC-5204, EDUC-5493 (full-year course)

Spring: four weeks of E.C.E. Infant/Toddler field placement

FIFTH YEAR
Fall Term: three B.A. courses; the B.Ed. courses EDUC-5209; EDUC-5312; EDUC-5318; EDUC-5494 (full-year course)
Winter Term: three B.A. courses; the B.Ed. course EDUC-5205; EDUC-5494 (full-year course)
Spring Term: 4 weeks of B.Ed. Primary grades practice teaching (EDUC-5494 (full-year course)

Courses used to calculate the BA major average are: as listed for the General BA program.
Courses used to calculate the Education major average are: All required Education courses.

**Standing Required for Continuation**
Students must comply with the general university regulations, and with the academic regulations of their particular B.A. program. In addition, candidates who obtain three or more final Education course grades below 65% will not be recommended for certification. Candidates who are unsuccessful in practice teaching or obtain a grade of F in any course will not be recommended for either a degree or certification. Students may repeat only one B.Ed. course, excluding EDUC-5491, EDUC-5492, EDUC-5493, EDUC-5494, for upgrading throughout the program. Any deviation from the prescribed sequence of courses must be approved by the Dean of the Faculty of Education.

**Graduation**
Graduates of the program receive both the Bachelor of Arts and the Bachelor of Education (General) degrees from the University of Windsor, and the Diploma in Early Childhood Education from St. Clair College.

The Faculty of Education does not issue a teaching certificate. The Ontario Certificate of Qualification is issued by the Ontario College of Teachers upon recommendation of the Dean of the Faculty of Education. Only Canadian citizens or Permanent Residents of Canada qualify for this certificate. Under certain conditions, the Ontario College of Teachers may grant a non-Canadian citizen an Interim Certificate of Qualification.

# EDUCATION COURSES

## PRE-SERVICE COURSES

Pre-Service courses may extend over one, two or four terms.

**EDUC-1199. Teaching and Learning Part I**
The course provides students with directed experience in a community service organization such as a service club, a youth club or group, a national park or conservation area, or a science museum. The Faculty of Education Field Experience Office will arrange the Community Service Field Placements, where applicable. Workshops and seminars will prepare students for the Community Service Field Placements and introduce students to the Professional Year Applicant Portfolio as a means of documenting and reflecting on professional learning and practice in the teaching profession. (Open only to students in the Modern Languages, French, English Language and Literature, History, Drama, Visual Art, General Science and Mathematics I/S Concurrent Education programs).

**EDUC-2299. Community Service Education**
This course provides students with directed field experiences in a grade 9 or 10 classroom (mathematics or science) during each of the Fall and Winter semesters. The Faculty of Education Field Experience Office will arrange the Field Placements. Workshops and seminars will provide an orientation to schools, with a focus on school culture and school community, and assist students in developing their Professional Year Applicant Portfolio as a means of documenting and reflecting on professional learning and practice in the teaching profession. (Open only to third-year students in the Modern Languages, French, English Language and Literature, History, Drama, Visual Art, General Science and Mathematics I/S Concurrent Education programs (Prerequisite: EDUC-1199).

**EDUC-3399. Teaching and Learning Part II**
This course provides students with directed field experiences in a grade 11 or 12 classroom (mathematics or science) during the Fall semester. The Faculty of Education Field Experience Office will arrange the Field Placements. Workshops and seminars will provide an orientation to the senior division, with a focus on school culture and school community, and assist students in completing their Professional Year Applicant Portfolio. (Open only to fourth-year students in the Modern Languages, French, English Language and Literature, History, Drama, Visual Art, General Science and Mathematics I/S Concurrent Education programs.) (Pre-requisites: EDUC-1199 and EDUC-2299).

**EDUC-5200. Religious Education in Roman Catholic Schools**
This course is provided for those preparing themselves for the ministry of teaching in the Roman Catholic Schools of Ontario. This course is open to all Education students. This course offers prospective teachers the opportunity: 1) to reflect, in an adult context, upon the significance of their faith and faith growth for themselves and their students; 2) to gain a theological background for an introduction to Religious Education. (1.5 Credit Weight).

**EDUC-5201. Foundations of Practice (Part I): Philosophical Orientation to Education**
Theories of learning and the nature of learning will be explored so that teacher candidates begin an inquiry process toward their teaching philosophy. (1.5 Credit Weight)

**EDUC-5202. Foundations of Practice (Part II): Classroom Practice**
Theories from Part 1 will be linked to instructional aspects of teaching, discovering strategies that are related to teacher candidates' perspective/philosophy of teaching. (1.5 Credit Weight)

**EDUC-5203. Educational Psychology**
Psychology applied to teaching: child growth and development, the learning process, mental health, learning and adjustment problems in the environment. (3.0 Credit Weight)

**EDUC-5204. Differentiated Instruction for Students with Special Needs**
This course provides an introduction to the field of special education in the Canadian context, focusing on background knowledge needed by teachers to address diverse learning needs in inclusive classrooms. This course provides an introduction to the field of special education in the Canadian context, focusing on background knowledge needed by teachers to address diverse learning needs in inclusive classrooms. It will examine the various methodologies used for differentiating instruction, accommodating and modifying instruction for IEP's, tiered instruction, and using technology to assist learning. (3.0 Credit Weight)

**EDUC-5205. Educational Foundations, Law and Ethics**
This course focuses on provincial legislation and policies and explores the significance of professional learning and ethical conduct that involves understanding a range of educational philosophies and pedagogical approaches. (Open only to Concurrent Education students.) (3.0 Credit Weight)

**EDUC-5206. Aboriginal Ways of Knowing: Cultural, Political and Linguistic Contexts**
Emphasis will be on critical thinking around the politics of education, explore resources so educators can better support Aboriginal learners and increase awareness about First Nations, Métis and Inuit culture as well as the multicultural and inclusive classrooms. (1.5 Credit Weight)

**EDUC-5207. Service Learning Specialization**
Students select one of the following options according to their division PJ/JI/IS (3.0 Credit Weight):

1. Leadership Experience for Academic Direction (LEAD) (JI/IS)
In this course students will gain an understanding of youth in the 21st century who are identified as being in-risk. Social learning theories, theories of resilience and personal and social responsibility are integrated. Teacher candidates will be responsible for a minimum of a 20-hour experiential service-learning project within the school community.

2. Urban Education (PJ)
In this course, teacher candidates will gain an understanding of expressions of power in society and SES factors that affect the teaching/learning process in our urban city schools in relation to issues of racism, ethnocentrism and poverty. Teacher candidates will be responsible for a minimum of a 20-hour experiential service-learning project within the school community or community at-large.

3. English Language Learners (PJ/JI/IS)
An understanding of the English Language Learner and how to engage the learner in learning is critical in the success of the Ontario urban classroom. Teacher candidates will be responsible for a minimum of a 20-hour experiential service-learning project within the school community or community at-large.

4. Global Learning: Cultural Engagement (PJ/JI/IS)
Global and Cultural Education International Experience allows for intercultural dialogue and engagement and provides a challenge to advocate for a global cross-cultural future in harmony and peace. Teacher candidates will be responsible for a minimum of a 20-hour experiential service-learning project within the global community.

5. Beginning Time Aboriginal Teaching (PJ/JI)
In this course, teacher candidates participate in a series of learning experiences that will allow them to think through and learn from traditional teachings and learning modalities. Teacher candidates will be responsible for a minimum of a 20-hour experiential service-learning project within the aboriginal community.

6. Early Childhood Education (PJ)
An introduction to Early Childhood Education provides the candidate with the opportunity for discovery of the nature of child development and learning through a specific early childhood education program preparing the candidate for full day kindergarten. Teacher candidates will be responsible for a minimum of a 20-hour experiential service-learning project within the Early Childhood Education community within schools or Early Childcare Centres.

7. Ecology and Wellness (PJ/JI/IS)

A course designed to study environment issues, concepts and pedagogy to advocate for sustainability, environmental justice and stewardship as well as becoming environmentally literate. Teacher candidates will be responsible for a minimum of a 20-hour experiential service-learning project within school communities.

8. 'Going the Extra Mile' (MILE) Project (PJ)
Teacher candidates will go the extra "MILE" to combine academic study with service learning. In this course teacher candidates service students and communities in low SES neighbourhoods in the area. In addition to the benefits of engagement and service for both teacher candidates and the local community that they serve, teacher candidates gain valuable skills and experiences while establishing rapport, gaining insights to understand the lived reality of children beyond the classroom, and to make connections between inquiry and practice. Teacher candidates will be responsible for a minimum of a 20-hour experiential service-learning project within the school community or the low SES community at-large.

**EDUC-5208. Assessment and Evaluation**
This course will examine ways to incorporate "assessment as", "assessment for" and "assessment of" learning in all classes. Emphasis will be placed on incorporating frequent, continuous assessment techniques to foster an environment of intrinsic motivation for success. Strategies for tying feedback directly to curriculum expectations will also be explored. (1.5 Credit Weight)

**EDUC-5209. Critical Analysis of Social, Global & Cultural Issues in Education**
An introduction to critical reflection and analysis of educational issues. This course addresses the varieties of students who enter the classroom in terms of their diverse social origins, cultures, identities, and social status (lived and perceived). It engages participants in an examination of the purposes of education, education policy, and teachers' responsibility to work productively with school colleagues and other adults to achieve equitable access, experiences, and outcomes for all students. (1.5 Credit Weight)

**EDUC-5210. Foundations of Practice (III) Law and Ethics – School Governance**
This course focuses on provincial legislation and policies and explores the significance of professional learning and ethical conduct that involves understanding a range of educational philosophies and pedagogical approaches. (Open only to Consecutive Education students.) (1.5 Credit Weight)

**EDUC-5211. Mental Health in the Classroom**
This course is designed to assist teacher candidates in developing their mental health literacy. It will explore the concepts of mental health, mental illness and the stigma that surrounds it, looking specifically at various mood and anxiety disorders that can affect children and adolescents. It will include discussion of interventions teachers can implement and how to develop student resilience.

**EDUC-5215. Mathematics Foundations (P/J)**
This course is intended to give prospective teachers an in-depth preparation in the content, concepts, and principles of elementary mathematics education for students in Junior Kindergarten - Grade 6. Real-life problem-solving approaches, usefulness, and power of mathematics in everyday life will be emphasized in the course. The use of manipulatives, investigations, discussions, and the application of modern technological tools in appropriate situations. (1.5 Credit Weight)

**EDUC-5221. Pedagogy of the Arts (J/I)**

This course situates the arts in Grades 4 to 8 classes and communities and examines how they contribute to the growth of knowledge, creativity, and critical thinking in our students and in society. This will include strategies to encourage best practices in teaching and supporting learning and attainment of skills and knowledge in aesthetic and artistic practices.The course emphasises differentiated instructional practices, diversity, curriculum planning and assessment. (1.5 Credit Weight)

**EDUC-5225. Mathematics Foundations (J/I)**
An introduction to the growth, development, and learning of children from Grades 4 to 8, with an emphasis on instructional practices and curriculum planning for teaching mathematics. (1.5 Credit Weight)

**EDUC-5231. Pedagogy of the Arts (I/S)**
This course situates the arts in Grades 7 to 8 classes and communities and examines how they contribute to the growth of knowledge, creativity, and critical thinking in our students and in society. This will include strategies to encourage best practices in teaching and supporting learning and attainment of skills and knowledge in aesthetic and artistic practices. The course emphasises differentiated instructional practices, diversity, curriculum planning and assessment. (1.5 Credit Weight)

**EDUC-5311. Visual Arts Methodology**
An introduction to the growth, development, and learning of children from Junior Kindergarten to grade 6 with an emphasis on instructional practices and curriculum planning for teaching visual arts. (3.0 Credit Weight)

**EDUC-5312. Digital Technology and Social Media Applications (P/J)**
This course explores a range of digital technologies in educational settings. Focusing on teaching, learning and inquiry, students will evaluate digital educational resources, critically discuss and assess uses of new media in school-based contexts, gain hands-on experiences with various digital tools, and develop various multimedia instructional tools with the aim of building an intelligent and thoughtful disposition towards the use of learning technologies within their own classroom and school contexts. (3.0 Credit Weight)

**EDUC-5313. Health and Physical Education (P/J)**
This course explores a constructivist approach to teaching health and physical education to children from Junior Kindergarten to Grade 6 with an emphasis on differentiated instructional practices, diversity, curriculum planning and assessment. (3.0 Credit Weight)

**EDUC-5314. Language Arts (P/J)**
An introduction to the theories of learning and linguistics of children from Junior Kindergarten to grade 6 with an emphasis on curriculum content, expectations, ways of learning and implications of EQAO standardized testing. (3.0 Credit Weight)

**EDUC-5315. Mathematics Methodology (P/J)**
This course is designed to introduce methods for teaching mathematics to elementary students from Junior Kindergarten - Grade 6. This course focuses on children's thinking in mathematics and classroom practices that support and develop children's thinking. Teacher candidates will develop frameworks for assessing children's strategies for solving problems. They will explore the connection between arithmetical and algebraic thinking in the elementary grades. (3.0 Credit Weight)

**EDUC-5316. Music Methodology**

An introduction to the growth, development, and learning of children from Junior Kindergarten to grade 6 with an emphasis on instructional practices and curriculum planning for teaching music. (3.0 Credit Weight)

**EDUC-5317. Science (P/J)**
This course explores an inquiry-based approach to teaching science to children from Junior Kindergarten to Grade 6 with an emphasis on differentiated instructional practices, diversity, curriculum planning and assessment. (3.0 Credit Weight)

**EDUC-5318. Social Studies (P/J)**
This course explores a constructivist approach to teaching social studies to children from Junior Kindergarten to Grade 6 with an emphasis on differentiated instructional practices, diversity, curriculum planning and assessment. (3.0 Credit Weight)

**EDUC-5319. Issues in Education**
An introduction to critical reflection and analysis of social, cultural and political issues in education.

**EDUC-5321. Visual Arts Methodology**
An introduction to the growth, development, and learning of children from grades 4 to 8, with an emphasis on instructional practices and curriculum planning for teaching visual art. (3.0 Credit Weight)

**EDUC-5322. Digital Technology and Social Media Applications (J/I)**
This course explores a range of digital technologies in educational settings. Focusing on teaching, learning and inquiry, students will evaluate digital educational resources, critically discuss and assess uses of new media in school-based contexts, gain hands-on experiences with various digital tools, and develop various multimedia instructional tools with the aim of building an intelligent and thoughtful disposition towards the use of learning technologies within their own classroom and school contexts. (3.0 Credit Weight)

**EDUC-5323. Health and Physical Education (J/I)**
This course explores a constructivist approach to teaching health and physical education to children from Grades 4 to 8 with an emphasis on differentiated instructional practices, diversity, curriculum planning and assessment. (1.5 Credit Weight)

**EDUC-5324. Language Arts (J/I)**
An introduction to the growth, development, and learning of children from grades 4 to 8, with an emphasis on instructional practices and curriculum planning for teaching language arts. (1.5 Credit Weight)

**EDUC-5325. Mathematics Methodology (J/I)**
An introduction to the growth, development, and learning of children from Grades 4 to 8, with an emphasis on instructional practices and curriculum planning for teaching mathematics. (1.5 Credit Weight)

**EDUC-5326. Music Methodology**
An introduction to the growth, development, and learning of children from grades 4 to 8, with an emphasis on instructional practices and curriculum planning for teaching music. (1.5 Credit Weight)

**EDUC-5327. Science (J/I)**

This course explores an inquiry-based approach to teaching science to children from Grades 4 to 8 with an emphasis on differentiated instructional practices, diversity, curriculum planning and assessment. (3.0 Credit Weight)

**EDUC-5328. Social Studies (J/I)**
This course explores a constructivist approach to teaching social studies to children from Grades 4 to 8 with an emphasis on differentiated instructional practices, diversity, curriculum planning and assessment. (1.5 Credit Weight)

**EDUC-5331. Visual Arts Methodology**
An introduction to the development and learning of students in grades 7 to 8 with an emphasis on instructional practices and curriculum planning for teaching visual art. (1.5 Credit Weight)

**EDUC-5332. Digital Technology and Social Media Applications (I/S)**
This course explores a range of digital technologies in educational settings. Focusing on teaching, learning and inquiry, students will evaluate digital educational resources, critically discuss and assess uses of new media in school-based contexts, gain hands-on experiences with various digital tools, and develop various multimedia instructional tools with the aim of building an intelligent and thoughtful disposition towards the use of learning technologies within their own classroom and school contexts. (3.0 Credit Weight)

**EDUC-5333. Health and Physical Education (I/S)**
This course explores a constructivist approach to teaching health and physical education to children Grades 7 to 8 with an emphasis on differentiated instructional practices, diversity, curriculum planning and assessment. (1.5 Credit Weight)

**EDUC-5334. Language Across the Curriculum (I/S)**
An exploration of the development and learning of students in Grades 7 to 8 with an emphasis on instructional practices and curriculum planning for teaching language arts across the curriculum. (1.5 Credit Weight)

**EDUC-5335. Mathematics (I/S)**
An introduction to the growth, development, and learning of children Grades 7 to 8, with an emphasis on instructional practices and curriculum planning for teaching mathematics. (1.5 Credit Weight)

**EDUC-5336. Music Methodology**
An introduction to the development and learning of students in grades 7 to 8 with an emphasis on instructional practices and curriculum planning for teaching music. (1.5 Credit Weight)

**EDUC-5337. Science (I/S)**
This course explores an inquiry-based approach to teaching science to children Grades 7 to 8 with an emphasis on differentiated instructional practices, diversity, curriculum planning and assessment. (1.5 Credit Weight)

**EDUC-5338. Social Science (I/S)**
This course explores a constructivist approach to teaching social studies to children Grades 7 to 8 with an emphasis on differentiated instructional practices, diversity, curriculum planning and assessment. (1.5 Credit Weight)

**EDUC-5339. Career and Guidance Education (I/S)**

An exploration of the development and learning of students in grades 7 to 8 with an emphasis on career and guidance education. (1.5 Credit Weight)

**EDUC-5352 to EDUC-5380. Junior - Intermediate, Intermediate - Senior Methods**
These courses provide a more detailed study and application of the aims and teaching procedures of specific subjects in the Junior-Intermediate and Intermediate-Senior concentrations. Intermediate-Senior candidates must select two courses from the Table of Options. Junior-Intermediate candidates must select one.

**EDUC-5360. Media Arts Teachable**
Media Arts teachable focuses on strategies to refine high school students' use of multiple media and their skills in the use of emerging technologies and tools. The technologies and processes used include photography, film, classical animation, and video/television. On the digital side technologies include digital imaging, sound recording and sonic sculpture, two and three-dimensional animation, multimedia production, holography and web-page design.

**EDUC-5386. Curriculum Development for Technological Studies Part I**
An introduction to the theory and practice of curriculum development for Broad-Based Technology programs in secondary schools. The course uses a constructivist approach to promote integrated learning and broad-based technology approaches through activities that lead to the development of unit plans, a course of study, a project outline, a student learning module and a course portfolio. Thematic and project-based strategies are used to address the learning expectations outlined in curriculum guidelines and policy documents and provide a variety of student learning styles, teaching approaches, and assessment and evaluation strategies. Shop safety and workplace safety are themes infused throughout the course.

**EDUC-5387. Curriculum Development for Technological Studies Part II**
An introduction to the theory and practice of curriculum development for Broad-Based Technology programs in secondary schools. The course uses a constructivist approach to promote integrated learning and broad-based technology approaches through activities that lead to the development of unit plans, a course of study, a project outline, a student learning module and a course portfolio. Thematic and project-based strategies are used to address the learning expectations outlined in curriculum guidelines and policy documents and provide a variety of student learning styles, teaching approaches, and assessment and evaluation strategies. Shop safety and workplace safety are themes infused throughout the course. (Prerequisite: EDUC-5386.)

**EDUC-5388. Principles and Methods of Teaching Technological Studies Part I**
This course is an introduction to the methodology and processes of facilitating learning in the Broad-Based Technological Education classroom. The course will provide opportunities to apply pre-instructional planning, instruction and classroom management skills, ongoing and post-instructional assessment and evaluation strategies. Emphasis is on course activities that will focus on teaching and learning theories, the dynamics of team and group learning, and the development of written and oral communication skills. Course activities include lesson planning, team practice teaching, report writing, seminar presentations, and the development of video and print student learning modules.

**EDUC-5389. Principles and Methods of Teaching Technological Studies Part II**
This course is an introduction to the methodology and processes of facilitating learning in the Broad-Based Technological Education classroom. The course will provide opportunities to apply pre-instructional planning, instruction and classroom management skills, ongoing and post-instructional assessment and evaluation strategies. Emphasis is on course activities that will focus on teaching and

learning theories, the dynamics of team and group learning, and the development of written and oral communication skills. Course activities include lesson planning, team practice teaching, report writing, seminar presentations, and the development of video and print student learning modules. (Prerequisite: EDUC-5388.)

**EDUC-5411. Drama Methodology (P/J)**
This course situates Drama as one of the arts in Junior Kindergarten to Grade 6 classes and communities and examines how it contributes to the growth of knowledge, creativity, and critical thinking in our students and in society. This will include strategies to encourage best practices in teaching and supporting learning and attainment of skills and knowledge in aesthetic and artistic practices. The course emphasizes differentiated instructional practices, diversity, curriculum planning and assessment.

**EDUC-5412. Dance Methodology (P/J)**
This course situates Dance as one of the arts in Junior Kindergarten to Grade 6 classes and communities and examines how it contributes to the growth of knowledge, creativity, and critical thinking in our students and in society. This will include strategies to encourage best practices in teaching and supporting learning and attainment of skills and knowledge in aesthetic and artistic practices. The course emphasizes differentiated instructional practices, diversity, curriculum planning and assessment.

**EDUC-5414. Language and Media Literacy (P/J)**
Emphasis will be placed on instructional practices and curriculum planning for teaching language arts through differentiated and tiered instruction. The use of media in language arts will be explored through a critical lens. (1.5 Credit Weight)

**EDUC-5421. Drama Methodology (J/I)**
This course situates Drama as one of the arts in Grades 4 to 8 classes and communities and examines how it contributes to the growth of knowledge, creativity, and critical thinking in our students and in society. This will include strategies to encourage best practices in teaching and supporting learning and attainment of skills and knowledge in aesthetic and artistic practices. The course emphasises differentiated instructional practices, diversity, curriculum planning and assessment.

**EDUC-5422. Dance Methodology (J/I)**
his course situates Dance as one of the arts in Grades 4 to 8 classes and communities and examines how it contributes to the growth of knowledge, creativity, and critical thinking in our students and in society. This will include strategies to encourage best practices in teaching and supporting learning and attainment of skills and knowledge in aesthetic and artistic practices. The course emphasises differentiated instructional practices, diversity, curriculum planning and assessment

**EDUC-5424. Language and Media Literacy (J/I)**
An introduction to the growth, development, and learning of children from Grades 4 to 8, with an emphasis on instructional practices and curriculum planning for teaching language arts. (1.5 Credit Weight)

**EDUC-5431. Drama Methodology (I/S)**
This course situates Drama as one of the arts in Grades 7 to 8 classes and communities and examines how it contributes to the growth of knowledge, creativity, and critical thinking in our students and in society. This will include strategies to encourage best practices in teaching and supporting learning and attainment of skills and knowledge in aesthetic and artistic practices. The course emphasises differentiated instructional practices, diversity, curriculum planning and assessment.

**EDUC-5491, EDUC-5492, EDUC-5493, and EDUC-5494. Practice Teaching**
Directed observation and practice teaching is provided through a series of field experiences. Primary-Junior candidates will normally be placed in Grades K to Six inclusive; Junior-Intermediate candidates will normally be placed in Grades Four to Ten inclusive; Intermediate-Senior candidates will be placed in Grades Seven to Twelve inclusive.

**EDUC-5497. Internship**
The Internship consists of 90 hours of skills upgrading with 36 hours dedicated to an action research community service project. This community service project gives the students an opportunity to complete a needs assessment related to their trade in education, followed by an inquiry-based research project and evaluation. The remaining hours will be dedicated to the integration of technological skills, theory, and pedagogical practice and to deepening and broadening their skills and knowledge in their selected area of technological education. A technology skills profile will be used to track the range and level of skill development of each candidate. The Program Coordinator for the Technological Education program will work with Board-based Technological Program Consultants across the province to select teacher advisors who will support teacher candidates during their Internship period. The Technological Program Consultants will be responsible for evaluating teacher candidates during their Internship. (7.5 Credit Weight).

**EDUC-5498. Practicum**
The practicum consists of two main components: orientation to schools, with a focus on school culture and school community; and classroom practice related to the candidate's specific discipline. Teacher candidates are assigned, during Fall and Winter practicum sessions, to schools or other settings approved by the Ontario College of Teachers, for a minimum of sixty days of combined observation and practice related to these components. As well, candidates will do 100 hours of pedagogical workshops, courses or seminars, offered by the Board. The Technological Program Consultant will sign off on this training. Candidates would be required to visit schools that offer their discipline. The Technological Program Coordinator will set up the school visits and the Board will pay for teacher coverage during their absence from regular teaching. (Open only to student in the BEd/Diploma in Technological Education program.)

**EDUC-5499. Practicum**
The practicum consists of two main components: orientation to schools, with a focus on school culture and school community; and classroom practice related to the candidates' specific discipline. Teacher candidates are assigned, during Fall and Winter practicum sessions, to schools or other settings approved by the Ontario College of Teachers, for a minimum of 80 days of combined observation and practice related to these components. (12 Credit Weight)

## ORGANIZATIONAL LEARNING AND TEACHING COURSES

NOTE: The Organizational Learning and Teaching courses that lead to the Minor in Organizational Learning and Teaching can not be counted towards a Bachelor of Education.

**EDUC-4000. Diversity and Inclusion in the Learning Organization**
This course will examine the evolution of the concepts of diversity and inclusion in social organizations, key management practices for improving performance, and current diversity and inclusion challenges in organizations. Diversity and inclusion are important aspects of learning organizations for the purpose of developing strategic options for improvement in many different ways. (Prerequisite: Semester 3 or above standing)

**EDUC-4050. Instructional Technologies**
This course has been designed to provide students with an introduction to theoretical and practical issues pertaining to the use of informational and instructional technologies in learning organizations. Students will examine and critique the context of the field of instructional technologies and learn to apply current instructional technologies and media to instructional design and practice and the enhancement of learning opportunities. Basic concepts in educational technology, major developments, the present status of informational and instructional technologies, key principles of educational technology as an approach and tool for teaching and learning, and the development of appropriate educational technologies in terms of a learning organization's goals will also be examined. Technological literacy will be emphasized throughout while exploring computer applications, the utilization of converging digital technologies, and the use of the internet and web resources.(Prerequisite: Semester 3 or above standing)

**EDUC-4100. Learning-Centred Teaching: Planning, Delivery, Assessment, and Evaluation**
Students will learn about principles and theories of learning-centred practices. Specifically, students will critically examine and synthesize the findings of current research and scholarly texts on teaching and learning to develop a critical personal understanding of learning-centred practices that are applicable to a wide range of diverse workplace contexts. Through assigned readings and texts, students will acquire, integrate, and apply knowledge pertaining to planning, instructional delivery, and the assessment and evaluation of learning. Self-, peer-, and teacher-evaluated assignments will provide students with opportunities to integrate research and practice and to facilitate the development of particular skills, notably, interpersonal communication skills, planning, facilitation and organization of learning, critical thinking, inquiry learning, and reflection. (Prerequisite: Semester 3 or above standing)

**EDUC-4150. Learning Organizations: Management and Leadership**
Students will learn about current management theories and practices in contemporary learning organizations where learning is a primary or significant characteristic or quality of the organization. Specifically, from a leadership perspective, this course will examine the nature of leading and managing in learning organizations, the role of learning, and the complex legal, ethical, and social issues that give shape to the organization and its leaders. Through the use of a variety of resources and approaches, students will explore and question theories, models, tools, and best practices for managing and leading in learning organizations, prompting and providing critical perspectives and practical tools that may be applied in different contexts.(Prerequisite: Semester 3 or above standing)

**EDUC-4200. Theories of Individual and Collective Learning**
Students will examine current theories pertaining to learning and learners in diverse organizational contexts. Particular themes will be examined, including the nature of learning, patterns of growth and development, the dynamics and complexities of learning in diverse educational contexts, and current educational realities in society. Specifically, students will examine a number of important issues, such as: learning and cognitive processes; personal, social and moral development; individual and group differences; social-cognitive views (e.g., racial discrimination, bullying, harassment, abuse, gender bias, xenophobia, homophobia, stereotyping); motivation and cognition relevant to individual and collective learning; knowledge construction and higher-order thinking. In this course, students will develop a critical awareness of learning theories and related issues and will critique, analyze, and reflect on the underlying assumptions associated with matters and the implications for individual and collective learning in learning organizations.(Prerequisite: Semester 3 or above standing)

**EDUC-4800. Experiential Learning Field Placement**
This course has been designed to provide students with an experiential learning opportunity with which to connect theoretical and practical issues in a field-based learning environment. Under the guidance of

the course instructor and the partners in the field, students will engage in a collaborative process leading to the production of a final paper on an issue or topic of inquiry of relevance to the partners in the field. This course will present students with authentic assessment tasks that situate their on-going inquiries in a context that enables them to apply and further critique what has been previously learned. Students will engage in matters pertaining to learning and learners applicable to research, needs assessment, program review, and policy development, as appropriate. The final project will be grounded in the field experience, and will show evidence of knowledge, skills of inquiry, reflection and problem-solving acquired through the other courses. This course will be taken following completion of the other course-work in the minor option. (Prerequisites: EDUC-4000, EDUC-4050, EDUC-4100, EDUC-4150, EDUC-4200)

## EDUCATION IN-SERVICE COURSES

In-Service Courses include:
Additional Basic Qualification Courses
Additional Qualification Courses
Honours Specialist Qualification Courses
Principal's Qualification Course

For a complete description of all In-Service courses and registration procedures, please visit the Faculty of Education website at www.uwindsor.ca/edfac.

# FACULTY OF ENGINEERING

## PROGRAM INFORMATION

The engineering curriculum leading to the BASc degree has been designed to offer students an education that is immediately valuable to them on graduation and which, at the same time, provides a foundation to accommodate their further education in industry or research.

Those interested in pursuing graduate studies should consult the graduate calendar information on the Integrated BASc/MASc program.

The first year is common in order to give the student an introduction to general engineering principles and to allow investigation of a special field of interest for subsequent years of study.

The Co-operative Education Program is available in Civil Engineering, Electrical Engineering, Environmental Engineering, Industrial Engineering (with or without a minor in Business Administration), and Mechanical Engineering (with or without an option in Aerospace, Automotive, Materials or Environmental).

While engineers must work within the technologies of the times, they are also responsible for the continual development of these technologies. The flexibility demanded of the engineer must be based upon proficiency in the physical sciences, and a confident ability to apply the sciences to the benefit of humankind. Therefore, our engineering programs are founded upon a substantial content of mathematics, physics, and chemistry; and our engineering subjects are taught with a view to familiarizing the students with contemporary practice, and teaching them those methods of analysis, design, and realization which they will be able to apply to a continually developing discipline.

The aim of the engineer is to apply the latest science and technology for the betterment of society; engineers must, therefore, realize their duties to society and, as a prerequisite, appreciate how civilizations have developed to their present states.

The independent responsibility that we wish to see in practicing engineers is impressed upon our students by emphasis on laboratory work, tutorials, projects, and assignments. Further, the student is assisted in individual studies by counselling and professional development seminars.

These activities encourage a close and profitable student professor relationship and facilitate the interchange of engineering information and experience to develop the professional maturity and integrity of the student.

## ACADEMIC REGULATIONS

Students are directed to become familiar and to comply with the general regulations of the University which apply to all students. Additionally, programs within the Faculty of Engineering have particular regulations. Students enrolled in Engineering programs also must comply with these particular requirements.

Students also are directed to read the "Statement of Responsibility".

## COURSE CHANGES

All course changes subsequent to registration require the written approval of the Associate Dean of the Faculty.

## COURSES NOT PART OF THE ENGINEERING PROGRAM

A student may register for courses additional to those in the Engineering program only with the permission of the Head of the department in which the student is enrolled and the Associate Dean.

## FACULTY OF ENGINEERING: COURSES THAT MAY BE TAKEN FROM OUTSIDE THE FACULTY OF ENGINEERING

For complete descriptions of the courses listed below, see the respective area/program sections of this Calendar.

Not all courses will be offered each year. All courses are three hours a week unless otherwise indicated.

Consult the Office of the Associate Dean (Academic) for the current list of approved courses that may be taken from outside Engineering and which have been chosen to satisfy the Complementary Studies requirements of the Canadian Engineering Accreditation Board.

Psychology:
PSYC-1150. Introduction to Psychology as a Behavioral Science
PSYC-1160. Introduction to Psychology as a Social Science
PSYC-2400. Psychology of Sex and Gender

Sociology:
SACR-1100. Foundations of Social Life
SACR-2040. Sociology of the Family
SACR-2050. Sociology of the Sex
SACR-2100. Women, Sexuality and Social Justice
SACR-3400. Food and Global Sustainability
SACR-3510. Gay and Lesbian Studies

Communication, Media and Film:
CMAF-1010. Introduction to Communication Studies: Media and Society
CMAF-2610. Public Opinion, Public Relations, and Propaganda

History:
HIST-1130. Europe Encounters the World: Facing Islam, 8th-15th Century
HIST-1140. Europe Encounters the World: The Age of Discovery, 15th-18th Century
HIST-1230. The World in the Twentieth Century, 1914-1945
HIST-1240. The World in the Twentieth Century, 1945-Present
HIST-2010. Early Modern Europe
HIST-2020. Modern Europe
HIST-2180. War in the 20th Century

HIST-2200 History of Africa, 700-1800
HIST-2430. Canada from Early European Contacts to the Origins of Confederation, 1600-1867
HIST-2440. Canada since Confederation, 1867 to the Present
HIST-2460. Aboriginal Peoples in Canadian History: Beginnings to Mid-Nineteenth Century
HIST-2470. Aboriginal Peoples in Canadian History: Mid-Nineteenth Century to the Present
HIST-2490. Women in Canada and the United States, 1600-1870
HIST-2500. Women in Canada and the United States, 1870-Present
HIST-2510. History of Women's Movements in North America (Also offered as Women's and Gender Studies WGST-2510.)
HIST-2610. History of America, 1600-1877
HIST-2620. History of America, 1877 to the Present
HIST-2720. Modern Latin America
HIST-2870. History of Crime
HIST-3210. Colonialism in Africa, 1830s-1960s
HIST-3360. Becoming Visible: Women in European History
HIST-3610. Slavery In North America, 1600-1877
HIST-4350. The Early Modern Atlantic World

English Language, Literature, and Creative Writing:
ENGL-1005. Topics in Literature
ENGL-2520. Topics in Literature
ENGL-2010. Medieval Literature
ENGL-3010. Topics in Medieval Literature

Labor Studies:
WORK-1000. Labor and Social Movements in Canadian Society
WORK-1500. Working for a Living
WORK-2000. Labor Law and Policy
WORK-2500. Worker Health and Safety

Languages, Literatures, and Cultures:
ARAB-2610. Arabic Culture I: Introduction to Arabic Culture
ARAB-2620. Arabic Culture II: Modern Arabic Literature
INCS-1000. Religion and Culture
INCS-2300. Christianity: Early Church to the Reformation
INCS-2310. Christianity: Reformation to the Modern Age
INCS-2200. Language, Linguistics and Society
INCS-1370. Introduction to German, Italian, and Spanish Literature
INCS-2370. German, Italian and Spanish Literary Traditions (Antirequisties: INCS-2370 and the former INCS-334.)
INCS-2020. Culture and Ideas: From the Black Death to the Enlightenment
INCS-2030. Culture and Ideas: From the French Revolution to the Present
INCS-2350. To Auschwitz and Beyond: Reflections on the Meaning of the Holocaust
INCS-2360. Surviving Survival: Reflections on Genocide, War and Trauma
ASIA-2620. Special Topics in Chinese Culture
GRST-1100. Introduction to Greek Civilization
GRST-1200. Introduction to Roman Civilization
GRST-2110. Greek Prose
GRST-2111. Greek Poetry
GRST-2000. Topics in Classical Culture

GRMN-2480. German Cinema
GRMN-2600. German Culture and Civilization I
GRMN-2610. German Culture and Civilization II
ITLN-2600. Italian Culture and Civilization I
ITLN-2610. Italian Culture and Civilization II
SPAN-2480. Spanish Cinema
SPAN-2600. Culture and Civilization of Spain
SPAN-2610. Culture and Civilization of Spanish America
FREN-1410. Introduction to Literary Studies (Note: FREN-1410 is a prerequisite course for all literature courses in French Studies.)

Interdisciplinary Studies:
INCS-2020. Culture and Ideas I
INCS-2030. Culture and Ideas II
SOSC-1000 Introduction to Canadian Studies

Philosophy:
PHIL-1100. Introduction to Western Philosophy
PHIL-1120. Philosophy and Human Nature
PHIL-1290. Contemporary Moral Issues
PHIL-1300. Philosophy and Popular Culture
PHIL-1600. Reasoning Skills (Antirequisite: PHIL-1620.)
PHIL-2210. Introduction to Ethics
PHIL-2240. Business Ethics
PHIL-2260. Law, Punishment, and Morality
PHIL-2270. Environmental Ethics
PHIL-2280. Technology and Human Values
PHIL-2400. Philosophy of Religion (Prerequisite: Semester 3 or above standing.)
PHIL-2520. Existentialism (Prerequisite: Semester 3 or above standing.)
PHIL-2530. Philosophy of Science
PHIL-2550. Knowledge and Community (Prerequisite: semester 3 or above standing.)
PHIL-2730. Ancient Greek Philosophy (Prerequisites: Semester 3 or above standing and one prior Philosophy course.)
PHIL-3230. Globalization and Social Justice (Prerequisite: Semester 3 or above standing, or permission of the instructor.)
PHIL-3290. Animals and Ethics (Prerequisites: Semester 3 standing and at least one prior Philosophy course, or permission of the instructor.)
PHIL-3300. Theories of Nature (Prerequisites: Semester 3 standing and at least one Philosophy course, or permission of the instructor.)
PHIL-3420. Philosophy of Education (Prerequisites: Semester 3 or above standing and at least one prior Philosophy course, or consent of the instructor.)
PHIL-3560. Mind Design and Android Epistemology

Political Science:
POLS-1000. Introduction to Canadian Government and Politics
POLS-1300. Comparative Politics in a Changing World
POLS-1600. Issues in World Politics
POLS-2010. Current Issues in Canadian Politics
POLS-2110. Women and Politics (Also offered as Women's and Gender Studies WGST-2110)
POLS-2120. Environmental Policy and Politics

POLS-2130. Public Opinion, Mass Media and Canadian Democracy
POLS-2140. Legal Process in Canada
POLS-2320. Government and Politics of the United States
POLS-2330. Politics of the Developing World
POLS-2410. Contemporary African Politics
POLS-2440. Government and Politics in Europe
POLS-2490. Political Economy of Agriculture and Food (Also offered in Geography HUGR-2490.)
POLS-2510. Classical Political Thought
POLS-2520. Modern Political Thought
POLS-2600. Politics, History, and Asian Religions
POLS-2610. Politics, History, and Western Religions
POLS-3200. Political Parties and Elections
POLS-3210. The Legislative Process
POLS-3240. Public Infrastructure
POLS-3350. Political Geography
POLS-3670 The Politics of the European Union
POLS-3720. Religious Fundamentalism and Politics
POLS-3790. Politics and Culture

Visual Arts:
MACS-3380. Islamic Art (Prerequisites for Visual Arts majors: MACS-2140 and MACS-2150.)
MACS-3390. Japanese Art (Prerequisites for Visual Arts majors: MACS-2140 and MACS-2150.)
MACS-3400. Art of India (Prerequisites for Visual Arts majors: MACS-2140 and MACS-2150.)
MACS-3410. Art of China (Prerequisites for Visual Arts majors: MACS-2140 and MACS-2150.

Women's and Gender Studies:
WGST-1000. Women in Canadian Society
WGST-1200. Gal Pals: Women and Friendship
WGST-1300. Imagining Women
WGST-2510. History of Women's Movements in North America (Also offered as History HIST-2510.)
WGST-2100. Women, Sexuality and Social Justice (Also offered as Sociology SACR-2100.) (Prerequisite: WGST-1000 or consent of the instructor.)
WGST-2110. Women and Politics Also offered as Political Science POLS-2110
WGST-2500. Women's Bodies, Women's Health (Prerequisite: One Women's and Gender Studies (WGST-) course and at least semester 3 standing.)
WGST-2190. Women, Movement, and Performance (Prerequisite: one Women's and Gender Studies course.)
WGST-2600. Women and Globalization (Prerequisites: at least Semester 3 standing.)
WGST-3340. Love, Honor, and Obey: Marriage and Gender (Pre-requisite: One Women's and Gender Studies course or HIST-2510 or permission of the instructor.)

Economic:
ECON-1100. Introduction to Economics I
ECON-1110. Introduction to Economics II (Prerequisite: ECON-1100.)
ECON-2210. Intermediate Microeconomics I (Prerequisite: ECON-1100.)

Business:
STEN-1000. Introduction to Business

## SUPPLEMENTAL PRIVILEGES

The Academic Standing Committee may grant a supplemental evaluation privilege for a failed course provided that the student:
(a) has failed only one course in the evaluation period; and
(b) has a grade below 50%; and
(c) has a cumulative average of 60% or better.

If a supplemental evaluation privilege is granted and the student decides to exercise this privilege, the student must register for the supplemental and pay the appropriate fee. Once a student has registered for a supplemental evaluation and the required evaluation method has been prescribed, the evaluation will occur at the time and place prescribed by the Faculty of Engineering. Failure to write after registering for the supplemental evaluation will result in a failing grade being assigned. Both the resulting grade and the original grade will be shown on the student's transcript and will be included in the determination of the student's cumulative average.

## GRADUATION REQUIREMENTS

In addition to complying with the general university regulations an Engineering student must complete the program within eight years of study from the date of first registration in an Engineering program.

# CO-OPERATIVE EDUCATION PROGRAM

The Faculty of Engineering Co-operative Education Program offers students the opportunity to combine their classroom experiences with career-related work experiences. The Co-operative Education Program is based upon the principle that the preparation of undergraduate Engineering students can be enhanced by blending career related work experience with a quality curriculum.

Admission to the Co-operative Education Program is competitive. Students who apply and are accepted into the Program must successfully complete three or four paid work experiences, normally interspersed throughout the four-year honours program, in addition to specified program requirements. The experience gained while participating in these structured and supervised work placements is viewed as an integral component of the student's education program.

Industrial Engineering students have to take an internship position, of at least three (3) terms in duration, to fulfil the requirements.

Note: Under extenuating circumstances, first year Engineering students may be considered for a co-op term in their first year at the discretion of Faculty of Engineering.

## APPLICATION PROCEDURE

Students can apply for the Co-op program directly out of high school via the OUAC application form. The Co-op portion of the degree will begin in the fall of 2nd year. Students who were not admitted and/or did not apply to Co-op directly out of high school can apply for the Engineering Co-op program in September of their 2nd year of study. Second-year co-op applications are available through the Co-op, Career and Employment Services Office.

Withdrawal from the co-op program will be granted on an exception basis only as it must be determined that the student has no outstanding commitments to employers. Students who wish to

withdraw must meet with a Co-op Coordinator and complete a withdrawal form. However, the only time a student may withdraw from an undergraduate co-op program without further co-op fee payment implications is by the 1st Friday of classes after their first co-op work term. Students who withdraw from Co-operative Education at any other time will be liable for paying the co-op fee for the term in which they are dropping and one additional term. This will help offset the costs of developing another student for placement.

In the interest of building solid partnerships with employers, students who have accepted a co-op employment offer (either by ranking a position in round 1 of the job competition or by accepting a position either verbally or in writing in later rounds) must honour that commitment. Therefore, once students have accepted an offer of employment for a work term, they will be considered registered in the appropriate work term course and must remain in the co-op program until they have completed their work term requirements. Failure to honour these commitments and/or to complete all work term requirements will lead to being required to withdraw from the co-op program and will result in a failing grade on his/her transcript for that work term.

## CO-OP JOB SEARCH PROCESS

All Co-op positions must be full-time, paid, related to the degree program and approved by the University. The process of securing a co-op position is competitive. Co-op students will apply for work opportunities as advertised by the Centre for Career Education using an Internet-based software program and employers will make interview and hiring decisions. Students are also encouraged to seek co-op employment outside of the advertised postings by completing a guided job search process facilitated by the Centre for Career Education.

## SEQUENCE OF WORK AND STUDY TERMS

FIRST YEAR
Fall Term: Study term
Winter Term: Study term

SECOND YEAR
Fall term: Study term
Winter term: Study term
Summer Term: Work term

THIRD YEAR*
Fall Term: Study term
Winter Term: Work term
Summer Term: Study term

THIRD YEAR* (for Environmental Engineering)
Fall Term: Study term
Winter Term: Study term
Summer Term: Work term

FOURTH YEAR
Fall Term: Work term

Winter Term: Study term
Summer Term: Study term

## ACADEMIC STANDING

Co-op students must have: 1) a minimum cumulative average of 70% at the end of Year 1 of Engineering studies; and 2) be eligible for 2nd year standing, or at the discretion of the Faculty of Engineering. Should the number of eligible coop applicants exceed the number of available coop placements, the allocation of available coop placements will be decided on the basis of academic merit (cumulative Year 1 average). Successful coop applicants must maintain a minimum 60% in years 2, 3 and 4 to continue in the Co-op program.

## WORK TERM EVALUATION

A student's performance in a Work Term will be evaluated as either "Pass" or "Fail". To obtain a "pass" evaluation, a student must successfully complete all the requirements of the Co-operative Program as described in Co-op Commitments and Expectations provided to all co-op students and available from the Co-op, Career and Employment Services Office.

## CO-OPERATIVE PROGRAM GRADUATION REQUIREMENTS

In addition to the requirements for graduation from the regular B.A.Sc. program, students in the Co-operative Program must satisfactorily complete three work terms, unless a student is involved in an internship which is approved for different specific conditions.

# PROGRAMS ADMINISTERED BY THE OFFICE OF THE DEAN OF ENGINEERING

## Bachelor of Engineering Technology

**Admission Requirements for all Streams**

Applicants are eligible if they:*

a) possess an Advanced Diploma in Technology from Ontario CAATs (or an equivalent Canadian or International Institution)
b) possess an Engineering degree from a Canadian university (or an equivalent recognized International Institution)
c) possess a University degree in a scientific or technical subject from a Canadian university (or an equivalent international institution)
d) have completed the equivalent of three years of an engineering degree from a recognized international institution.

*Admission to the Bachelor of Engineering Technology Program (General Stream) also may be extended to students with a two-year Engineering Technology Diploma or Certificate from a Canadian College (CAAT or equivalent) and relevant work experience based on space availability in the program. Additional coursework may be required to ensure equivalency to the three-year diploma program as evaluated by the Office of Admissions and Faculty of Engineering.

And meet the following minimum average requirement:
1. For Canadian Colleges (CAAT or equivalent), Graduating Cumulative Average of 70%.
2. For international colleges (equivalent to CAAT's advanced diploma), Graduating Cumulative Average of 80% and minimum English language requirement as per University policy
3. For Canadian University degree holders who are seeking technology designation, 70%.
4. For international university degree holders who are seeking technology designation, 80% and minimum English language requirement as per University policy.
5. For individuals who have completed the equivalent of three years of an engineering degree from a recognized international institution, cumulative average of 80%, or first class honours, or equivalent; and minimum English language requirements as per University policy.

Remark 1: Students applying to Bachelor of Engineering Technology (Mechanical) must have received an advanced diploma in Mechanical Engineering Technology (or equivalent as stated in 1 and 2 above). Students applying to Bachelor of Engineering Technology (Civil) must have received an advanced diploma in Civil Engineering Technology (or equivalent as stated in 1 and 2 above).

Remark 2: Students, who received a four-year degree in a technical subject in Science, if admitted into BEngTech program, may be asked to take additional courses beyond the minimum requirements, and up to four courses in their original degree can be counting towards the BEngTech program, if appropriate.

## Bachelor of Engineering Technology (BEngTech) - General Stream

**Degree Requirements**

Total courses: A minimum 15 courses

(a) Two 100 0 courses, six 2000 level courses, three 3000 level courses, and four 4000 level courses.

A higher level course can replace a lower level course but the reverse is only allowed under extenuating circumstances. The students are encouraged to take more 3000 and 4000 level courses.

NOTE: Due to the curriculum change in Engineering, some 2000 level courses are offered during the third year, and some 3000 level courses are offered during the fourth year of studies.

**Suggested Courses**

Fall Courses
MECH-3212 Thermodynamics
GENG-2320 Engineering Software Fundamentals
GENG-2340 Electrical and Computing Fundamentals
GENG-2500 Engineering and the Environment
GENG-2220 Treatment of Experimental Data
MECH-3233 Fluid Mechanics I
GENG-3130 Engineering Economy
CIVL-3530 Structural Analysis I
CIVL-4820. Planning and Construction Management
MECH-4850 Welding Engineering
INDE-2010 Engineering Management and Globalization

Winter Courses
GENG-2190 Engineering Materials
MECH-2230 Advanced Engineering & Design
GENG-2220 Treatment of Experimental Data
GENG-4210 Engineering and Society
CIVL-2200 Civil Engineering Information Systems
INDE-3020 Health, Safety and Human Factors
INDE-3110 Computer Aided Design and Computer Aided Manufacturing
MECH-4212 Mechatronics (Laboratory Based)

Summer Courses
GENG-4210 Engineering and Society
GENG-4830 Engineering Report
CIVL-3650 Transportation and Traffic Engineering
MECH-3220 Fundamentals of Automotive Engineering
ENVE-4810 Sustainability and Engineering

## Bachelor of Engineering Technology (BEngTech) - Mechanical Stream

**Degree Requirements**

Total courses: A minimum 20 courses

Fall Courses
MECH-3212 Thermodynamics
GENG-2220 Treatment of Experimental Data
GENG-2320 Engineering Software Fundamentals
MECH-3233 Fluid Mechanics 1 (or CIVL-3510 Fluid Mechanics)
GENG-2500 Engineering & the Environment

Winter Courses
GENG-2180 Mechanics of Deformable Bodies
GENG-2200 Numerical Analysis for Engineering
MECH-2230 Advanced Engineering & Design
GENG-2190 Engineering Materials
1 course from INDE-3020 Health, Safety, & Human Factors, INDE-3270 Product Quality & Reliability, INDE-3110 CAD/CAM, CIVL-4720 Hydraulics

Summer Courses
MECH-3217 Applied Thermodynamics
MECH-4228 Sustainability in Engineering
MECH-4255 Environmental Effects & Control of Noise
GENG-4210 Engineering and Society
1 course from MECH-3224 Engineering Measurements, MECH-4259 Computer Aided Engineering, MECH-3670 Aerospace Engineering Fundamentals, MECH-3430 Automotive Engineering Fundamentals, MECH-3830 Materials and their Properties

Fall Courses

GENG-3130 Engineering Economics
INDE-3210 Manufacturing Process Design
MECH-3211 Stress Analysis (or CIVL-3520 Stress Analysis)
2 courses from INDE-3150 Product & Process Design, INDE-2010 Management and Globalization, INDE-4280 Facilities Design and Logistics, MECH-2210 Dynamics, MECH-4850 Welding Engineering

## Bachelor of Engineering Technology (BEngTech) - Civil Stream

**Degree Requirements**

Total courses: A minimum 20 courses as follows:

Fall Courses
GENG-2220 Treatment of Experimental Data
GENG-2320 Engineering Software Fundamentals
GENG-2500 Engineering & the Environment
CIVL-3510 Fluid Mechanics (or MECH-3233 Fluid Mechanics I)
1 course from MECH-2210 Dynamics, INDE-2010 Management and Globalization, GENG-1110 Engineering Mechanics I

Winter Courses
GENG-2180 Mechanics of Deformable Bodies
CIVL-2200 Civil Engineering Information Systems
CIVL-2190 Materials in Civil and Environmental Eng.
GENG-4210 Engineering & Society
1 course from ENVE-3630 Water and Wastewater treatment, ENVE-4710 Water Distribution and Wastewater Coll. Sys., CIVL-4720 Hydraulics, INDE-3020 Health, Safety, & Human Factors

Summer Courses
GENG-1190 Technical Communication
ENVE-4810 Sustainability in Engineering
MECH-4255 Environmental Effects & Control of Noise
2 courses from CIVL-3650 Transportation and Traffic Engineering, CIVL-4820 Planning and Construction Management, CIVL-4810 Highway Design and Construction, ENVE-3620 Air Pollution Control

Fall Courses
GENG-3130 Engineering Economics
CIVL-3520 Stress Analysis
CIVL-3540 Concrete Design
CIVL-3530 Structural Analysis
1 course from CIVL-3550 Geotechnical Engineering I, MECH-3220 Fluid Mechanics II

## Bachelor of Engineering Technology (BEngTech) - Mechatronics Stream

**Degree Requirements**

Total courses: 15 courses as follows:

GENG-3130. Engineering Economics
GENG-3300. Applied Engineering Mathematics
GENG-3400. Mechatronic System Design and Project
GENG-3500. Signals and Systems Analysis
GENG-4300. Intelligent and Digital Manufacturing
GENG-4400. Energy Conversion Systems
GENG-4500. Artificial Intelligence and Machine Learning
GENG-4600. Introduction to Robotics
GENG-4800. Capstone Mechatronics
ELEC-4100. Directed studies I (Engineering Project Management)
ELEC-4100. Directed Studies I (Industrial Control Systems)
ELEC-4490. Sensor and Vision Systems
MECH-3221. Control Theory
MECH-3224. Engineering Measurements
MECH-4212. Mechatronics

# FACULTY OF ENGINEERING GENERAL COURSES

**GENG-1110. Engineering Mechanics I**
Statics of particles and rigid bodies; trusses, frames, machines; centroids and centres of gravity; friction. (3 lecture, 2 tutorial hours a week.)

**GENG-1180. Engineering and the Profession**
The Engineering and the Profession course is an introductory professional course for all Engineering students. The students will be introduced to and learn about various professional and academic topics, and may include but are not limited to: differences and similarities between the various engineering disciplines; academic performance, expectations, and procedures; strategies for academic success; extracurricular student opportunities; important career development issues; academic integrity and ethical considerations; sustainability considerations; and public health and safety responsibilities; and how engineering is broadly related to our society. The fundamentals of technical communications will be introduced, focusing on common technical writing needs, such as grammar, formatting, and style, as well as basic writing forms, such as memos and short documents. Additional topics may include the basics of common engineering measurements, technical principles and approaches, business and legal practices. (3 lectures hours a week.)

**GENG-1190. Technical Communications**
The Technical Communications course focuses on teaching Engineering students effective oral and written communication techniques and approaches to improve their clarity and comprehensiveness when communicating to a variety of audiences. The topics covered may include but are not limited to: graphical communications, informative presentations; persuasive presentations; the use of visual aids for conveying technical/engineering information when speaking; resumes and job search communications; technical writing styles and formatting; information gathering and analysis; literature research techniques; topic development; summaries and abstracts; the use of visual tools such as graphs, figures, and tables; research documentation and referencing; developing and documenting instructions and procedures; proposals and technical reports. Ethical and legal issues in communications, such as plagiarism, will also be covered. Topics for discussion, assignments, and skills

development activities may include issues and aspects taught in GENG-1180 or other relevant subjects. In addition, students will continue to receive periodic communications relevant to their academic and professional development.

**GENG-1200. Engineering Thermofluids**
Introductory thermodynamics, fluid mechanics, and heat transfer. Terminology and units; sources of and types of energy and their interchange; types of fluid flow and heat transfer; physical and thermal properties of fluids. Solution of basic problems using laws of thermofluids; exploration of common thermofluid systems. Includes demonstrations and laboratory-based experiments. (Prior knowledge from GENG-1110 or PHYS-1400 is recommended.) (3 lecture, 2 tutorial/laboratory hours per week)

**GENG-1330. Engineering and Design**
Introductory engineering design course. Visualization techniques, graphical communication using sketching, isometric drawings, orthographic projection, section views, auxiliary views and descriptive geometry. Drafting portfolio. Design portfolio consisting of open-ended problems: problem identification and formulation; analysis of the problem; problem solving techniques; graphical communication of the solution. Includes group work to develop personal, teamwork, leadership, and task completion skills. (3 lecture, 3 laboratory hours a week.)

**GENG-1980. Work Term**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course may not be allowed to remain in the co-op program.)

**GENG-2180. Mechanics of Deformable Bodies**
An introduction to stress, strain, and stress-strain relations. Internal stresses and bending moment, and deformation of members subjected to different types of external load including axial load, torsion, transverse load and eccentric load including axial load, torsion, transverse load and eccentric load. An introduction to statically indeterminate problems. (Prerequisites: GENG-1110 and MATH-1720.) (3 lecture hours, 3 laboratory/tutorial hours a week.)

**GENG-2190. Engineering Materials Fundamentals**
This course explains how the properties of solid materials are derived and are related to their basic crystallographic and electronic structures: Metals, ceramics, polymers, and electronic materials are covered. (3 lecture, 2 laboratory or tutorial hours a week.)

**GENG-2200. Numerical Analysis for Engineering**
Application of numerical methods to real-world engineering problems. Development of mathematical background for numerical techniques. Root finding; numerical linear algebra; curve fitting; numerical quadrature; numerical solution to ordinary differential equations. (Prerequisite: GENG-2320.) (3 lecture, 2 laboratory or tutorial hours a week.)

**GENG-2220. Engineering Treatment of Experimental Data**
Treatment of engineering data using the concepts of frequency distribution; measures of central tendency and dispersion. Probability; random variables; discrete and continuous distributions. Tests of hypotheses; estimation; goodness-of-fit test; linear regression and correlation. Applications using

computers in engineering design problems, quality control, and manufacturing processes. (Prerequisite: MATH-1720.) (3 lecture hours, 1 tutorial hour a week.)

**GENG-2320. Engineering Software Fundamentals**
Fundamental engineering problems and the application of digital computers to analyze these problems. Introduction to additional programming languages and computing concepts, and emphasizing the use of MATLAB in engineering computations (2 lecture, 2 tutorial hours a week.)

**GENG-2340. Electrical and Computing Fundamentals**
Basic components of electric circuits; circuit laws and theorems; circuit analysis techniques; energy-storage elements; transient response of first and second-order circuits. (3 lecture, 3.0 laboratory/tutorial hours a week.) (Credit cannot be obtained for both GENG-2340 and ELEC-2140).

**GENG-2500. Engineering and the Environment**
Introduction to: pollutants, natural cycles, natural energy use, human population and consumption, common environmental problems, effects on human health. Dimensions of environmental contamination and flow. Pollution Prevention: waste audits, mass balances (open and closed systems, with and without chemical change), waste reduction, industrial ecology, and design for the environment. Conversion of energy and efficiency. Energy: world consumption, sources and their potential, environmental effects. Occupational health and safety. Environmental legislation. Sustainability. (Prerequisite: CHEM-1103.) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**GENG-2980. Work Term I**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course may not be allowed to remain in the co-op program.)

**GENG-3130. Engineering Economics**
Cost estimation, cost accounting, and cost control. Comparison of engineering alternatives by annual cost, present worth, and rate of return methods. Depreciation and taxes. Equipment replacement. (3 lecture, 1.5 tutorial hours a week.)

**GENG-3300. Applied Engineering Mathematics**
This course will cover first-order ordinary differential equations (ODEs), higher-order ODEs with constant coefficients, Cauchy-Euler equations, systems of linear ODEs, Laplace transforms, and applications to science and engineering. Application of ODE for analyzing the first, second, and higher order RLC electrical circuits will be studied. Mechanicals system analysis using ODE will be considered as another application. The rest of the course will cover complex numbers and applications in engineering. Specifically, phasor concept and analyzing of the steady state solution of electrical systems is considered as the main application. Then the frequency response will be introduced as the most important application.

**GENG-3400. Mechatronic System Design and Project**
This course will introduce concepts to integrate mechatronic components such as mechanical, electronic, optical and computer programming. Basic concepts and fundamental principles in mechatronic system-based design for automation, packaging and other applications will be reviewed.

Students will develop the knowledge and skills necessary to adopt an interdisciplinary approach to mechatronic system design. The hands-on laboratory activities will assist in developing the skills in designing and troubleshooting integrated mechatronic systems. Students will be organized into teams of three or four students, and each team will be proposing, conceptualizing, designing, building and demonstrating a significant hands-on mechatronic project. Through this course and team project the students will be prepared for the final Capstone Mechatronics.

**GENG-3500. Signals and Systems Analysis**
Discrete and Continuous-Time Signals and Systems, Discrete and Continuous-Time Linear Time-Invariant Systems, System Analysis in Time Domain, System Analysis in Frequency Domain, Convolution, Differential Equation Models, Fourier series, the Fourier Transform, the Laplace Transform and its Applications, Sampling of Systems.

**GENG-3980. Work Term II**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course may not be allowed to remain in the co-op program.)

**GENG-4210. Engineering and Society**
The technology-society relationship in a historical context; the nature of technological change and its consequences; the engineer's role in the control of technology and sustainable development; the responsibility of engineers for health and safety in the workplace, including OHSA, WHMIS. The development of the engineering profession; professional registration and the code of ethics; the duties and responsibilities of engineers; the engineer and the law. (Restricted to fourth-year students.) (3 lecture hours a week.)

**GENG-4300. Intelligent and Digital Manufacturing**
Manufacturing methods are shifting towards smart tools that are adaptive and self-aware. This course will introduce concepts and components for intelligent machining tools and interfacing them with digital manufacturing that will create the knowledge of Industry 4.0. Integration of smart sensors and controls, data processing, interconnected machines, digital link between design and production, analysis of manufacturing processes and supply chains will be discussed.

**GENG-4400. Energy Conversion Systems**
This course covers the fundamental principles of energy conservation processes. Design analysis, and construction of modern electromechanical systems, mechanical transmission systems, measurement of mechanical motion, and implementation of electromechanical coupling. DC and AC machinery fundamentals, electromechanical energy conversion, synchronous and induction motors, motion and controls of electromechanical systems will be discussed. Hands-on lab with modelling and simulation of multi-domain electromechanical systems. The course also introduces the use of modern energy conversion systems which may include conventional combustion based and Rankine power systems, energy systems for space applications, Autonomous vehicle applications, solar, wind, wave, thermoelectric, and geothermal energy systems.

**GENG-4500. Artificial Intelligence and Machine Learning**
This course is an introduction to the area of Artificial Intelligence and designing intelligent machines. Artificial intelligence aims to understand thinking and intelligence in ways that enable the construction

of computer systems that are able to reason in uncertain environments. Work in AI has supported the development of driverless cars and house-cleaning robots as well as systems that have defeated world chess champions and planned space explorations. The course has three core sections: search, representation, and uncertainty. Each section will provide a thorough understanding of major approaches, representational techniques and core algorithms. Students completing this course will have an in-depth understanding of three core areas of AI and the connections among them, and with such other key AI areas as machine learning, robotics, natural language processing and multi-agent systems.

**GENG-4600. Introduction to Robotics**
This course is an introduction to robotics modeling, dynamics, and control of robotic manipulators and industrial motion control. Students study Kinematics and Dynamics of Machines and will be exposed to principles of the geometry of motion, Uniform and non-uniform motion, linkage, gears, cams. Students will be exposed to the operation, programming and applications of a typical industrial robot using the actual and simulation tools. Hands-on activities will include manual teach programming, testing with simulation software and programming of advance movements.

**GENG-4800. Capstone Mechatronics**
A team-based Mechatronics Capstone Project will integrate and realize all the technical skills and hands-on experience the students have acquired throughout their program. Students will be organized into teams of three or four students, each team will be proposing, conceptualizing, designing, building and demonstrating a significant hands-on mechatronic project. Skills deployed during this project include: creative thinking, engineering design, documentation and implementation, team work, presentation, engineering standards and entrepreneurship.

**GENG-4830. Engineering Report**
The course prepares the students to present a problem, an observation, or idea, and to analyze it logically and draw conclusions or make recommendations. The course content includes acceptable technical content involving engineering analysis, design, development, or research. The course outcome includes generating a report to demonstrate a satisfactory level of writing and graphical skills, thus the quality of the presentation will be a factor in determining the acceptability of the report. The final report should be about 5,000 words long, or 25 double-spaced typewritten pages not including tables and graphs, and includes a signed statement that it was written by the candidate. (Open to BEngTech Majors)

**GENG-4980. Work Term III**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course may not be allowed to remain in the co-op program.)

# CIVIL AND ENVIRONMENTAL ENGINEERING

## PROGRAMS

### Bachelor of Applied Science in Civil Engineering

(For students who entered the program Fall 2008 to present)

Civil engineering comprises the conception, design, operation, and maintenance of buildings, railroads, waterways, bridges, harbours, tunnels, water supply and purification systems, sewage collection and treatment facilities, hydraulic structures, and waterpower developments. The Civil Engineering curriculum provides a diversity of applied course work and aids the student in selecting a major field of endeavour as well as a thorough background in the basic sciences and a broad understanding of the social sciences and humanities.

The Civil Engineering program provides modern and comprehensive laboratory facilities in the following fields: Strength of Materials, Soil Mechanics, Hydraulics, Structures, Concrete, Sanitary Engineering, and Surveying. The Canadian Society for Civil Engineering has an active student section on campus.

Note: The baccalaureate degree program in Civil Engineering is accredited by the Canadian Engineering Accreditation Board of the Canadian Council of Professional Engineers.

**Degree Requirements**

FIRST AND SECOND YEAR - Common to all Civil And Environmental Engineering Programs
Year 1 - Fall (Semester 1)
GENG-1110. Engineering Mechanics I
GENG-1330. Engineering and Design
MATH-1720. Differential Calculus
MATH-1270. Linear Algebra (Engineering)
GENG-1180. Engineering and the Profession

Year 1 - Winter (Semester 2)
GENG-1200. Engineering Thermofluids
MATH-1730. Integral Calculus
PHYS-1410. Introductory Physics II
CHEM-1103. Topics in General Chemistry
GENG-1190. Technical Communications

SECOND YEAR
Students must have completed at least eight (8) of their 1st year courses before being allowed to register into the 2nd year courses.

Year 2 - Fall Term (Semester 3)
GENG-2320. Engineering Software Fundamentals
GENG-2340. Electrical and Computing Fundamentals
GENG-2500. Engineering and the Environment
MECH-2210. Dynamics
MATH-2790. Differential Equations
1 course from outside Engineering, selected from the approved list

Year 2 - Winter Term (Semester 4)
GENG-2180. Mechanics of Deformable Bodies
GENG-2220. Treatment of Experimental Data
CIVL-2200. Civil Engineering Information Systems
CIVL-2190. Materials in Civil and Environmental Engineering
GENG-2200 Numerical Analysis for Engineering
MATH-2780. Vector Calculus

Year 2 - Summer Term (Co-op students only)
GENG-2980. (Work Term I)

THIRD YEAR
Students must have completed all the 1st year courses and at least nine (9) of their 2nd year courses before being allowed to register into the 3rd year courses.

Year 3 - Fall (Semester 5)
CIVL-3510. Fluid Mechanics
CIVL-3520. Stress Analysis
CIVL-3530. Structural Analysis
CIVL-3540. Concrete Design
CIVL-3550. Geotechnical Engineering I
GENG-3130. Engineering Economy

Year 3 - Winter Term (Co-op students Only)
GENG-3980. Work Term II

Year 3 - Summer (Semester 6)
CIVL-3610. Masonry and Concrete Design
CIVL-3620. Finite Element For Analysis and Design
CIVL-3630. Geotechnical Engineering II
CIVL-3640. Structural Steel Design
CIVL-3650. Transportation and Traffic Engineering

FOURTH YEAR
Students cannot register into any of the 4th year courses until they have completed nine (9) 3rd year Civil Engineering courses and all courses from 1st and 2nd year.

Year 4 – Fall Term (Co-op students only)
GENG-4980. Work Term III

Year 4 - Winter (Semester 7)

CIVL-4000. Capstone Design
ENVE-4710. Water Distribution and Wastewater Collection Systems
CIVL-4710. Hydrology
CIVL-4720. Hydraulics
ENVE-3630. Water and Wastewater Treatment
1 course from outside Engineering, selected from the approved list

Year 4 - Summer (Semester 8)
CIVL-4000 Capstone Design
CIVL-4810 Highway Design and Construction
GENG-4210 Engineering and Society
CIVL-4820 Plan and Construction Management
2 courses from CIVL-4910 Foundation Engineering, CIVL-4920 Advanced Topics in Structural Design, CIVL-4940 Transportation Systems Analysis, ENVE-4810 Sustainability in Engineering, ENVE-4820 Hydrogeological Engineering

## Bachelor of Applied Science in Environmental Engineering

(For students who entered the program Fall 2008 to present)

The program in Environmental Engineering is built upon a broad base of science and mathematics combined with an emphasis on engineering principles and design.

The rapid growth of industrial activities has produced many new problems related to environmental protection, resource conservation, and safety. The public has been aware of the risks involved in handling a wide range of hazardous and toxic materials by major incidents which have occurred in spite of improved design methods and operating techniques to overcome potential problems. Consequently, legislation is being formulated and enacted to control the release of toxic chemicals and pollutants into our environment. Environmental engineers are trained not only to solve problems of immediate concern, but also to develop practices and processes to systematically avoid their occurrence.

Environmental engineers have qualifications which will permit them to focus upon the transport, transformation and removal of contaminants in air, water, and soil, as well as the broader aspects of environmental planning and impact assessment.

Note: The baccalaureate degree program in Environmental Engineering is accredited by the Canadian Engineering Accreditation Board of the Canadian Council of Professional Engineers. With appropriate selection of electives, students would be qualified to apply to medical schools.

**Degree Requirements**

FIRST AND SECOND YEAR - Common to all Civil And Environmental Engineering Programs
Year 1 - Fall (Semester 1)
GENG-1110. Engineering Mechanics I
GENG-1330. Engineering and Design
MATH-1720. Differential Calculus
MATH-1270. Linear Algebra (Engineering)
GENG-1180. Engineering and the Profession

Year 1 - Winter (Semester 2)

GENG-1200. Engineering Thermofluids
MATH-1730. Integral Calculus
PHYS-1410. Introductory Physics II
CHEM-1103. Topics in General Chemistry
GENG-1190. Technical Communications

SECOND YEAR
Students must have completed at least eight (8) of their 1st year courses before being allowed to register into the 2nd year courses.

Year 2 - Fall Term (Semester 3)
GENG-2320. Engineering Software Fundamentals
GENG-2340. Electrical and Computing Fundamentals
GENG-2500. Engineering and the Environment
MECH-2210. Dynamics
MATH-2790. Differential Equations
1 course from outside Engineering, selected from the approved list

Year 2 - Winter Term (Semester 4)
GENG-2180. Mechanics of Deformable Bodies
GENG-2220. Treatment of Experimental Data
CIVL-2200. Civil Engineering Information Systems
CIVL-2190. Materials in Civil and Environmental Engineering
GENG-2200 Numerical Analysis for Engineering
MATH-2780. Vector Calculus

Year 2 - Summer Term (Co-op students only)
GENG-2980. (Work Term I)

THIRD YEAR
Students must have completed all the 1st year courses and at least nine (9) of their 2nd year courses before being allowed to register into the 3rd year courses.

Year 3 - Fall (Semester 5)
GENG-3130. Engineering Economy
CIVL-3510. Fluid Mechanics
CIVL-3520. Stress Analysis
CIVL-3550. Geotechnical Engineering I
ENVE-3510. Thermodynamics
ENVE-3520. Environmental Chemical Analysis

Year 3 – Winter (Semester 6)
BIOL-1111. Biological Diversity
CIVL-4710. Hydrology
ENVE-3610. Transport Phenomena
ENVE-3620. Air Pollution Control
ENVE-3630. Water/Wastewater Treatment
ENVE-3640. Materials Recovery/Waste Management

Year 3 - Summer Term (Co-op students Only)

GENG-3980. Work Term II

FOURTH YEAR
Students cannot register into any of the 4th year courses until they have completed nine (9) 3rd year Civil Engineering courses and all courses from 1st and 2nd year.

Year 4 – Fall Term (Co-op students only)
GENG-4980. Work Term III

Year 4 - Winter (Semester 7)
CIVL-4720. Hydraulics
ENVE-4000. Capstone Design
ENVE-4710. Water Dist./Wastewater Coll.
ENVE-4720. Chemical Reaction Engineering
ENVE-4730. Environmental Engineering Microbiology
1 course from outside Engineering, selected from the approved list

Year 4 - Summer (Semester 8)
GENG-4210. Engineering and Society
ENVE-4000. Capstone Design
ENVE-4810. Sustainability in Engineering
ENVE-4820. Hydrogeological Engineering
1 course from CIVL-3630. Geotechnical Engineering II, CIVL-3650. Transportation and Traffic Engineering, CIVL-4820. Planning and Construction Management, MECH-3224. Engineering Measurements, MECH-3228. Heat Transfer, MECH-4255. Environmental Effects and Control of Noise

## Honours Certificate in Environmental Engineering

**Admission Requirements**
A candidate for the Honours Certificate in Environmental Engineering shall hold the degree of (i) Bachelor of Applied Science (B.A.Sc.); (ii) a four-year B.Sc. (or BCS) degree in Chemistry, Biochemistry, Biotechnology, Earth Sciences or related Science fields. The program can be also taken concurrently by 3rd year and 4rth year students at the University of Windsor in Engineering and Science Fields.

**Certificate Requirements**

Total courses: Eight (8) courses [minimum of 6 upper year courses (Years 3 and 4), and up to 8 if the student has all the pre-requisite, or their equivalent, courses.

(a) eight (8) undergraduate courses, at the 3000 or 4000-level, as listed in the program requirements for the BASc in Environmental Engineering. Students with an undergraduate Bachelor of Science degree may take a minimum of two courses at the 2000-level.

NOTES:
The present pre-requisite requirements for 3rd and 4th year courses must be respected. All selected courses should not be from courses, subjects or topics that were part of the applicant's undergraduate studies.

If students from another program are missing pre-requisites courses critical for successful completion of the certificate, they are to choose from appropriate 2nd year courses. A maximum of 2 courses from the

pre-requisite courses will count towards the certificate, although more may be necessary depending on the student's background.

To qualify for the certificate, students will be required to successfully complete all 8 courses at the University of Windsor. No transfer credit will be considered for this certificate.

## Honours Certificate in Civil Engineering

**Admission Requirements**
A candidate for the Honours Certificate in Civil Engineering shall hold the degree of (i) Bachelor of Applied Science (B.A.Sc.); (ii) a four-year B.Sc. (or BCS) Science fields degree. The program can also be taken concurrently by the 3rd and 4th years University of Windsor students in Engineering and Science fields.

**Certificate Requirements**

Total courses: Eight (8) courses [minimum of 6 upper year courses (Years 3 and 4), and up to 8 if the student has all the pre-requisite, or their equivalent, courses].

(a) eight (8) undergraduate courses, at the 3000 or 4000-level, as listed in the program requirements for the BASc in Civil Engineering. Students with an undergraduate Bachelor of Science degree may take a minimum of two courses at the 2000-level.

NOTES:
The present pre-requisite requirements for 3rd and 4th year courses must be respected. All selected courses should not be from courses, subjects or topics that were part of the applicant's undergraduate studies.

If students from another program are missing pre-requisites courses critical for successful completion of the certificate, they are to choose from appropriate 2nd year courses. A maximum of 2 courses from the pre-requisite courses will count towards the certificate, although more may be necessary depending on the student's background.

To qualify for the certificate, students will be required to successfully complete all 8 courses at the University of Windsor. No transfer credit will be considered for this certificate.

## Bachelor of Applied Science in Civil Engineering for Graduates of St. Mary's University Diploma of Engineering

**Admission Requirements**
Graduates of St. Mary's University Diploma of Engineering minimum cumulative average of 60% may be admitted to this degree completion pathway.

**Degree Requirements**
The total course requirements and course sequence listed are for students who have met the minimum requirement of 60% for each course for which transfer credit has been assessed. Additional courses will need to be taken for students who have not qualified for the maximum allowable transfer credit.

Total courses: 25

YEAR 1

Fall Term
CIVL-3520 Stress Analysis
CIVL-3530 Structural Analysis
CIVL-3540 Concrete Design
CIVL-3550 Geotechnical Engineering I

Winter Term
GART-1510 Effective Writing II
CIVL-2190 Materials in Civil and Environmental Engineering
CIVL-2200 Civil Engineering Information Systems
GENG-2200 Analysis of Engineering Systems

Summer Term
CIVL-3610 Masonry and Concrete Design
CIVL-3620 Finite Element for Analysis and Design
CIVL-3630 Geotechnical Engineering II
CIVL-3640 Structural Steel Design
CIVL-3650 Transportation and Traffic Engineering

Students cannot register into any of the 4th year courses until they have completed nine (9) 3rd year Civil Engineering courses and all courses from 1st and 2nd year.

YEAR 2

Winter Term
CIVL-4000 Capstone Design Project
ENVE-4710 Water Distribution and Wastewater Collection Systems
CIVL-4710 Hydrology
CIVL-4720 Hydraulics
ENVE-3630 Water and Wastewater Treatment
1 course from outside Engineering, selected from the approved list

Summer Term
CIVL-4000 Capstone Design Project
CIVL-4810 Highway Design and Construction
GENG-4210 Engineering and Society
CIVL-4820 Planning and Construction Management
2 courses from CIVL-4910 Foundation Engineering, CIVL-4920 Advanced Topics in Structural Design, CIVL-4940 Transportation Systems Analysis, ENVE-4810 Sustainability in Engineering, ENVE-4820 Hydrogeological Engineering

## Articulation Agreement with St. Clair College, Civil Engineering Technology Program

**Table and Associated Conditions**

1. The articulation only applies to the Advanced Diploma in Civil Engineering Technology at St. Clair College.
2. When applicable, the university Challenge Exams must be completed with a 70% or better grade to secure a passing grade.
3. It is the responsibility of the student to arrange a Challenge Exam through the Department of Civil and Environmental Engineering.

| UW # | UW course title | St. Clair courses title |
|---|---|---|
| MATH-1720 | Differential Calculus | MTH203 Differential Calculus<br>MTH404 Integral Calculus<br>MTH700 Advanced Calculus |
| MATH-1270 | Linear Algebra | MTH158 Geometry<br>MTH505 Linear Algebra |
| MATH-1730 | Integral Calculus | MTH203 Differential Calculus<br>MTH404 Integral Calculus<br>MTH605 Calculus B |
| PHYS-1410 | Intro Physics II | PHY 163 Physics<br>MET 273 Analysis of Electric Circuits<br>(Need to have satisfied credit transfer for GENG-1110 at the University of Windsor) |
| GENG-1200 | Engineering Thermofluids | MET 521 Thermodynamics<br>MET541 Heat Transfer<br>MET617 Fluid Mechanics<br>PHY163 Physics |
| GENG-1110 | Engineering Mechanics I | CVL 205B Statics and Strength of Materials (plus a Challenge Exam) |
| GENG-1330 | Engineering and Design | CVL304B Drafting and Design<br>ARC104 Building CAD I<br>CVL405A Computer Applications<br>CVL306A Civil CAD |
| CIVL-2200 | Civil Engineering Information Systems | ARC204 Building CAD II<br>CVL105 Surveying<br>CVL505A Introduction to GIS<br>CVL604B Advanced Surveying |
| CIVL-3540 | Concrete Design | CVL410A Reinforced Concrete and Masonry Design<br>CVL404A Material Testing<br>(plus a Challenge Exam) |
| CIVL-3550 | Geotechnical Engineering I | CVL409 Soil Mechanics Introduction<br>CVL509 Soil Mechanics and Foundations |
| CIVL-4810 | Highway Design and Construction | CVL404A Material Testing<br>CVL508A Transportation Engineering Technology |
| CIVL-4820 | Planning and Construction Management | CVL305A Estimating & Specification<br>CVL608 Civil Estimation<br>CVL412 Construction Management |
| Non-tech | Arts/Social Science Course | Two non-Engineering courses at St. Clair counts for one non-Engineering course at the University of Windsor. The |

| UW # | UW course title | St. Clair courses title |
|---|---|---|
| | | CEAB requirements for content of approved courses from outside Engineering apply. |

St. Clair courses in the above table require a grade of at least “B” (70%) to be considered. University challenge exams must be completed with a 70% or better grade to secure a passing grade. It is the responsibility of the student to contact the Department to arrange for the Challenge examination.

# CIVIL AND ENVIRONMENTAL ENGINEERING COURSES

## CIVIL ENGINEERING

- Students must have completed at least eight (8) of their 1st year courses before being allowed to register into the 2nd year courses.
- Students must have completed all the 1st year courses and at least nine (9) of their 2nd year courses before being allowed to register into the 3rd year courses.
- Students cannot register into any of the 4th year courses until they have completed nine (9) 3rd year Civil Engineering courses and all courses from 1st and 2nd year.

**CIVL-2190. Materials in Civil and Environmental Engineering**
Fundamental materials in civil and environmental engineering. Concrete: Portland cement, hydration, mixture design, admixtures, mixing, placing and curing. Masonry: masonry units, mortar, grout, and plaster, types of bond and joints. Timber: Structure and types of wood. Iron and steel: cast iron, wrought iron, steel products, structural steel, reinforcing steel, welded wire fabrics. Wastewater and biosolids, Coagulant and adsorbents. Particulate air pollutants. Solid waste and hazardous waste.

**CIVL-2200. Civil Engineering Information Systems**
A course in information systems in civil engineering including Surveying, GPS, GIS and Graphic communication. Surveying: Distance measurements; Leveling theory of differential leveling, curvature and refraction, types of surveying levels, leveling rods, benchmark leveling, profile and cross-section leveling; Angles and Theodolites: reference directions for vertical angles, meridians, horizontal angles, Total Station: reference directions for vertical angles, meridians, horizontal angles; Transverses Survey and Computations: balancing field angles, meridians, bearings, azimuths, latitude departures; Curves: circular curves, vertical curves, spiral curves. Introduction to GPS and GIS; applications of GIS and GPS in surveying. Graphic communication using AutoCAD. Required field trip*. (one week; immediately following the final examination period.) *Note: There will be no additional fees for the field camp course.

**CIVL-3510. Fluid Mechanics**
Continuity, energy, momentum concepts. Boundary layers. Pipe flow including network installations. Rotodynamic pumps, system curves. Irrotational flow, flownets. Introduction to open channel flow: specific energy, flow regimes; uniform, (Prerequisite: GENG-1200 and MATH-2790.) (3 lecture, 2 laboratory hours a week.)

**CIVL-3520. Stress Analysis**
Distribution of internal loading in structural members; Deflection of beams; Moment areas theorems; Virtual work; Castigliano's theorems; Maxwell-Betti reciprocal theorem; Buckling of columns; and

Application of Energy methods in simple determinate structures. (Prerequisite: GENG-2180) (3 lecture and 2 laboratory/tutorial hours a week.)

**CIVL-3530. Structural Analysis**
Stability and determinacy of trusses and frames; analysis of statically determinate trusses and frames;Influence lines and moving loads. Statically indeterminate structures; force method; displacement method. (Prerequisite: GENG-2180.) (3 lecture, 2 laboratory hours a week.).

**CIVL-3540. Concrete Design**
Mechanics and behaviour of reinforced concrete components. Analysis and ultimate strength design of reinforced concrete beams and one-way slabs. Design for serviceability. Design for columns. Laboratory work includes design and testing of a concrete beam. (Prerequisite: GENG-2180) (3 lecture, 2 laboratory hours a week.)

**CIVL-3550. Geotechnical Engineering I**
Index properties of soils. Soil structure and classification of soils. Soil compaction and stabilization. Hydraulic principles of flow through soils, flow nets. Frost action in soils. Effective stresses. Compressibility, consolidation, and settlement analysis. Shear strength of soil. Kinematics and Stress distribution in soil. Stress analysis and stability of slopes (Prerequisite: GENG-2180.) (3 lecture, 3 laboratory hours a week.)

**CIVL-3610. Masonry and Concrete Design**
Analysis and design of columns, two-way slabs, and footings. Design of RC bearing walls and retaining walls. Design of masonry units for axial, flexure, and combined loads; Design of masonry beams, flexural and load bearing walls; columns, and pilasters; (Prerequisite: CIVL-3540) (3 lecture, 2 laboratory hours a week.)

**CIVL-3620. Finite Element for Analysis and Design**
Limit state design concepts; load factors and combinations; load specifications for structural design calculations. Introduction to the finite element method; computer-aided analysis of structures. (Prerequisite: CIVL-3530) (3 lecture, 2 tutorial hours a week.)

**CIVL-3630. Geotechnical Engineering II**
Earth pressure and design of retaining walls. Sheet-pile walls, braced and tie back excavations. Combined pressures. Soil bearing capacity. Soil exploration. Load induced pressures and settlements. Footings and eccentrically loaded foundations. Raft and pile foundations. Piles and pile driving, cofferdams and caissons. (Prerequisites: GENG-2180 and CIVL-3550) (3 lecture, 3 laboratory hours a week).

**CIVL-3640. Structural Steel Design**
Design of structural steel components subjected to axial tension and compression forces, shear force, bending moment, and combined bending and compression; Design of Composite beams -; Design of simple bolted and welded connections; Computer-aided design of steel structures. (Prerequisite: GENG-2180 and CIVL-3520.) (3 lecture, 2 tutorial hours a week.)

**CIVL-3650. Transportation and Traffic Engineering**
Characteristics of transportation systems; rail, highway, airway, waterway, and pipeline, urban transportation planning, analysis and prediction, traffic impacts studies, highway and intersection

capacity, characteristics of traffic flow, traffic control principles, queuing theory. (3 lecture, 2 laboratory hours a week.)

**CIVL-4000. Capstone Design Project**
A significant design experience which is based on knowledge and skills acquired in earlier course work. Engineering design integrates mathematics, basic science, engineering sciences and complementary studies in developing elements, systems and processes to meet specific needs while considering economic, health, safety, environmental, social or other pertinent factors. It involves a creative, iterative, and open-ended process Written and oral reports are required. (Prerequisite: consent of the supervisor and Department Head.) (2 hours lecture and 4 hours lab/week) (2 semester course)

**CIVL-4710. Hydrology**
Hydrologic Cycle, Weather. Precipitation: intensity, frequency, duration; Point and area estimates of precipitation; rational methods. Hydrologic abstractions. Runoff: storms, conceptual models, unit hydrograph principles, inflow design hydrograph. Streamflow: gauging, stage-discharge. Channel and Reservoir flood routing. Snowmelt. basics of hydrologic modeling; Probability applications and frequency analysis of precipitation and floods. Groundwater flow and water wells. Hydrologic design of urban and highway structures (Prerequisites: GENG-2220 and CIVL-3510 or consent of the instructor/ Department Head.) (3 lecture, 2 laboratory hours a week.)

**CIVL-4720. Hydraulics**
Review of basic concepts. Gradually and rapidly varied flows; surface profiles. Design of open channels with non-erodible and erodible beds; steady gradually varied flow computations in prismatic and non-prismatic channels; computer methods including HEC2. Design of hydraulic structures including gravity and arch dams, spillways, and outlet structures. (Prerequisite: CIVL-3510.) (3 lecture, 2 laboratory hours a week.)

**CIVL-4810. Highway Design and Construction**
Geometric design of highways and at-grade intersections; horizontal and vertical alignments, Cross--section elements, drainage; highway soil engineering including soil stabilization; bituminous materials; rigid and flexible pavement design; construction of pavements. (Prerequisite: GENG-2180 or CIVL-3520.) ( 3 lecture, 2 laboratory hours a week.)

**CIVL-4820. Planning and Construction Management**
The planning portion of this course will cover the elements of proper urban planning, the Planning Act, official plans, zoning by-laws, and subdivision design guidelines. The construction management portion will cover construction industry characteristics; types of business ownerships; organizational structures; drawings and specifications; estimating and bidding; types of construction contracts; insurance, bonding and claims; financial considerations; project cost controls and scheduling; project planning and administration; computer applications in construction industry, quality assurance, and construction safety. (3 lecture, 2 tutorial hours a week.)

## APPROVED CIVIL ENGINEERING COURSES TO FULFILL NON-SPECIFIED ENGINEERING COURSE REQUIREMENTS

**CIVL-4910. Foundation Engineering**
Footings and eccentrically loaded foundations. Raft and pile foundations. Piles and pile driving, cofferdams and caissons. Soil-structure interaction. Computer-aided analysis and design of foundations (Prerequisite: CIVL-3550.) ( 3 lecture hours, 2 laboratory/tutorial hour a week.)

**CIVL-4920. Advanced Topics in Structural Design**
Design of plate girders and composite structures. Introduction to prestressed concrete and wood design. (Prerequisite: CIVL-3610 and CIVL-3640.) (3 lecture, 2 tutorial hours a week.)

**CIVL-4940. Transportation Systems Analysis**
Socio-economic impacts on transportation, four-stage demand modeling system, use of models in transportation planning and forecasting, data and space issues, regression and discrete choice models; choice of modes, destinations and routes, passenger and freight travel, introduction to land use modeling. (Prerequisite: CIVL-3650) (3 lecture, 2 laboratory hours a week.)

## ENVIRONMENTAL ENGINEERING

- Students must have completed at least eight (8) of their 1st year courses before being allowed to register into the 2nd year courses.
- Students must have completed all the 1st year courses and at least nine (9) of their 2nd year courses before being allowed to register into the 3rd year courses.
- Students cannot register into any of the 4th year courses until they have completed nine (9) 3rd year Environmental Engineering courses and all courses from 1st and 2nd year.

**ENVE-3510. Thermodynamics**
Real gas behaviour and equations of state. The First and Second Laws of Thermodynamics and their applications. (3 lecture hours, 2 tutorial hours a week.)

**ENVE-3520. Environmental Chemical Analysis**
Environmental site assessment, statistical analysis of environmental data. Important characteristics of air, water, wastewater, and solid wastes. Basic concepts in quantitative analysis of physical, chemical, and biological parameters. Environmental site assessment, statistical analysis of environmental data. Instrumental methods of analysis for organic and inorganic contaminants in air, water, and soil. (Prerequisite: CHEM-1103.) (3 lecture, 2 tutorial/laboratory hours a week.)

**ENVE-3610. Transport Phenomena**
Introduction to the unifying theory of transport phenomena. Estimation of viscosities, thermal conductivities, and diffusivities for gases and liquids. Shell balances and some case studies of momentum, energy, and mass-transport. Mass transfer applications involving examples relevant to the environment. (3 lecture, 2 tutorial hours a week).

**ENVE-3620. Air Pollution Control**
Regulations and methods of source testing and monitoring. Nomenclature of organic compounds. Dispersion modelling. Air pollution control methods, designs, and their relative effectiveness. (Prerequisite: GENG-2500) (3 lecture, 2 lab/tutorial hours per week).

**ENVE-3630. Water and Wastewater Treatment**

Water and wastewater quality, guidelines and standards, flow fluctuation and design capacity. Design of different unit operations and processes in water and wastewater treatment. (Prerequisites: GENG-2500 and a course in fluid mechanics or hydraulics.) (3 lecture, 3 laboratory hours a week.)

**ENVE-3640. Materials Recovery and Waste Management**
The study, characterization, and analysis of municipal and industrial solid waste systems. Waste reduction, reuse, and recycling. Managing, collecting and transporting solid wastes. Waste reclamation and disposal methods, including landfiling, incineration, and composting. Waste management policies, regulations and facility siting issues. Various assignments will be integrated into a comprehensive project. (Prerequisite: GENG-2500.) (3 lecture hours).

**ENVE-4000. Capstone Design Project**
A significant design experience which is based on knowledge and skills acquired in earlier course work. Engineering design integrates mathematics, basic science, engineering sciences and complementary studies in developing elements, systems and processes to meet specific needs while considering economic, health, safety, environmental, social or other pertinent factors. Written and oral reports are required. (Prerequisite: consent of the supervisor and Department Head.) (2 lecture, 4 lab/tutorial hours per week (2 terms).

**ENVE-4710. Water Distribution and Wastewater Collection Systems**
Quantities of water and wastewater; development of surface and groundwater sources; design, construction, and maintenance of water distribution systems; design, construction, and maintenance of wastewater collection systems. (Prerequisite: CIVL-3510 Fluid Mechanics or equivalent.) (3 lecture, 2 tutorial/laboratory hours a week).

**ENVE-4720. Chemical Reaction Engineering**
Classification of chemical reactions and reactors, the rate equation, ideal reactor concept. Design equations for batch and flow (CSTR and PFR) reactors. Multiple reaction and reactor systems. Reactor design calculations under isothermal and non-isothermal conditions. (3 lecture, 2 tutorial hours a week).

**ENVE-4730. Environmental Engineering Microbiology**
Nature of inorganic and organic pollutants; biological approaches to environmental pollution problems; microorganisms; nutritional requirements and growth; metabolic pathways; energy generation and utilization in biological systems; response to changes in environment; pathogenic microorganisms and disinfection. (3 lecture hours a week, 1 tutorial/laboratory hour a week).

**ENVE-4810. Sustainability in Engineering**
Environmental impact assessment. Biophysical and socioeconomic impacts from engineering activities, processes, and projects. Human health and environmental risk concepts. Introduction to life cycle analysis, corporate/industrial environmental management, and environmental management systems. Students will undertake various project related and problem-based assignments. (3 lecture, 2 tutorial hours a week.) (Credit may only be obtained for one of MECH-4228, or ENVE-4810).

**ENVE-4820. Hydrogeological Engineering**
Fundamental physics and properties of groundwater flow in porous geologic material; anisotropy, heterogeneity. Introduction to the theory of groundwater flow; groundwater flow equations and patterns, recharge and discharge, flow nets, aquifer pumping, two-phase flow and well hydraulics.

Aquifer development and management. Introduction to chemical hydrogeology and non-aqueous phase liquids, Wellhead protection. Numerical modeling concepts. (Prerequisites: MATH-1720, MATH-1730, CIVL-3510 and CIVL-4710, or consent of instructor.) (3 lecture, 2 laboratory hours a week.)

# ELECTRICAL AND COMPUTER ENGINEERING

## Program Regulations and Information

Electrical Engineering encompasses a large number of exciting and diverse areas of study. Areas such as: electronics, computer systems and networks; communications; energy systems; computer-aided design; control systems, robotics and multimedia are only a few of the directions that Electrical Engineering students can choose after graduation. The program of study includes co-operative work terms for qualified students that are designed to enhance the knowledge and professionalism of the student.

The program of study encompasses courses outside Electrical Engineering and provides a professional education sufficiently fundamental in nature so as to allow the student to choose his or her specific area of professional specialization after graduation. This philosophy of education recognizes that the professional responsibilities of graduate engineers evolve throughout their careers. Student may select from the list of approved courses from within Engineering during the fourth year so as to meet their needs more effectively.

Graduates of this program are able to engage, from the outset of their career, in decision making with a much broader perspective than is possible when excessive specialization at the undergraduate level is permitted. The program of study also provides excellent preparation for those students who may wish to continue their formal education with graduate study and research.

Students must participate in a fourth-year team-based capstone design project that develops leadership skills and professionally maturity. Students are encouraged to participate in seminars and in other professional development activities as organized by the Department, as well as off-campus professional activities. The Institute of Electrical and Electronics Engineers (IEEE) has an active student chapter on campus which includes a Women in Engineering AffinityGroup (WIE).

Note: The baccalaureate degree program in Electrical Engineering is accredited by the Canadian Engineering Accreditation Board of the Canadian Council of Professional Engineers.

# PROGRAMS

## Bachelor of Applied Science in Electrical Engineering

OUTLINE OF STUDIES
Note: All students will follow the sequence of study terms shown in their program of study.

**Degree Requirements**

FIRST YEAR
Common to all Engineering programs

Fall Term
GENG-1110. Engineering Mechanics I
GENG-1330. Engineering and Design
MATH-1720. Differential Calculus
MATH-1270. Linear Algebra (Engineering)
GENG-1180. Engineering and the Profession

First Year
Students who wish to enter into the Electrical Engineering program will have to declare their major in this semester and register for the following courses.

Winter Term
GENG-1200. Engineering Thermofluids
MATH-1730. Integral Calculus
PHYS-1410. Intro. Physics II
CHEM-1103. Topics in General Chemistry
GENG-1190. Technical Communications

SECOND YEAR
Students must have completed at least eight (8) of their 1st year courses before being allowed to register into the 2nd year courses including all pre-requisite courses required for registration into the 2nd year courses.

Fall Term
GENG-2320. Engineering Software Fundamentals
GENG-2340. Electrical and Computing Fundamentals
MATH-2780. Vector Calculus
MATH-2790. Differential Equations
PHYS-2200. Oscillations, Waves, and Electromagnetism
One non-technical course from the Faculty of Engineering's approved list.

Winter Term
ELEC-2200. Circuit Analysis
ELEC-2170. Digital Logic Design I
ELEC-2240. Signals and Systems
ELEC-2260. Electronics I
ELEC-2280. EM Waves and Rad. System
GENG-2220. Treatment of Experimental Data .

Summer Term Co-op students only
GENG-2980. Work Term I

THIRD YEAR
Students must have completed all the 1st year courses and at least ten 10 of their 2nd year courses before being allowed to register into the 3rd year courses courses including all pre-requisite courses required for registration into the 3rd year courses.

*** Students opting for the Integrated BASc/MASc program:
The Faculty of Engineering offers a Bachelor's/Master's Integrated Engineering Degree program which allows students with outstanding academic ability to achieve both a B.A.Sc. and M.A.Sc. degree in a time period as short as five years. This program treats the educational process through the B.A.Sc. to the M.A.Sc. degree as a single coherent integrated whole, while ensuring that the requirements for both degrees are fully satisfied. This structured program represents a complementary alternative to the existing separate undergraduate and graduate degree programs.

Application to the Integrated B.A.Sc./M.A.Sc. can be made early in the Winter semester of the student's third year of undergraduate B.A.Sc. study. Normally, only applicants who have a cumulative average of at least 77%, and a semester average of 77% in the Fall semester of their third year of undergraduate B.A.Sc. study may be granted admission to the integrated program which confers conditional admission status to the M.A.Sc. program.

Fall Term
GENG-3130. Engrg. Economics
ELEC-3130. Electromech. Systems I
ELEC-3160. Electronics II
ELEC-3300. Dig. Logic Design II
ELEC-2110. Computer Aided Analysis

Winter Term
Co-op students only
GENG-3980. Work Term II

Summer Term
ELEC-2250. Physical Electronics
ELEC-3240. Control Systems I
ELEC-3270. Microprocessors
ELEC-3290. Analog Comm.
GENG-2500 Engineering and the Environment
One non-technical course from the Faculty of Engineering’s approved list.

FOURTH YEAR

Students cannot register into any of the 4th year courses until all Electrical Engineering courses from 1st , 2nd and 3rd year have been completed.
**4th year students are required to take a total of five courses in 4th year from: ELEC-4190. Digital Communications, ELEC-4330. Digital Integrated Circuits, ELEC-4340. Automotive Electronics, ELEC-4350. Microelectromech. Systems, ELEC-4360. Computer Communications, ELEC-4370. Intelligent Computing, ELEC-4380. Coding and Info. Theory, ELEC-4390. Multimedia Systems, ELEC-4400. Wireless Communications, ELEC-4430. Embedded Sys. Design , ELEC-4440. Analog Int. Circuit Design, ELEC-4450.

Power Electronics, ELEC-4470. Comp. Networks & Security, ELEC-4480. Digital Comp. Arch., ELEC-4490. Automotive Sensors, ELEC-4500. Power Systems I, ELEC-4600. Power Systems II.

Fall Term
Co-op students only
GENG-4980. Work Term III

Winter Term
Core Subjects - All Students
ELEC-4000. Capstone Design Project
ELEC-4310. Control Systems II
ELEC-4570. Fundamentals of Digital Signal Processing
**2 or 3 courses from ELEC-4190. Digital Communications, ELEC-4340. Automotive Electronics, ELEC-4360. Computer Communications, ELEC-4370. Intelligent Computing, ELEC-4430. Embedded Sys. Design, ELEC-4440. Analog Int. Circuit Design, ELEC-4450. Power Electronics, ELEC-4490. Automotive Sensors, ELEC-4500. Power Systems I.
[Students opting for the Integrated BASc/MASc program will need to register in two graduate courses spread over the Winter-Summer terms (one graduate course per term). Admission requirements for the Integrated BASc/MASC are shown in the third year course sequence.]

Summer Term
Core Subjects - All Students
GENG-4210. Engineering and Society
ELEC-4000. Capstone Design Project
ELEC-4320. EM waves and Rad. Sys. II
2 or 3 courses from ELEC-4330. Digital Integrated Circuits,ELEC-4350. Microelectromech. Systems, ELEC-4380. Coding and Info. Theory, ELEC-4390. Multimedia Systems, ELEC-4400. Wireless Communications, ELEC-4470. Comp. Networks & Security, ELEC-4480. Digital Comp. Arch., ELEC-4600. Power Systems II
[For the students who are registered in the Integrated BASc/MASc program see the conditions outlined in the 4th year Winter semester.]

Taking courses out of sequence can be allowed for special cases transfers, advanced credit, etc. at the discretion of the Department Head.

**Area of Specialization**
Upon request, the Department will provide students with letters indicating that they have completed an area of specialization based on the successful completion of the following cluster of courses:

Students who wish to specialize in:

Electronics, are recommended to include the following courses in their selection:

Winter:
ELEC-4440. Analog Integrated Circuit Design
ELEC-4450. Power Electronics

Summer:
ELEC-4330. Digital Integrated Circuits
ELEC-4350. Microelectromechanical Systems

Communications, are recommended to include the following courses in their selection:

Winter:
ELEC-4190. Digital Communications
ELEC-4360. Computer Communications

Summer:
ELEC-4380. Coding and Info. Theory
ELEC-4400. Wireless Communications

Automotive Electronics, are recommended to include the following courses in their selection:

Winter:
ELEC-4430. Embedded System Design
ELEC-4490. Automotive Sensors

Summer:
ELEC-4340. Automotive Electronics
ELEC-4350. Microelectromechanical Systems

Computer Engineering, are recommended to include the following courses in their selection:

Winter:
ELEC-4430. Embedded System Design
ELEC-4480. Digital Computer Architecture

Summer:
ELEC-4390. Multimedia Systems
ELEC-4470. Computer Networks and Security

## Honours Certificate in Electrical Engineering

**Admission Requirements**
A candidate for the Honours Certificate in Electrical Engineering shall hold the degree of Bachelor of Applied Science (B.A.Sc.) or a four-year B.Sc. (or BCS) degree in Computer Science or in Physics.

**Certificate Requirements**

Total courses: eight

(a) a minimum of 6 courses from ELEC-4190. Digital Communications, ELEC-4330. Digital Integrated Circuits, ELEC-4340. Automotive Electronics, ELEC-4350. Microelectromech. Systems, ELEC-4360. Computer Communications, ELEC-4370. Intelligent Computing, ELEC-4380. Coding and Info. Theory, ELEC-4390. Multimedia Systems, ELEC-4400. Wireless Communications, ELEC-4430. Embedded Sys. Design , ELEC-4440. Analog Int. Circuit Design, ELEC-4450. Power Electronics, ELEC-4470. Comp. Networks & Security, ELEC-4480. Digital Comp. Arch., ELEC-4490. Automotive Sensors, ELEC-4500. Power Systems I, ELEC-4600. Power Systems II.
(b) a maximum of 2 courses from our 3rd year and
(c) a maximum of 1 course from 2nd year

All selected courses should not be from courses, subjects or topics that were part of the applicant's undergraduate studies.

To qualify for the certificate, students will be required to successfully complete all 8 courses at the University of Windsor. No transfer credit will be considered for this certificate.

# ELECTRICAL AND COMPUTER ENGINEERING COURSES

Students must have completed at least nine (9) of their 1st year courses before being allowed to register into the 2nd year courses including all pre-requisite courses required for registration into the 2nd year courses.

**Note: Students must have completed at least eight (8) of their 1st year courses before being allowed to register into the 2nd year courses including all pre-requisite courses required for registration into the 2nd year courses.**

**ELEC-2110. Computer-Aided Analysis**
Object oriented programming in C++ covering most of the basic concepts. Development of Classes for matrix operations, complex numbers, etc. The rest of the course covers class development for a set of numerical schemes that include: Gauss-Jordan Method for solving Linear Simultaneous Algebraic Equations; Matrix inversion; Root finding using the Newton-Raphson and the half-interval methods; Lin-Bairstow method for Roots of Polynomials; Least-squares fitting; Numerical Integration using the Trapezoidal and Simpson's 1/3 rule; Solution of Ordinary Differential Equations of any order using Euler, Improved Euler and the fourth-order Runge-Kutta methods. (Corequisites: MATH-2780 and MATH-2790) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**ELEC-2170.Digital Logic Design I**
Boolean algebra and logic gates; simplification of Boolean functions; arithmetic operations; analysis and design of combinatorial logic circuits with SSI, MSI, and LSI; sequential logic components; registers; counters and memory units; analysis and synthesis of sequential synchronous and asynchronous networks. (Co-requisites: MATH-2780 and MATH-2790) (3 lecture, 2 Laboratory/tutorial hours or equivalent a week.)

**ELEC-2200. Circuit Analysis**
Sinusoidal steady-state analysis; complex power in single and three-phase systems; magnetically coupled circuits; circuit analysis in the s-domain; frequency response; two-port networks; and computer-aided analysis and design. (3 lecture, 3.0 laboratory/tutorial hours a week.) (Prerequisite: GENG-2340.) (Credit cannot be obtained for ELEC-2200 and ELEC-2140.)

**ELEC-2240. Signals and Systems**
Discrete and Continuous-Time Signals and Systems, Discrete and Continuous-Time Linear Time-Invariant Systems, System Analysis in Time Domain, System Analysis in Frequency Domain, Convolution, Differential Equation Models, Fourier series, the Fourier Transform, the Laplace Transform and it's Applications, Sampling of Systems. (Prerequisites: MATH-2780 and MATH-2790) (3 lecture, 1.5 laboratory hours and 1.5 tutorial hours a week.)

**ELEC-2250. Physical Electronics**
This course covers crystal structures. properties of semiconductor materials. Schrodinger wave equation. energy band theory. intrinsic and extrinsic semiconductors. charge carriers in

semiconductors. thermal equilibrium carrier concentrations. carrier transport mechanisms. non-equilibrium excess carriers in semiconductors, Metal-Oxide-Semiconductor Field-Effect Transistors (MOSFET), and Bipolar Junction Transistors (BJT). (Prerequisites: MATH-2780 and MATH-2790) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**ELEC-2260. Electronics I**
Classification of signals; introduction to diodes; rectifier circuits, Zener diode, limiting and clamping circuits; Op amp amplifier configurations, Op amp distortion, non ideal op amp performance; active filters, Tow-Thomas Biquad; Introduction to data converters; oscillators; super-diodes; pulse generation. (Prerequisites: MATH-2780 and MATH-2790) (3 lecture, 1.5 laboratory hours and 1.5 tutorial hours a week.)

**ELEC-2280. Electromagnetic Fields**
Static electric fields; Coulomb's law, Gauss's law and its applications; electric potential; dielectrics; boundary conditions; capacitance; resistance; steady electric currents, current density, boundary condition for current density, equation of continuity and Kirchhoff's law; power dissipation; static magnetic fields; Biot-Savart's law, Ampere's law; vector magnetic potential; magnetic dipole; magnetic circuits; boundary conditions for magnetic fields; magnetic forces and torque; induction current. (Prerequisites: MATH-2780 and MATH-2790) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**Note: Students must have completed all the 1st year courses and at least ten (10) of their 2nd year courses before being allowed to register in the 3rd year courses, including all pre-requisite courses required for registration in the 3rd year courses.**

**ELEC-3130.Electromechanical Systems**
Machinery principles; transformers; AC machinery fundamentals; synchronous generators; synchronous and induction motors; DC machinery fundamentals; DC motors; electromechanical energy conversion; three-phase concepts; special-purpose motors. (Prerequisites: MATH-2780, MATH-2790, ELEC-2250.) (3 lecture, 2 laboratory hours or equivalent a week.)

**ELEC-3160. Electronics II**
Analog amplification; small-signal modeling of analog circuits; differential-amplifier topology; BJT, MOSFET and JFET differential amplifiers; frequency response and time-dependent circuit behavior; feedback and stability; multistage and power amplifiers; active filters and oscillators; use of CAD in modern transistor circuit design. (Prerequisites: MATH-2780, MATH-2790 and ELEC-2260.) (3 lecture, 1.5 laboratory hours and 1 hour tutorial.)

**ELEC-3240. Control Systems I**
Transfer function and state-space model for linear time-invariant systems; linearization of nonlinear systems; controllability and observability; transient performance; stability; tracking performance; Proportional-Integral-Derivative (PID) control design; frequency response and root locus (Prerequisites: MATH-2780, MATH-2790, ELEC-3130.) (3 lecture, 1.5 laboratory hours and 1.5 tutorial hours a week.)

**ELEC-3270. Microprocessors**
Microprocessor systems (8 and 16 bit) and architecture; data representations, arithmetic units; memory structures; complex instruction set; accumulator, index, and memory reference instructions; addressing modes; stacks, subroutines, and other instructions; interrupts and timing; interfacing I/O devices and data converters; software development systems and assemblers; code implementation on

microcontrollers. (Prerequisites: MATH-2780, MATH-2790, ELEC-2170, ELEC-3160 and ELEC-3300.) (3 lecture, 3 laboratory/tutorial hours or equivalent a week.)

**ELEC-3290. Analog Communications**
Analog communication systems; information measure; signals and noise; Fourier transform and spectra; bandwidth of signals; analog modulation and demodulation systems; AM, FM, TV transmitters and receivers, detector circuits. (Prerequisites: MATH-2780, MATH-2790 and ELEC-3160.) (3 lecture, 1.5 laboratory hours and 1.5 tutorial hours a week.)

**ELEC-3300. Digital Logic Design II**
Contemporary digital system design; programmable logic; device architectures; reconfigurable computing; design entry methods; VHDL (Hardware Description Language); Electronic Design Automation (EDA) tools; combinational and sequential logic design, implementation using programmable logic devices. (Prerequisites: MATH-2780, MATH-2790 and ELEC-2170.) (3 lecture, 3 laboratory/tutorial hours or equivalent a week.)

**Note: Students cannot register in any of the 4th year courses until all Electrical Engineering courses from 1st, 2nd and 3rd year have been completed.**

**ELEC-4000. Capstone Design Project**
Team based design project satisfying the "CAPSTONE DESIGN PROJECT REQUIREMENTS", available from the Department of Electrical and Computer Engineering. Gives the student significant design experience and builds on the knowledge and skills acquired in earlier course work. Provides an exposure to teamwork so as to emulate a typical professional design environment. Computers are to be used both in the execution of the design methodology and the management of the design project. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (2 lecture/4 laboratory hours per week; that must be completed over two consecutive winter and summer terms.) 2 semester course.

**ELEC-4100. Directed Study I**
The objective of this course is to provide an opportunity for the exceptional fourth-year student with a demonstrated record of scholarship to work in close accord with a faculty member on a project of mutual interest. A written report and oral presentation are required for evaluation by the Department. A Directed Study course may be taken by an eligible student in place of a fourth-year unspecified course. (Prerequisite: an 11.0 GPA or better in the third year and permission of the Department Head.) (For the purposes of assigning grades and determining averages, 3 lecture hours per week have been allocated to the course.)

**ELEC-4190. Digital Communications**
Digital communication systems; discrete Fourier transform; sampling theory; A/D converters; digital modulation; time-division multiplexing; packet transmission; random processes and spectral analysis for digital systems; error probabilities; noise; introduction to information theory. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**ELEC-4200. Directed Study II**
The objective of this course is to provide an opportunity for the exceptional fourth-year student with a demonstrated record of scholarship to work in close accord with a faculty member on a project of mutual interest. A written report and oral presentation are required for evaluation. A Directed Study course may be taken by an eligible student in place of a fourth-year general option course.

(Prerequisite: an 11.0 GPA or better in the third year and permission of the Department Head.) (For the purposes of assigning grades and determining averages, 3 lecture hours per week have been allocated to the course.)

**ELEC-4310. Control Systems II**
Stability and performance analysis in frequency domain; lead-lag control design in frequency domain; elementary observer and control design in state space; z- transformation and z-plane analysis; direct and indirect discrete-time control design; implementation of digital control. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (3 lecture, 1.5 laboratory hours and 1.5 tutorial hours a week.)

**ELEC-4320. EM Waves and Radiating Systems**
Maxwell equations; time varying potentials; time harmonic fields; electromagnetic wave propagation; wave polarization; power and Poynting vector; transmission lines; Smith chart; rectangular waveguides; waveguide current and mode excitation; dipole antenna; small loop antennas; antenna characteristics; antenna arrays. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (3 lecture, 2 tutorial hours a week.)

**ELEC-4330. Digital Integrated Circuit Design**
Physics and modelling of MOSFETs; fabrication and layout of CMOS integrated circuits; the CMOS inverter: analysis and design; switching properties of MOSFETs; static logic gates; transmission gate logic circuits; dynamic logic circuit concepts; CMOS dynamic logic families; CMOS differential logic families; design methodologies and CAD tools; deep-submicron implementations. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**ELEC-4340. Automotive Electronics**
Proportional-Integral-Derivative (PID) controllers and limit cycle controllers; fundamentals of digital control of Spark-Ignition (SI) engine; MPC555 Motorola Power PC/dSPACE based SI engine control system; Motronic engine management system; automotive sensors and actuators; vehicle motion control including Antilock Braking System (ABS); Controller Area Network (CAN); Time-Triggered CAN (TTCAN); FlexRay. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**ELEC-4350. Microelectromechanical Systems**
MicroElectroMechanical System (MEMS) technology overview and design process; microfabrication and process integration; lumped element modeling; 3-D finite element modeling; energy conserving transducers (electrostatics); linear and nonlinear system dynamics; elasticity, stress, strain, material properties; structure analysis, beams, plates; MEMS sensing and actuation; material case studies; MEMS design methodology; device modeling. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**ELEC-4360. Computer Communications**
Protocols and architecture; data transmission; data encoding; interfacing; data link control; multiplexing, ISO reference model; wide-area networks; circuit switching; packet switching; ATM and frame relay; LAN technology and systems; internet protocols; inter-network operation; transport protocols; network security. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**ELEC-4370. Intelligent Computing**

Computing models of the human mind. Neural computing models and learning algorithms. Fuzzy set theory and fuzzy systems. Evolutionary computing. Applications of intelligent computing. (Prerequisites:completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year in an Engineering program or fourth year standing in a Computer Science program.) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**ELEC-4380. Coding and Information Theory**
Abstract algebra, number theory and complexity theory; simple cryptosystems; Shannon's theory; entropy and information theory; data encryption standard, RSA system and factoring; public-key cryptosystems; signature schemes; hash functions; key distribution and key agreement; identification schemes; authentication codes; access structures and general secret sharing; pseudo-random number generation; zero-knowledge proofs (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**ELEC-4390. Multimedia Systems**
Multimedia signals: Audio fundamentals; the Human visual system and perception; multimedia data acquisition. Multimedia signal compression: Transforms and subband decomposition; text representation; digital text, audio, image, and video compression. Multimedia signal processing: Digital audio, image, and video processing. Multimedia systems. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**ELEC-4400. Wireless Communications**
Introduction to wireless communications; cellular system design fundamentals; propagation path loss; fading and multi-path propagation; modulation techniques; diversity; coding and equalization; speech coding for wireless communications; multiple access networking, wireless communications protocols; satellite communication systems. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**ELEC-4430. Embedded System Design**
Embedded hardware and software systems; introduction to embedded systems; custom single-purpose processors, hardware design; general-purpose processors, software, design flow environment and tools, testing and debugging; standard single-purpose processors, peripherals, memory system design; interfacing issues, serial and parallel communication, bus standards, protocols and arbitration; exercises on real world applications; Laboratory implementation on modern Field Programmable Gate Arrays (FPGAs) and microcontrollers using associated Electronic Design Automation (EDA) tools. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (3 lecture, 3 laboratory hours a week.)

**ELEC-4440. Analog Integrated Circuit Design**
Bipolar and Metal-Oxide-Semiconductor Field-Effect Transistors (MOSFET) technology; device characterization; analog circuit modelling; current sinks, sources, and mirrors; differential pairs; current and voltage amplifiers; differential amplifiers; comparators; operational amplifiers; A/D and D/A converters; Integrated Circuit (IC) implementation with Electronic Design Automation (EDA) tools. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (3 lecture, 3 laboratory/tutorial hours or equivalent a week.)

**ELEC-4450. Power Electronics**

Power diodes; thyristors; power Metal-Oxide-Semiconductor Field-Effect Transistors (MOSFET); Insulated-Gate Bipolar Transistors (IGBT); controlled rectifiers; DC-DC converters; inverters; AC-AC converters; gate drive circuits; motor drives; r computer simulation of power electronics and motor drives. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**ELEC-4470. Computer Networks Security**
Introduction to computer networks security; cryptography; public-key and secret key encryption; encryption algorithms; network security mechanisms and techniques; security protocols; authentication and network security services; traditional and emerging Information Technology (IT) security; cyber-security. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**ELEC-4480. Digital Computer Architecture**
Computer Organization and architecture (32 bit); computer abstraction; reduced instruction set; high level to assembler level language translation; pipelinable instruction set architectures; speculation and branch prediction; instruction level parallelism; memory hierarchies, and virtual memory; secondary storage and I/O; multithreading, multicore, multiple CPU, and clustering; Graphics Processing Unit (GPU). (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (3 lecture, 3 laboratory/tutorial hours a week.)

**ELEC-4490. Sensor and Vision Systems**
Basics of sensors and transducers; sensor characteristics and applications; fundamentals of pressure, temperature, displacement and position sensors; accelerometer physics, strain gauges, and torque sensors; machine vision; image processing, image enhancement, edge and corner detectors; image segmentation techniques; image feature extraction and matching; colour models and processing; object recognition and classification; discussion on camera parameters and calibration; stereo vision, 3D range imaging techniques. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (3 lecture, 2 laboratory/tutorial hours a week.)

**ELEC-4500. Power Systems I**
Principles of operation, modeling and analysis of electric power systems; complex power, phasors and per-unit system; three-phase circuits; power transformer and generator modeling; transmission line parameters; steady-state operation of transmission lines; network matrices and power flow analysis; introduction to alternative energy sources. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**ELEC-4570. Fundamentals of Digital Signal Processing**
Discrete time signals and systems models and analysis; Z-transform; discrete Fourier transform (DFT); FFT algorithms; FIR filter design; IIR filter design; stability; realization; hardware and software implementations; digital signal processing applications. (Prerequisites: completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

**ELEC-4600. Power Systems II**

Advanced analytical tools; analysis of abnormal operation, numerical methods, stability and control; transient stability and voltage stability; control and monitoring of power systems; dynamics and control of multi-machine systems; symmetrical faults; symmetrical components; unsymmetrical faults; power system protection and relaying; economic dispatch; optimal power flow; numerical simulation tools in power systems. (Prerequisites: ELEC-4500 and completion of all Electrical Engineering courses from 1st year, 2nd year and 3rd year.) (3 lecture, 2 laboratory/tutorial hours or equivalent a week.)

# MECHANICAL, AUTOMOTIVE, AND MATERIALS ENGINEERING

## PROGRAM INFORMATION

Students may take a regular program in Mechanical Engineering or in Industrial Engineering. They may also specialize in Engineering Materials, Aerospace Engineering, Environmental Engineering, Automotive Engineering, or Industrial Engineering with Minor in Business Administration as described below.

The baccalaureate degree program in Mechanical Engineering is accredited by the Canadian Engineering Accreditation Board of the Canadian Council of Professional Engineers.Mechanical engineers are responsible for the design, construction, maintenance, and operation of machines and systems of machines. They create, plan, research, supervise, analyze, and generally act as the professionals of mechanical technology.

The mechanical engineer's knowledge and skills are needed in many industries, such as: heating, ventilating, and air conditioning; transportation; power generation and distribution; metal production and processing; manufacturing; and chemical and electrical equipment. Mechanical engineers commonly go beyond the limits of purely mechanical work. They are found at all levels of management in private industry and the public sector.

Students in the regular program specialize by selecting six courses from those offered in the areas of: air conditioning; dynamics and stress analysis; vibrations and noise; and gas dynamics and turbomachinery.

**AUTOMOTIVE ENGINEERING**
Students interested in the Automotive Option begin their specialization in the Summer term of their third year. The Option includes four required courses and two courses from within Engineering, selected from the approved list.

**ENVIRONMENTAL ENGINEERING**
Students interested in the Environmental Option begin their specialization in the Summer term of their third year. The Option includes five required courses and one course from within Engineering, selected from the approved list.

**ENGINEERING MATERIALS**
Students interested in the Engineering Materials Option begin their specialized studies in the Summer term of their third year. The Option includes a series of four required and two courses from within Engineering, selected from the approved list. Engineering Materials courses include modern developments in such areas as steels, casting, polymers, environmental degradation and novel processing techniques.

**INDUSTRIAL AND MANUFACTURING SYSTEMS ENGINEERING**
The Industrial and Manufacturing Systems Engineering program is unique and innovative. It provides students with a broad based curriculum of practical real world material that develops engineering skill for which demand exceeds supply in industry, manufacturing and business organizations world wide. Examples of manufacturing assignments held by our alumni include the areas of Product Engineering, Process Engineering, Plant/Facility Engineering, Tool Engineering, Industrial Engineering and Human Factors. Business organizations such as banks, railroads, petroleum, airlines, insurance companies, and hospitals are also employing our graduates to manage and improve performance of their operations. Our graduates are employed all over the world, in all levels of management and responsibilities. The department has a tradition of highly successful co-op internship education programs with local business and industry in Canada, the United States and the European Union. These activities expose students to applied aspects of their research programs and help them establish strong contacts with potential employers in relevant fields that include design and manufacturing at several local corporate headquarters such as Ford, General Motors, DaimlerChrysler, Toyota, Honda, VW Audi. The combination of real industry experience, cutting edge research and a curriculum that delivers the skill needed by employers provides exceptional value and our degree is valued by others. Enrolment in the programs is competitive and the department welcomes new student applicants who have a drive to succeed and are prepared to be challenged to top performance.

Students may enrol in a general Industrial Engineering program or a Minor in Business Administration. The first and second years are common for all students registered in the Industrial Engineering program. The baccalaureate degree program in Industrial Engineering is accredited by the Canadian Engineering Accreditation Board of the Canadian Council of Professional Engineers.

# PROGRAMS

## Bachelor of Applied Science in Industrial Engineering (General Program)

OUTLINE OF STUDIES
Note: All students will follow the sequence of study terms shown in their program of study.

**Degree Requirements**

FIRST YEAR - Common to all Industrial Engineering Programs

Fall Term
GENG-1110. Engineering Mechanics I
GENG-1330. Engineering and Design
MATH-1720. Differential Calculus
MATH-1270. Linear Algebra (Engineering)
GENG-1180. Engineering and the Profession

Winter Term
GENG-1200. Engineering Thermofluids
MATH-1730. Integral Calculus
PHYS-1410. Introductory Physics II
CHEM-1103. Topics in General Chemistry

GENG-1190. Technical Communications

SECOND YEAR

Fall Term
MATH-2790. Differential Equations
GENG-2320. Engineering Software Fundamentals
GENG-2340. Electrical and Computing Fundamentals
GENG-2500. Engineering and the Environment
INDE-2010. Engineering Management and Globalization
STEN-1000. Introduction to Business

Winter Term
MATH-2780. Vector Calculus
GENG-2220. Treatment of Experimental Data
GENG-2180. Mechanics of Deformable Bodies
GENG-2190. Introduction Engineering Materials
GENG-2200. Numerical Analysis for Engineering
ACCT-1510. Financial Accounting I

Summer Term - Co-op students only
GENG-2980. Work Term I

THIRD YEAR

Fall Term
INDE-3170. Systems Analysis and Design
INDE-3120. Operations Research I
GENG-3130. Engineering Economics
INDE-3150. Product and Process Design
INDE-3210. Manufacturing Process Design
1 course from outside Engineering, selected from the approved list

Winter Term
INDE-3110. Computer Aided Design and Computer Aided Manufacturing
INDE-3020. Health, Safety and Human Factors
INDE-3270. Product Quality and Reliability
INDE-3910 Supply Chain Engineering
MGMT-2430 Human Resource Management

Summer Term - Co-op students only
GENG-3980. Work Term II

FOURTH YEAR

Fall Term

INDE-4000. Capstone Industrial Design Projects
INDE-4130. Production Analysis and Logistics
INDE-4220. Simulation of Industrial Systems
INDE-4280. Facilities Design and Logistics
MECH-3221. Control Theory
1 course from outside Engineering, selected from the approved list

Winter Term
INDE-4000. Capstone Design Project
INDE-4120. Operations Research II
GENG-4210. Engineering and Society
INDE-4350. DOE Techniques for Manufacturing
INDE-4310 Flexible Manufacturing Systems

Summer Term - Co-op students only
GENG-4980. Work Term III

## Bachelor of Applied Science in Industrial Engineering - Minor in Business Administration Option

Students interested in a Minor in Business Administration are able to begin their specialized studies in the Fall term of the third year. This option includes a series of specialized curriculum that was specially prepared by the Odette School of Business for Industrial and Manufacturing Systems Engineering undergraduate students. The Minor in Business Administration is administered by the Odette School of Business.

OUTLINE OF STUDIES
Note: All students will follow the sequence of study terms shown in their program of study.

**Degree Requirements**

FIRST YEAR - Common to all Engineering Programs

Fall Term
GENG-1110. Engineering Mechanics I
GENG-1330. Engineering and Design
MATH-1720. Differential Calculus
MATH-1270. Linear Algebra (Engineering)
GENG-1180. Engineering and the Profession

Winter Term
GENG-1200. Engineering Thermofluids
MATH-1730. Integral Calculus
PHYS-1410. Intro. Physics II
CHEM-1103. Topics in General Chemistry
GENG-1190. Technical Communications

SECOND YEAR

Fall Term
MATH-2790. Differential Equations
GENG-2320. Engineering Software Fundamentals
GENG-2340. Electrical and Computing Fundamentals
GENG-2500. Engineering and the Environment
INDE-2010. Engineering Management and Globalization
STEN-1000. Introduction to Business

Winter Term
MATH-2780. Vector Calculus
GENG-2220. Treatment of Experimental Data
GENG-2180. Mechanics of Deformable Bodies
GENG-2190. Introduction Engineering Materials
GENG-2200. Numerical Analysis for Engineering
ACCT-1510. Financial Accounting

Summer Term - Co-op students only
GENG-2980. Work Term I

THIRD YEAR

Fall Term
INDE-3170. Systems Analysis and Design
INDE-3120. Operations Research I
GENG-3130. Engineering Economics
INDE-3150. Product and Process Design
INDE-3210. Manufacturing Process
ACCT-2550. Managerial Accounting

Winter Term
INDE-3110. Computer Aided Design and Computer Aided Manufacturing
INDE-3020. Health, Safety and Human Factors
INDE-3270. Product Quality and Reliability
INDE-3910. Supply Chain Engineering
MGMT-2430. Human Resource Management
1 course from outside Engineering, selected from the approved list

Summer Term - Co-op students only
GENG-3980. Work Term II

FOURTH YEAR

Fall Term
INDE-4000. Capstone Design Project
INDE-4130. Production Analysis and Logistics
INDE-4220. Simulation of Industrial Systems
INDE-4280. Facilities Design and Logistics
MECH-3221. Control Theory
MKTG-1310. Principles of Marketing

Winter Term
INDE-4000. Capstone Design Project
INDE-4120. Operations Research II
GENG-4210. Engineering and Society
INDE-4350. DOE Techniques for Manufacturing
INDE-4310. Flexible Manufacturing Systems
MSCI-2130. Management Information Systems

Summer Term - Co-op students only
GENG-4980. Work Term III

## Bachelor of Applied Science in Mechanical Engineering

OUTLINE OF STUDIES
Note: All students will follow the sequence of study terms shown in their program of study.

**Degree Requirements**

FIRST YEAR - Common to all Engineering Programs

Fall Term
MATH-1270. Linear Algebra (Engineering)
MATH-1720. Differential Calculus
GENG-1110. Engineering Mechanics I
GENG-1330. Engineering and Design
GENG-1180. Engineering and the Profession

Winter Term
CHEM-1103. Topics in General Chemistry
MATH-1730. Integral Calculus
PHYS-1410. Introductory Physics II
GENG-1200. Engineering Thermofluids
GENG-1190. Technical Communications

SECOND YEAR

Fall Term
MATH-2790. Differential Equations
GENG-2320. Engineering Software Fundamentals
GENG-2340. Electrical and Computing Fundamentals
MECH-2210. Dynamics
GENG-2500. Engineering and the Environment
INDE-2010. Engineering Management and Globalization

Winter Term
MATH-2780. Vector Calculus
GENG-2190. Introduction Engineering Materials
GENG-2220. Treatment of Experimental Data
GENG-2200. Numerical Analysis for Engineering
MECH-2230. Advanced Engineering and Design

GENG-2180. Mechanics of Deformable Bodies

Summer Term - Co-op students only
GENG-2980. Work Term I

THIRD YEAR

Fall Term
MECH-3212. Thermodynamics
MECH-3233. Fluid Mechanics I
GENG-3130. Engineering Economics
MECH-3211. Stress Analysis
MECH-3223. Machine Dynamics
1 course from outside Engineering, selected from the approved list

Winter Term - Co-op students only
GENG-3980. Work Term II

Summer Term
MECH-3217. Applied Thermodynamics
MECH-3220. Fluid Mechanics II
MECH-3228. Heat Transfer
MECH-4221. Machine Design
MECH-4259. Computer Aided Engineering - CAE
1 additional course*

FOURTH YEAR

Fall Term - Co-op students only
GENG-4980. Work Term III

Winter Term
MECH-4218. Thermofluid Systems Design
MECH-4200. Capstone Design
MECH-4211. Design for Failure Prevention
3 additional courses*

Summer Term
MECH-3221. Control Theory
MECH-3224. Engineering Measurements
GENG-4210. Engineering and Society
MECH-4200. Capstone Design
2 additional courses*

*The six additional courses must comply with the following rules:
·A minimum of two must be numbered MECH-32XX, 42XX
·A maximum of two may be numbered MECH-34XX, MECH-44XX
·A maximum of two may be numbered MECH-36XX, MECH-46XX
·A maximum of two may be numbered MECH-38XX, MECH-48XX
·A maximum of two may be taken from any program or Faculty outside of MECH-XXXX

# Bachelor of Applied Science in Mechanical Engineering with Aerospace Option

OUTLINE OF STUDIES
Note: All students will follow the sequence of study terms shown in their program of study.

**Degree Requirements**

FIRST YEAR - Common to all Engineering Programs

Fall Term
MATH-1270. Linear Algebra (Engineering)
MATH-1720. Differential Calculus
GENG-1110. Engineering Mechanics I
GENG-1330. Engineering and Design
GENG-1180. Engineering and the Profession

Winter Term
CHEM-1103. Topics in General Chemistry
MATH-1730. Integral Calculus
PHYS-1410. Introductory Physics II
GENG-1200. Engineering Thermofluids
GENG-1190. Technical Communications

SECOND YEAR

Fall Term
MATH-2790. Differential Equations
GENG-2320. Engineering Software Fundamentals
GENG-2340. Electrical and Computing Fundamentals
MECH-2210. Dynamics
GENG-2500. Engineering and the Environment
INDE-2010. Engineering Management and Globalization

Winter Term
MATH-2780. Vector Calculus
GENG-2190. Introduction Engineering Materials
GENG-2220. Treatment of Experimental Data
GENG-2200. Numerical Analysis for Engineering
MECH-2230. Advanced Engineering and Design
GENG-2180. Mechanics of Deformable Bodies

Summer Term - Co-op students only
GENG-2980. Work Term I

THIRD YEAR

Fall Term

MECH-3212. Thermodynamics
MECH-3233. Fluid Mechanics I
MECH-3211. Stress Analysis
GENG-3130. Engineering Economics
MECH-3223. Machine Dynamics
1 course from outside Engineering, selected from the approved list

Winter Term - Co-op students only
GENG-3980. Work Term II

Summer Term
MECH-3217. Applied Thermodynamics
MECH-3220. Fluid Mechanics II
MECH-4259. Computer Aided Engineering - CAE
MECH-4221. Machine Design
MECH-3228. Heat Transfer
MECH-3670. Aerospace Engineering Fundamentals

FOURTH YEAR

Fall Term - Co-op students only
GENG-4980. Work Term III

Winter Term
MECH-4200. Capstone Design (Aerospace)
MECH-4211. Design for Failure Prevention
MECH-4218. Thermofluid Systems Design
MECH-3671. Aerospace Materials and Manufacturing
MECH-4671. Aerodynamics and Performance
1 course from MECH-4834 Polymers, INDE-4280 Facilities Design & Logistics, INDE-3270 Product Quality and Reliability, MECH-3215 Vibrations, MECH-4255 Environmental Effects and Control of Noise, MECH-4250 Gas Dynamics, and Materials Joining and Aerospace Electronics and Systems (New Course - to be developed)

Summer Term
MECH-4200. Capstone Design (Aerospace)
MECH-3224. Engineering Measurements
MECH-3221. Control Theory
GENG-4210. Engineering and Society
MECH-4670. Aerospace Propulsion
MECH-4672. Flight Dynamics and Control of Unmanned Aerial Vehicles

## Bachelor of Applied Science in Mechanical Engineering with Automotive Option

OUTLINE OF STUDIES
Note: All students will follow the sequence of study terms shown in their program of study.

**Degree Requirements**

FIRST YEAR - Common to all Engineering Programs

Fall Term
MATH-1270. Linear Algebra (Engineering)
MATH-1720. Differential Calculus
GENG-1110. Engineering Mechanics I
GENG-1330. Engineering and Design
GENG-1180. Engineering and the Profession

Winter Term
CHEM-1103. Topics in General Chemistry
MATH-1730. Integral Calculus
PHYS-1410. Introductory Physics II
GENG-1200. Engineering Thermofluids
GENG-1190. Technical Communications

SECOND YEAR

Fall Term
MATH-2790. Differential Equations
GENG-2320. Engineering Software Fundamentals
GENG-2340. Electrical and Computing Fundamentals
MECH-2210. Dynamics
GENG-2500. Engineering and the Environment
INDE-2010. Engineering Management and Globalization

Winter Term
MATH-2780. Vector Calculus
GENG-2190. Introduction Engineering Materials
GENG-2220. Treatment of Experimental Data
GENG-2200. Numerical Analysis for Engineering
MECH-2230. Advanced Engineering and Design
GENG-2180. Mechanics of Deformable Bodies

Summer Term - Co-op students only
GENG-2980. Work Term I

THIRD YEAR

Fall Term
MECH-3212. Thermodynamics
MECH-3233. Fluid Mechanics I
MECH-3211. Stress Analysis
GENG-3130. Engineering Economics
MECH-3223. Machine Dynamics

1 course from outside Engineering, selected from the approved list

Winter Term - Co-op students only
GENG-3980. Work Term II

Summer Term
MECH-3217. Applied Thermodynamics
MECH-3220. Fluid Mechanics II
MECH-4259. Computer Aided Engineering - CAE
MECH-4221. Machine Design
MECH-3228. Heat Transfer
MECH-3430. Automotive Engineering Fundamentals

FOURTH YEAR

Fall Term - Co-op students only
GENG-4980. Work Term III

Winter Term
MECH-4218. Thermofluid Systems Design
MECH-4200. Capstone Design
MECH-4211. Design for Failure Prevention
MECH-4463. Vehicle Dynamics
MECH-4467. Vehicle Thermal Management
1 course with an automotive focus numbered MECH-XXXX or MATL-XXXX

Summer Term
MECH-3221. Control Theory
MECH-3224. Engineering Measurements
GENG-4210. Engineering and Society
MECH-4200. Capstone Design
MECH-4465. Internal Combustion Engines
1 course with an automotive focus numbered MECH-XXXX, MATL-XXXX

## Bachelor of Applied Science in Mechanical Engineering with Environmental Option

Note: All students will follow the sequence of study terms shown in their program of study.

**Degree Requirements**

FIRST YEAR - Common to all Engineering Programs

Fall Term
MATH-1270. Linear Algebra (Engineering)
MATH-1720. Differential Calculus
GENG-1110. Engineering Mechanics I
GENG-1330. Engineering and Design
GENG-1180. Engineering and the Profession

Winter Term
CHEM-1103. Topics in General Chemistry
MATH-1730. Integral Calculus
PHYS-1410. Introductory Physics II
GENG-1200. Engineering Thermofluids
GENG-1190. Technical Communications

SECOND YEAR

Fall Term
MATH-2790. Differential Equations
GENG-2320. Engineering Software Fundamentals
GENG-2340. Electrical and Computing Fundamentals
MECH-2210. Dynamics
GENG-2500. Engineering and the Environment
INDE-2010. Engineering Management and Globalization

Winter Term
MATH-2780. Vector Calculus
GENG-2190. Introduction Engineering Materials
GENG-2220. Treatment of Experimental Data
GENG-2200 Numerical Analysis for Engineering
MECH-2230. Advanced Engineering and Design
GENG-2180. Mechanics of Deformable Bodies

Summer Term - Co-op students only
GENG-2980. Work Term I

THIRD YEAR

Fall Term
MECH-3212. Thermodynamics
MECH-3233. Fluid Mechanics I
MECH-3211. Stress Analysis
GENG-3130. Engineering Economics
MECH-3223. Machine Dynamics
1 course from outside Engineering, selected from the approved list

Winter Term - Co-op students only
GENG-3980. Work Term II

Summer Term
MECH-3217. Applied Thermodynamics
MECH-3220. Fluid Mechanics II
MECH-4259. Computer Aided Engineering - CAE
MECH-4221. Machine Design
MECH-3228. Heat Transfer
MECH-4228. Sustainability in Engineering

FOURTH YEAR

Fall Term - Co-op students only
GENG-4980. Work Term III

Winter Term
MECH-4218. Thermofluid Systems Design
MECH-4200. Capstone Design
MECH-4211. Design for Failure Prevention
ENVE-3620. Air Pollution Control
ENVE-3630. Water and Wastewater Treatment
ENVE-3640. Materials Recovery and Waste Management

Summer Term
MECH-3221. Control Theory
MECH-3224. Engineering Measurements
GENG-4210. Engineering and Society
MECH-4200. Capstone Design
MECH-4255. Environmental Effects and Control of Noise
1 course with an environmental focus numbered CIVL-3XXX, CIVL-4XXX, MECH-3XXX, MECH-4XXX, ENVE-3XXX or ENVE-4XXX

## Bachelor of Applied Science in Mechanical Engineering with Materials Option

OUTLINE OF STUDIES
Note: All students will follow the sequence of study terms shown in their program of study.

**Degree Requirements**

FIRST YEAR - Common to all Engineering Programs

Fall Term
MATH-1270. Linear Algebra (Engineering)
MATH-1720. Differential Calculus
GENG-1110. Engineering Mechanics I
GENG-1330. Engineering and Design
GENG-1180. Engineering and the Profession

Winter Term
CHEM-1103. Topics in General Chemistry
MATH-1730. Integral Calculus
PHYS-1410. Introductory Physics II
GENG-1200. Engineering Thermofluids
GENG-1190. Technical Communication

SECOND YEAR

Fall Term
MATH-2790. Differential Equations

GENG-2320. Engineering Software Fundamentals
GENG-2340. Electrical and Computing Fundamentals
MECH-2210. Dynamics
GENG-2500. Engineering and the Environment
INDE-2010. Engineering Management and Globalization

Winter Term
MATH-2780. Vector Calculus
GENG-2190. Introduction Engineering Materials
GENG-2220. Treatment of Experimental Data
GENG-2200. Numerical Analysis for Engineering
MECH-2230. Advanced Engineering and Design
GENG-2180. Mechanics of Deformable Bodies

Summer Term - Co-op students only
GENG-2980. Work Term I

THIRD YEAR

Fall Term
MECH-3212. Thermodynamics
MECH-3233. Fluid Mechanics I
MECH-3211. Stress Analysis
GENG-3130. Engineering Economics
MECH-3223. Machine Dynamics
1 course from outside Engineering, selected from the approved list

Winter Term - Co-op students only
GENG-3980. Work Term II

Summer Term
MECH-3217. Applied Thermodynamics
MECH-3220. Fluid Mechanics II
MECH-4259. Computer Aided Engineering - CAE
MECH-4221. Machine Design
MECH-3228. Heat Transfer
MECH-3830. Materials and Properties

FOURTH YEAR

Fall Term - Co-op students only
GENG-4980. Work Term III

Winter Term
MECH-4218. Thermofluid Systems Design
MECH-4200. Capstone Design
MECH-4211. Design for Failure Prevention
MECH-4820. Ceramic Materials
MECH-4821. Deformation and Fracture
MECH-3831. Theromodynamics and Kinetics of Materials

Summer Term
MECH-3221. Control Theory
MECH-3224. Engineering Measurements
GENG-4210. Engineering and Society
MECH-4200. Capstone Design
2 courses numbered MECH-X8XX

## Bachelor of Applied Science in Mechanical Engineering Articulation Agreement with St. Mary's University Diploma of Engineering

**Admission Requirements**
Graduates of St. Mary's University Diploma of Engineering minimum cumulative average of 60% may be admitted to this degree completion pathway.

**Degree Requirements**
The total course requirements and course sequence listed are for students who have met the minimum requirement of 60% for each course for which transfer credit has been assessed. Additional courses will need to be taken for students who have not qualified for the maximum allowable transfer credit.

OUTLINE OF STUDIES
Note: All students will follow the sequence of study terms shown in their program of study.

Total courses: 25

YEAR 1

Fall Term
MECH-3212. Thermodynamics
MECH-3211. Stress Analysis
MECH-3223. Machine Dynamics
INDE-2010. Management and Globalization
1 additional course*

Winter Term
GART-1510. Effective Writing II
GENG-2190. Engineering Materials Fundamentals
MECH-2230. Advanced Engineering & Design
GENG-2200. Analysis of Engineering Systems
1 additional course*

Summer Term
MECH-3217. Applied Thermodynamics
MECH-3220. Fluid Mechanics II
MECH-3228. Heat Transfer
MECH-3224. Engineering Measurements
MECH-4221. Machine Design
MECH-4259. Computer Aided Engineering

Students must have completed all of the 1st year and 2nd year courses and at least ten of the twelve 3rd year courses before being allowed to register into the 4th year courses, including all prerequisite courses required for registration into the 4th year courses.

YEAR 2

Winter Term
MECH-4200. Capstone Design Project
MECH-4218. Thermofluid Systems Design
MECH-4211. Design for Failure Prevention
1 additional course*

Summer Term
MECH-4200. Capstone Design Project
MECH-3221. Control Theory
GENG-4210. Engineering & Society
2 additional courses

*A minimum of four out of the six additional courses must be numbered MECH-3XXX, MATL-3XXX, MECH-4XXX or MATL-4XXX. A maximum of two out of the six additional courses may be replaced with unrestricted electives. These unrestricted electives may be taken from any department or Faculty, but must have a minimum course weight of 3.0.

## Bachelor of Applied Science in Mechanical Engineering with Automotive Option Articulation Agreement with St. Mary's University Diploma of Engineering

**Admission Requirements**
Graduates of St. Mary’s University Diploma of Engineering minimum cumulative average of 60% may be admitted to this degree completion pathway.

**Degree Requirements**
The total course requirements and course sequence listed are for students who have met the minimum requirement of 60% for each course for which transfer credit has been assessed. Additional courses will need to be taken for students who have not qualified for the maximum allowable transfer credit.

Note: All students will follow the sequence of study terms shown in their program of study.

Total courses: 26

YEAR 1

Fall Term
MECH-3212. Thermodynamics
MECH-3211. Stress Analysis
MECH-3223. Machine Dynamics
INDE-2010. Management and Globalization

Winter Term
GENG-1190. Technical Communications

GENG-2190. Engineering Materials Fundamentals
MECH-2230. Advanced Engineering & Design
GENG-2200. Analysis of Engineering Systems

Summer Term
MECH-3217. Applied Thermodynamics
MECH-3220. Fluid Mechanics II
MECH-3228. Heat Transfer
MECH-4221. Machine Design
MECH-4259. Computer Aided Engineering
MECH-3430. Automotive Eng. Fundamentals

Students must have completed all of the 1st year and 2nd year courses and at least ten of the twelve 3rd year courses before being allowed to register into the 4th year courses, including all prerequisite courses required for registration into the 4th year courses.

YEAR 2

Winter Term
MECH-4200. Capstone Design Project
MECH-4218. Thermofluid Systems Design
MECH-4218. Design for Failure Prevention
MECH-4463. Vehicle Dynamics
MECH-4467. Vehicle Thermal Management
1 course with an automotive focus numbered MECH-XXXX, MATL-XXXX, MECH-3XXX or MECH-4XXX (see Undergraduate Handbook)

Summer Term
MECH-4200. Capstone Design Project
MECH-3221. Control Theory
MECH-3224. Engineering Measurements
GENG-4210. Engineering & Society
MECH-4465. Internal Combustion Engines
1 course with an automotive focus numbered MECH-XXXX, MATL-XXXX, MECH-3XXX, or MECH-4XXX (see Undergraduate Handbook)

## Bachelor of Applied Science in Mechanical Engineering with Environmental Option Articulation Agreement with St. Mary's University Diploma of Engineering

**Admission Requirements**
Graduates of St. Mary’s University Diploma of Engineering minimum cumulative average of 60% may be admitted to this degree completion pathway.

**Degree Requirements**
The total course requirements and course sequence listed are for students who have met the minimum requirement of 60% for each course for which transfer credit has been assessed. Additional courses will need to be taken for students who have not qualified for the maximum allowable transfer credit.

OUTLINE OF STUDIES
Note: All students will follow the sequence of study terms shown in their program of study.

Total courses: 26

YEAR 1

Fall Term
MECH-3212. Thermodynamics
MECH-3211. Stress Analysis
MECH-3223. Machine Dynamics
INDE-2010. Management and Globalization

Winter Term
GENG-1190. Technical Communications
GENG-2190. Engineering Materials Fundamentals
MECH-2230. Advanced Engineering & Design
GENG-2200. Analysis of Engineering Systems

Summer Term
MECH-3217. Applied Thermodynamics
MECH-3220. Fluid Mechanics II
MECH-3228. Heat Transfer
MECH-4228. Sustainability in Engineering
MECH-4221. Machine Design
MECH-4259. Computer Aided Engineering

Students must have completed all of the 1st year and 2nd year courses and at least ten of the twelve 3rd year courses before being allowed to register into the 4th year courses, including all prerequisite courses required for registration into the 4th year courses.

YEAR 2

Winter Term
MECH-4200. Capstone Design Project
MECH-4218. Thermofluid Systems Design
MECH-4211. Design for Failure Prevention
ENVE-3620. Air Pollution Control
ENVE-3630. Water and Wastewater Treatment
ENVE-3640. Materials Recovery and Waste Management

Summer Term
MECH-4200. Capstone Design Project
MECH-3221. Control Theory
GENG-4210. Engineering & Society
MECH-3224. Engineering Measurements
MECH-4255. Envir. Effects & Control of Noise
1 course with an environmental focus numbered CIVL-4XXX, MECH-4XXX or ENVE-4XXX (see Undergraduate Handbook)

# Bachelor of Applied Science in Mechanical Engineering with Materials Option Articulation Agreement with St. Mary's University Diploma of Engineering

**Admission Requirements**
Graduates of St. Mary's University Diploma of Engineering minimum cumulative average of 60% may be admitted to this degree completion pathway.

**Degree Requirements**
The total course requirements and course sequence listed are for students who have met the minimum requirement of 60% for each course for which transfer credit has been assessed. Additional courses will need to be taken for students who have not qualified for the maximum allowable transfer credit.

OUTLINE OF STUDIES
Note: All students will follow the sequence of study terms shown in their program of study.

Total courses: 26

YEAR 1

Fall Term
MECH-3212. Thermodynamics
MECH-3211. Stress Analysis
MECH-3223. Machine Dynamics
INDE-2010. Management and Globalization

Winter Term
GENG-1190. Technical Communications
GENG-2190. Engineering Materials Fundamentals
MECH-2230. Advanced Engineering & Design
GENG-2200. Analysis of Engineering Systems
1 course numbered MECH-XXXX or MATL-XXXX (see Undergraduate Handbook)

Summer Term
MECH-3217. Applied Thermodynamics
MECH-3220. Fluid Mechanics II
MECH-3228. Heat Transfer
MECH-3830. Materials and Their Properties
MECH-4221. Machine Design
MECH-4259. Computer Aided Engineering

Students must have completed all of the 1st year and 2nd year courses and at least ten of the twelve 3rd year courses before being allowed to register into the 4th year courses, including all prerequisite courses required for registration into the 4th year courses.

YEAR 2

Winter Term
MECH-4200. Capstone Design Project

MECH-4218. Thermofluid Systems Design
MECH-4211. Design for Failure Prevention
MECH-3831. Thermodynamics & Kinetics of Materials
MECH-4820. Ceramic Materials
MECH-4821. Deformation and Fracture

Summer Term
MECH-4200. Capstone Design Project
MECH-3221. Control Theory
GENG-4210. Engineering & Society
MECH-3224. Engineering Measurements
1 course numbered MECH-XXXX or MATL-XXXX (see Undergraduate Handbook)

## Honours Certificate in Industrial and Management Engineering

**Admission Requirements**
A candidate for the Honours Certificate in Industrial and Management Engineerings in Industrial Engineering shall hold the degree of (i) Bachelor of Applied Science (B.A.Sc.); (ii) a four-year B.Sc. (or BCS) degree in Computer Science or in Physics, or related Science fields, (iii) Bachelor of Commerce (B.Comm.), or (iv) BHK Honours.

**Certificate Requirements**

Total courses: Eight (8) courses

(a) a maximum of 5 courses from our 4th year (INDE-4XXX) courses and
(b) a maximum of 4 courses from our 3rd year (INDE-3XXX) and
(c) a maximum of 3 pre-requisite 2000-level courses, with the approval of the AAU Head and depending on the discipline of your undergraduate degree.

NOTES: No 1000-level courses will be permitted. The present pre-requisite requirements for 4th year courses must be respected. All selected courses should not be from courses, subjects or topics that were part of the applicant's undergraduate studies. Students from programs that do not have prerequisite general engineering courses will need to obtain them as described earlier in this application. If the student has taken the equivalent to required pre-requisite courses, this requirement may/will be waived.

If students from another program (students with degree from the Department of Electrical and Computer Engineering, degree in Computer Science and so forth) are missing pre-requisites courses critical for successful completion of the certificate, they are to choose from appropriate 2nd yr courses. A maximum of 3 courses from the pre-requisite courses will count towards the certificate, although more may be necessary depending on the student's background.

To qualify for the certificate, students will be required to successfully complete all 8 courses at the University of Windsor. No transfer credit will be considered for this certificate.

# MECHANICAL, AUTOMOTIVE, AND MATERIALS ENGINEERING COURSES

## MECHANICAL ENGINEERING COURSES

1. Students must have completed at least eight (8) of the ten 1st year courses before being allowed to register into 2nd year courses, including all prerequisite courses required for registration into 2nd year courses.
2. Students must have completed all 1st year courses and at least ten (10) of the twelve 2nd year courses before being allowed to register into 3rd year courses, including all prerequisite courses required for registration into 3rd year courses.
3. Students must have completed all 1st and 2nd year courses and at least ten of the twelve 3rd year courses before being allowed to register into 4th year courses, including all prerequisite courses required for registration into 4th year courses.
4. Taking courses out of sequence can be allowed at the discretion of the Department Head.

**MECH-2210. Dynamics**
Review of kinetics and kinematics of particles; work-energy and impulse-momentum methods; moments of inertia of areas and masses; kinematics of rigid bodies; plane motion; forces and accelerations for rigid bodies, energy and momentum methods for rigid bodies in plane motion. (Prerequisite: GENG-1110 or PHYS-1400) (3 lecture, 2 tutorial hours a week.)

**MECH-2230. Advanced Engineering and Design**
Computer aided design applications for engineering graphic communication. Solid modeling; orthographic projection and isometric drawing; sections and conventions; dimensioning and tolerancing. Design portfolio and project. (Prerequisite: GENG-1330) (4 lecture/laboratory hours a week.)

**MECH-3211. Stress Analysis**
Analysis of stresses and strains in simple mechanical structures subjected to combinations of axial, torsion and flexural loads; two-dimensional transformations of stress and strain components; yield and fracture criteria; deflection of statically determinate and indeterminate beams; buckling of columns with various end conditions; introduction to energy methods. (Prerequisite: GENG-2180.) (3 lecture, 2 laboratory/tutorial hours a week.)

**MECH-3212. Thermodynamics**
An introductory thermodynamics course in which fundamental principles are developed. Included are ideal gas relations, properties of pure substances, First Law for closed and steady flow systems, the Second Law with entropy relations, and an introduction to cycles. (3 lecture, 1.5 tutorial hours a week.) (Prerequisite: GENG-1200)

**MECH-3217. Applied Thermodynamics**
Ideal gas mixtures and psychrometrics. Reacting mixtures and combustion. Power cycles, refrigeration and heat pump cycles. (Prerequisite: MECH-3212.) (3 lecture, 2 laboratory/tutorial hours a week.)

**MECH-3220. Fluid Mechanics II**

Navier-Stokes equations and some exact solutions, external flows boundary layer over a flat plate, drag forces; turbulent flows in pipes and mixing length theory, flow measurement, compressible flows and introduction to potential flows. (Prerequisite: MECH-3233.) (3 lecture, 2 laboratory/tutorial hours a week.)

**MECH-3221. Control Theory**
Control system concepts, linear modelling and analysis of response and stability of physical systems, complex variables and Laplace transforms, frequency, and transient response analysis and performance specifications. (Prerequisites: MATH-2780 and MATH-2790.) (3 lecture hours, 1 tutorial hour a week.)

**MECH-3223. Machine Dynamics**
Linkages of flexible connectors, cams, toothed gearing, intermittent motion mechanisms, trains of mechanisms, static and dynamic analysis of mechanical flywheels, balancing of rotating and reciprocating masses. (Prerequisite: MECH-2210.) (3 lecture, 2 tutorial hours a week.)

**MECH-3224. Engineering Measurements**
Basic concepts in instrumentation; error analysis; instrumentation and measurement systems including sensors, transducer, signal conditioning and display; microcomputer-based data acquisition and analysis. (Prerequisite: GENG-2220 or STAT-2910.) (3 lecture, 1.5 laboratory/tutorial hours a week.)

**MECH-3228. Heat Transfer**
Introduction to the three heat transfer modes: conduction, convection, and radiation. Application of heat exchange equipment.(Prerequisite: MATH-2790 and semester 6 or higher standing.) (3 lecture, 2 laboratory hours a week.)

**MECH-3233. Fluid Mechanics I**
Fluid properties and basic concepts, fluid statics, equations of motion, one dimensional flows, flows in pipes in series, parallel and networks, dimensional analysis and similitude. (3 lecture hours, 1 tutorial hour a week.) (Prerequisite: GENG-1200)

**MECH-4200. Capstone Design**
Student design teams, operating within a "company" environment, utilize the broad range of their undergraduate experience in interdisciplinary projects selected to promote interaction between the mechanical, automotive, and materials programs. Design methodologies and team interaction simulate future professional practice. Project milestones include: a design proposal with cost analysis and scheduling, construction and commissioning of the designed appartus, and a final report and presentation having both global and detail completeness. (Prerequisite: Semester 7 or higher standing.) (2 semester course.)

**MECH-4211. Design for Failure Prevention**
Philosophy of machine design. Design factor/reliability relationships. Contemporary fatigue analysis, including low- and high-cycle, triaxial state of non-reversed stress and fatigue damage, with applications of selected mechanical elements. (Prerequisites: MECH-3211, MECH-3223, and Semester 7 or higher standing.) (3 lecture, 3 laboratory hours a week.)

**MECH-4218. Thermofluid Systems Design**
Evaluation of major thermofluid systems: HVACandR, power generation. Factors affecting design and selection of thermofluid devices: boilers, pumps and compressors, valves, piping systems, heat exchangers, evaporators, and turbines. Effect of device characteristics on process efficiency. Application

of optimization techniques to thermofluid systems. (Prerequisites: MECH-3212, MECH-3233, MECH-3228; and either MECH-3217 or MECH-3220.)

**MECH-4221. Machine Design**
Gearing and gear trains: spur, helical, worm, and bevel gears. Clutches, brakes, couplings, flywheels. Chain and belt drives. Design of shafting. Student-developed software to support mechanical design. (Prerequisite: MECH-3223 and MECH-3211.) (3 lecture, 3 laboratory hours a week.)

**MECH-4259. Computer Aided Engineering - CAE**
Three-dimensional graphics; fundamentals of finite element methods for problem solving in heat transfer, solids, and trusses using finite element computer programs. (Prerequisite: MECH-3211.) (2 lecture, 3 laboratory/tutorial hours a week.)

## MECHANICAL ENGINEERING APPROVED COURSES TO FULFILL NON-SPECIFIED ENGINEERING COURSE REQUIREMENTS

Some of these courses may not be offered in any given year.

**MECH-3215. Mechanical Vibrations**
Free, damped, and forced vibration of single and multi-degree of freedom systems with discrete masses. Exact and approximate methods of solution. Vibration isolation, vibration transducers, use of computers in vibration analysis. (Prerequisite: MECH-2210 and Semester 6 or higher standing.) (3 lecture, 2 tutorial hours a week.)

**MECH-4212. Mechatronics**
Review of electromechanical components. Practical application of microcontrollers in electromechanical systems. Use of infrared sensors, photoresistors, operational amplifiers, timers, servomotors, and analog/digital converters in mechatronics systems. A hands-on, laboratory-based course.(Prerequisite: Semester 7 or 8 standing for Mechanical Engineering students; other students require instructor approval.) (2 lecture, 3 laboratory/tutorial hours a week.)

**MECH-4228. Sustainability in Engineering**
Environmental impact assessment. Biophysical and socioeconomic impacts from engineering activities, processes, and projects. Human health and environmental risk concepts. Introduction to life cycle analysis, corporate/industrial environmental management, and environmental management systems. Students will undertake various project related and problem-based assignments. (Cross-listed with ENVE-4810.) (Prerequisite: GENG-2500 and Semester 6 or higher standing.) (3 lecture, 2 tutorial hours a week.)

**MECH-4240. Topics in Mechanical Engineering**
Selected topics of current interest in Mechanical Engineering. (Prerequisite: 4th-year Semester 7 or higher standing or permission of instructor.) (3 lecture, 1 laboratory hour a week.)

**MECH-4241. Directed Studies in Mechanical Engineering**
A special course of studies in Mechanical Engineering with content and direction approved by the Department Head. (Prerequisite: Semester 7 or higher standing with a 70% average or better.)

**MECH-4250. Gas Dynamics**
Basic concepts and one-dimensional flow equations of gas dynamics. Emphasis on isentropic flows in variable area ducts as well as Fanno, Rayleigh and Isothermal flows in constant area ducts. Normal shock waves, their appearance in various flow types, their application in nozzles and diffusers. Oblique shock and Prandtl Meyer expansion waves. Considerations in compressible flow measurements. (Prerequisite: MECH-3220.) (3 lecture, 1 laboratory/tutorial hours a week.)

**MECH-4251. Turbomachines**
Dimensional analysis and similitude; definitions of efficiency, two dimensional analysis of axial flow turbines and compressors, three dimensional flow, centrifugal pumps and compressors. (Prerequisite: MECH-3220.) (3 lecture, 1 laboratory/tutorial hours a week.)

**MECH-4253. Heating, Ventilation, and Air Conditioning**
Principles of environmental air quality and occupant comfort control. Psychrometric analysis of buildings as applied to common air distribution system designs. Current solar radiation estimation techniques and other energy transfer mechanisms; their application to cooling and heating load calculations. Analytical and numerical calculations. Computational tools. (Prerequisite: MECH-3217.) (3 lecture, 1 laboratory/tutorial hours a week.)

**MECH-4255. Environmental Effects and Control of Noise**
Physical properties of sound and noise, measurement of noise, noise control, hearing characteristics and environmental effects of noise. (Prerequisite: Semester 7 or higher standing.) (3 lecture, 1 tutorial/laboratory hours a week.)

## AEROSPACE ENGINEERING COURSES

**MECH-3670. Aerospace Engineering Fundamentals**
History of flight and aircraft evolution. Aircraft operating principles. Airfoil and wing aerodynamics. Aerospace propulsion systems (turbojets, turbofans, turboprops, and rockets). Lab on performance estimation and measurement for a turbojet engine. Aircraft design. Weight estimation. Aircraft systems. Aircraft materials and structures. Governance of aviation in North America. Design studies of aircraft or spacecraft and/or components thereof. (Prerequisites: MATH-2780, MATH-2790, semester 6 or higher standing; and Aerospace option students or permission of instructor.) (Co-requisites: MECH-3217, MECH-3220.)

**MECH-3671. Aerospace Materials and Manufacturing**
Properties and selection of metals, ceramics, polymers, and composite materials for aerospace applications. Structural and gas-turbine alloys. Machining, casting, forming, heat treating, and joining processes for original manufacture and repair. Manufacture and application of composites. In-service materials degradation. (Pre-requisites: MECH-3670.)

**MECH-4670. Aerospace Propulsion**
Application of gas dynamics and thermodynamics to aerospace engines. Analysis of engine cycles. Theory and design of propellers; turboprop engine analysis, Internal combustion and gas turbine engines. Component design for compressors, combustors, afterburners, exhaust nozzles. (Pre-requisites: MECH-3217, MECH-3220, MECH-3670, and semester 7 or higher standing.)

**MECH-4671. Aerodynamics and Performance**
Analysis of aircraft configurations. Viscous and compressibility effects. Manoeuvering loads and load factors; implications of manoeuverability on thrust requirements. Aircraft stability and control. (Pre-requisites: MECH-3220, MECH-3670, and Semester 7 or higher standing.)

**MECH-4672. Flight Dynamics and Control of Unmanned Aerial Vehicles**
Flight dynamics modelling for fixed-wing aircraft and rotorcraft. Low-Reynolds number considerations applicable to unmanned aerial vehicles (UAVs). Control theory and state-space control schemes. State-space controller design for UAVs. Lab(s) involving control of virtual and/or physical UAV models. (Pre-requisites: MECH-3670 and MECH-4671)

# AUTOMOTIVE ENGINEERING COURSES

**MECH-3430. Automotive Engineering Fundamentals**
Overview of primary automotive systems. Engine types and configurations, combustion, emission control, vehicle performance. Powertrain, suspension, frame and chassis. Materials and fabrication issues. Engine and vehicle dissection laboratory. Identification of industry issues and trends. (Prerequisite: Automotive Option students only and Semester 6 or higher standing.) (2 lecture, 3 laboratory hours a week.)

**MECH-4440. Topics in Automotive Engineering**
Selected topics of current interest in Automotive Engineering. (Prerequisite: Semester 7 or higher standing or permission of instructor.) (3 lecture, 1 laboratory hours a week.)

**MECH-4441. Directed Studies in Automotive Engineering**
A special course of studies in Automotive Engineering with content and direction approved by the Department Head. (Prerequisite: Semester 7 or higher standing with a 70% average or better.)

**MECH-4463. Vehicle Dynamics**
Classification and analysis of suspension types and geometry, powertrain layout, and ride quality. Tire modeling, stability, and numerical simulation of vehicle dynamics, including longitudinal and lateral vehicle response to driver inputs. Selected topics from industry experts. (Prerequisite: Semester 7 or higher standing.) (Co-requisite: MECH-3215 or MECH-3221.) (3 lecture, 1 tutorial hours a week.)

**MECH-4465. Internal Combustion Engines**
Mechanical design of vehicular internal combustion engines for different applications. Covers basic engine types and their operation from an energy conversion systems viewpoint, where the system needs to satisfy a number of requirements. These performance and operational requirements are derived from basic thermodynamics, operation of heat engine cycles, ignition and combustion processes, fuel system design, heat transfer, emissions formulation, available instrumentation and testing procedures. Environmental impact of vehicular designs on global pollution and government standards. Recent developments in energy-efficient and alternate fuel engines. (Prerequisites: MECH-3217, MECH-3220.) (3 lecture, 1 tutorial hours a week.)

**MECH-4467. Vehicle Thermal Management**
A study of controlled passenger compartment environment, and automotive thermal management hardware: radiator, heater core, air-conditioning components. Topics include the thermal comfort model of occupants in a vehicle, determination of heating and cooling loads, the practical application of refrigeration in automotive air-conditioning followed by design of equipment and HVAC system,

description and design of engine cooling system. (Prerequisites: MECH-3217, MECH-3228, MECH-3233.) (3 lecture, 1 laboratory hours a week.)

**MECH-4469. Diesel Engine Fundamentals**
Theory and practice of modern diesel engines. Diesel combustion cycle. Engine design aspects including fuel injection, turbocharging, and intercooling. Measurement and control of engine emissions. Engine performance testing. Future and advanced technologies including exhaust aftertreatment. (Prerequisites: MECH-3217 and Semester 6 or higher standing.)

## ENGINEERING MATERIALS COURSES

**MECH-3830. Materials and Their Properties**
The relationship of the engineering properties of materials to their atomic structure, bonding, crystal structure, imperfections and microstructure. The processing of materials to produce required structure and properties. Includes consideration of crystal structure determination, phase diagrams, diffusion, phase transformations, solidification, heat treatment and deformation. The laboratory is a term-long project designed to familiarize students with the use of materials-related equipment commonly found in industrial and research laboratories. (Prerequisite: GENG-2190 and Semester 6 or higher standing.) (3 lecture, 2 laboratory hours a week.)

**MECH-3831. Thermodynamics and Kinetics of Materials**
Thermodynamics: review of First and Second Laws, gas laws, humidity, thermochemistry, entropy, reversible and irreversible processes, equilibrium criteria, Gibbs free energy, activity and activity coefficient, solution thermodynamics, Raoult's and Henry's Laws, Gibbs-Duhem equation, alloy phase equilibria, free energy-composition diagrams, Ellingham diagrams. Kinetics: empirical treatment for homogeneous reaction rates, reaction order and specific rate constant, activation energy, Arrhenius' Law, energy distribution in reacting systems, heterogeneous reactions. Selected problems in materials processing to illustrate theory. (Prerequisites: MECH-3212 and Semester 7 or higher standing.) (3 lecture, 2 laboratory hours a week.)

**MECH-4820. Ceramic Materials**
Uses of traditional and advanced ceramics. Monolithic and composite ceramics. Comparison of ceramics with metals and alloys. Processing: raw material preparation, forming techniques, theory and practice of sintering, quality control. Properties: modulus of rupture, creep, corrosion, erosion, and electrical, magnetic and optical properties. (Prerequisite: Semester 7 or higher standing.) (3 lecture hours, 1 laboratory hours a week.)

**MECH-4821. Deformation and Fracture**
Introduction to basic plasticity theory and its application to common metal forming and metal cutting processes. Fracture mechanics and its applications in brittle and ductile fracture, creep and fatigue, for purposes of design and of analysis. (Prerequisite: MECH-3211 and Semester 7 or higher standing.) (3 lecture, 2 laboratory hours a week.)

**MECH-4832. Modern Steels**
Traditional and advanced high strength steels. Automotive sheet steels. Stainless and tool steels. Cast irons. Steel industry in Canada. Mechanical and microstructural characterization laboratories. (Prerequisite: Semester 7 or higher standing.) (3 lecture hours, 1 laboratory hour a week.)

**MECH-4834. Polymers**
The structure, properties, and processing of polymers (plastics) with emphasis on polymer forming processes, including extrusion, injection molding, blowmolding, and thermoforming, including tours of local industry. Fabrication and properties of composites with a polymer base. (Prerequisite: Semester 7 or higher standing.) (3 lecture hours, 1 laboratory hour a week.)

**MECH-4840. Topics in Materials Engineering**
Selected topics of current interest in Materials Engineering. (Prerequisites: Semester 7 or higher standing or permission of instructor.) (3 lecture, 1 laboratory hours a week.)

**MECH-4841. Directed Studies in Materials Engineering**
A special course of studies in Materials Engineering with content and direction approved by the Department Head. (Prerequisites: Semester 7 or higher standing with a 70% average or better.) (3 lecture hours, 1 laboratory hour a week.)

**MECH-4850. Welding Engineering**
Design and qualification of arc welding procedures to met the requirements of the ASME Boiler and Pressure Vessel Code. Arc welding processes, weld discontinuities, mechanical and non-destructive testing. Welding metallurgy, base and filler metal classification. Control of hydrogen-assisted cracking, preheat and postweld heat treatment. Fabrication issues. Canadian and international welding codes. (Prerequisite: Semester 7 or higher standing.) (3 lecture, 1 laboratory hours a week.)

# INDUSTRIAL AND MANUFACTURING SYSTEMS ENGINEERING COURSES

1. Students must have completed at least eight (8) of their 1st year courses before being allowed to register into the 2nd year courses including all pre-requisite courses required for registration into the 2nd year courses.
2. Students must have completed all their 1st year courses and at least ten (10) of their 2nd year courses before being allowed to register into the 3rd year Industrial Engineering courses including all pre-requisite courses required for registration into the 3rd year courses.
3. Students cannot register into any of the 4th year courses until all their courses from 1st, and 2nd year have been completed.
4. Students cannot register into 4th year courses if they have more than two (2) outstanding 3rd year mandatory courses.

**INDE-2010. Engineering Management and Globalization**
As globalization leads to an internationally integrated production and consumption of goods, cultural products, and services, local and national identities are challenged. Globalization creates both challenges and opportunities for companies providing goods or services. This course discusses the impact of globalization on the industrial and systems engineering discipline, in a multidisciplinary and multi national context. For engineers to competently operate in a globalized environment, they must understand the context, methodologies content and outcomes. Critical thinking, systems thinking, integration of technical and, professional and business acumen is necessary. Stability requires knowledge about understanding the complexity involved and learning to manage it. The course will also deal with: impact on industrial, production, and national systems. It should help prepare students and giving them skills for solving complex systems, and life-long learning and continuous improvement. (Prerequisites: GENG-1190 and GENG-1330) (3 lecture, 2 laboratory hours a week.)

**INDE-3020. Health, Safety and Human Factors**
Fundamentals of manufacturing safety and health are studied to provide manufacturing engineers with the knowledge to effectively incorporate design solutions for health and safety considerations in the workplace. Human capabilities and limitations in the industrial workplace are also assessed and taken into account when implementing design solutions. Topics will include: machine guards, confined space protocol, accident losses, prevention, liabilities and the Workplace Safety and Insurance Board by-laws, the Ontario Occupational Safety and Health Act, and related standards and codes. Also addressed are ergonomic issues such as the design of the workplace and environment, design of display and control systems and human factors in expanding technology. (Pre-requisite: GENG-2190) (3 lecture, 2 laboratory hours a week.)

**INDE-3110. Computer-Aided Design and Computer Aided Manufacturing**
This courses focuses on CAD/CAM from theory to practice. Basic and generic design principles and tools are introduced and the course material is complemented with significant hands on practice and engineering applications. Students will learn modelling strategies, and advanced computer aided engineering design, analysis, manufacturing and measurement tools. Topics include: Solid modelling, GD & T, tolerance stack ups, assembly modelling and mechanism analysis, process planning, CNC code generation, tool path optimization and principles of measurement.(3 lecture, 2 laboratory hours a week.)

**INDE-3120. Operations Research I**
Deterministic O. R. models. Linear programming-graphical and simplex methods, duality theory. Transportation, assignment and network models. Sensitivity analysis. Integer programming, branch-and-bound and cutting plane methods, mixed IP algorithms, 0/1 programming. Use of LP and IP computer software programs. Dynamic programming-principle of optimality, stagecoach problems, recursive relationship. (Prerequisite: MATH-1270.) (3 lecture, 2 laboratory hours a week.)

**INDE-3150. Product and Process Design**
Engineering design and work measurement principals are studied and applied to quantify and reduce the base engineered assembly content of automotive product designs. Non traditional methods for designing and building products for profit are studied with a goal of minimizing total assembly costs, manual labour and associated ergonomic injuries. Recent advances in manufacturing driven product designs in the automotive industry are presented to educate students on the contributions of product designs to the minimization of assembly costs, assembly labour content and the risk of injuries. (3 lecture and 2 lab hrs per week.)

**INDE-3170. Systems Analysis and Design**
Fundamental concepts, philosophies, and trends that provide the context of systems analysis and design methods. Information systems in terms of common building blocks: Data, Processes, and Interfaces. Basic concept of systems and systems engineering; system representation; system life cycle; system design process; and system design methods. Formulation of decision problems in engineering and management. Decision criteria. Strategies. Utility theory and decision functions. Information requirements of decision-making systems. Methods in systems analysis and design are applied to a wide variety of problem domains. (3 lecture hours and 2 laboratory/tutorial hours a week.)

**INDE-3210. Manufacturing Process Design**
This curriculum provides students with the basic science and engineering science background required to lead the design and manufacturing of products for profit in a globally competitive marketplace. Successful students will understand manufacturing in the broadest sense and emphasis is placed on the basic science of converting select raw materials into quality products anywhere on earth. Successful

graduates will know and be able to compare the difference between the mechanical behaviors of materials, select materials for manufacturing based on desirable physical properties and lead the design of the most important manufacturing processes used in industry. The manufacturing processes studied include the engineering science of: metal casting, rolling of metals, forging, extrusions and drawing of metals, sheet metal forming, and the forming and shaping of plastics parts. This course includes the laboratory analysis of the materials and the study of manufacturing processes used to produce automotive components. (3 lecture hours and 2 laboratory/tutorial hours a week.) (Prerequisite: GENG-2190, in addition to the program prerequisites.)

**INDE-3270. Product Quality and Reliability**
Impact of quality on manufacturing processes and product design. Methods and theories of statistical process control. Control charts for attributes and for variables. Process capability analysis and six-sigma method. Acceptance sampling and sampling standards. Reliability engineering and various failure models. Failure modes and effects analysis (FMEA). Taguchi method. Product design and quality function deployment (QFD). ISO 9000/ QS 9000 standards. Total Quality Management (TQM) method. (Prerequisite: GENG-2220.) (3 lecture, 2 tutorial hours a week.)

**INDE-3910. Supply Chain Engineering**
This course explores the basic concepts of managing the flow of materials in a typical enterprise supply chain. This includes the design and operation of manufacturing and warehousing facilities. Students will examine a complete overview of material and information flow, from internal and external suppliers, to and from the enterprise. Topics covered include: basic elements of the supply chain; planning and managing inventories in supply chains; just-in-time; enterprise resource planning; demand and aggregate planning; the analysis of logistics capabilities and transportation issues; and interrelationships among customer service. The impact of e-commerce on supply chain management is also included. The students have the opportunity to explore and use SAP and other software packages. (Pre-requisite: INDE-3120) (3 lecture, 2 laboratory hours a week.)

**INDE-4000. Capstone Industrial Design Projects**
Student teams, supervised by faculty, undertake a significant design project, which integrates mathematics, basic sciences, engineering sciences and complementary studies in making informed, thoughtful and creative decisions in devising a product, system, component, or process to meet specified needs. It is a creative open-ended and generative activity often iterative and multidisciplinary, subject to constraints which may be governed by corporate standards or applicable legislation to varying degrees depending upon the project. These constraints may relate to economic, health, safety, environmental, social or other pertinent factors. Course requirements include seminars, group meetings, oral presentations, and written reports. Faculty advisors and industrial preceptors will advise project groups and evaluate the progress and results of the design projects. (2 lecture hours and 4 laboratory hours a week.) (2 semester course.)

**INDE-4120. Operations Research II**
Probabilistic O.R. models. Markov chains and their properties; continuous-time Markov chains. Queuing theory; the role of Exponential and Poisson distributions. Applications of queuing theory in production systems. Markovian decision processes. Reliability. Renewal Theory. Use of computer software programs to solve optimization problems in queues and Markov Processes. (Prerequisite: GENG-2220.) (3 lecture, 2 laboratory hours a week.)

**INDE-4130. Production Analysis**
Analysis and control of production systems. Demand forecasting. Deterministic and stochastic inventory systems. Aggregate planning and master scheduling. Material requirement planning. Operations

sequencing and balancing. Job shop scheduling and control systems. Introduction to group technology and flexible manufacturing systems. (Prerequisite: INDE-3120.) (3 lecture and 2 laboratory hours per week.)

**INDE-4220. Simulation of Industrial Systems**
Introduction to Simulation-Random number and variate generation. Applications to queues, inventories and related models. Special purpose simulation languages-SIMAN/ARENA. Input data analysis and model validation. Simulation output analysis, design of experiments. Use of computer software. (Prerequisite: INDE-3270.) (3 lecture, 2 laboratory hours a week.)

**INDE-4280. Facilities Design and Logistics**
Approaches to establishing location and layout of space, equipment and services for industrial facilities. Criteria and data for generating & comparing alternatives. Computerized layout planning models, storage systems, AS/RS, Material handling, scope, definitions, and principles, unit load design, types of equipment, flow of material and line balancing. Environmental, human and cost considerations. Electrical and lighting systems and atmospheric systems. (Prerequisite: INDE-3150.) (3 lecture and 2 laboratory hours per week.)

**INDE-4300. Directed Study**
The student will undertake a literature survey and/or a laboratory project in consultation with the Department Head. A written report is mandatory and participation in the Industrial Engineering Program seminars may be part of the requirement. (Prerequisite: fourth-year standing with at least an 8.0 average.)

**INDE-4310. Flexible Manufacturing Systems**
Production Systems, Flexible Automation, Computer-Integrated Manufacturing, Group Technology And Cellular Manufacturing, Flexible Manufacturing Systems, Assembly Systems, Materials and tools handling, Robotics In Manufacturing, Principles Of Design For Manufacture, Process Planning And Concurrent Engineering, New Trends-Lean, Agile And Re-Configurable Manufacturing Systems. (Corequisite or prerequisite: INDE-4130 or equivalent.) (3 lecture, 2 tutorial/laboratory hours a week.

**INDE-4350. DOE Techniques for Manufacturing**
Use of designed experiments (DOE) in engineering product and process design processes. Experiments involving one factor; ANOVA; fixed, random, and mixed models; randomized blocks, Latin squares, and incomplete block designs. Factorial designs. Fractional designs. The Taguchi method and robust product/process design. Emphasis is put on industrial applications of various designs. (Prerequisite: INDE-3270.) (3 lecture, 2 laboratory hours a week.)

# FACULTY OF HUMAN KINETICS

## Kinesiology Program Information

The emphasis in the Bachelor of Human Kinetics degree is on providing students with an understanding of human physical activity in its broadest sense, rather than upon the details of professional practice and teaching methodologies.

A Bachelor of Human Kinetics degree may be earned either through a regular, eight-term program of study, or through the twelve-term Co-operative Education Program, which combines classroom and related work term experiences. In both programs, students follow a common core of Kinesiology and other courses and specialize in either Movement Science or Sport Management and Leadership.

**Human Kinetics "Core" Courses**
KINE-1000, KINE-2250, KINE-2690, KINE-2700.

Upon completion of the Human Kinetics "Core" requirements, students will select a major from Movement Science, Sport Management, or Sport Studies. This selection must be done through the Office of the Registrar prior to registration for the fifth semester, or at the end of the fourth semester.

**Thesis option**
The Undergraduate Thesis course provides undergraduate students with an opportunity to conduct a full year independent research project under the supervision of a faculty member, culminating in a written thesis. Students enrolled in the course will attend regular meetings throughout the fall and winter terms with their faculty supervisor. Components of the course will include: (a) establishing research questions and design; (b) research proposal document; (c) data collection and analysis; and (d) written and oral presentation of the outcomes of the research project. (Students will normally be in the final year of their degree and in Good Academic Standing. Approval of the supervising faculty member and Thesis Coordinator is required. Students who have already taken two (2) Individual Studies courses (KINE-4750), are not eligible for this course.)

**Co-op Option**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course cannot continue in the co-op program.)

**Internship Option**
A supervised, project-driven work experience in an approved setting. The experience will be expected to provide students with an enriched learning opportunity to integrate theory and practice. Internships are open to 4th year Kinesiology students from either major. (Offered on a Pass/Non-Pass basis.)

(Prerequisite: consent of the instructor is required at least three weeks prior to the end of the Fall or Winter term preceding the term in which enrollment is anticipated.) (9 hours a week.)

# Co-operative Education Program in Kinesiology

The Co-operative Education Program is designed for highly motivated students who wish to develop their skills, increase their knowledge, and gain career-related experience. Students must first be admitted to Kinesiology and are eligible to apply then for the twenty-five available co-op openings in the Winter of their first term of study.

The following criteria have been established to evaluate such applications:
1)academic achievement based on fall term marks;
2)previous volunteer and paid work experience;
3)an application form and resume;
4)an interview with the student.

Admission decisions will be made in the Winter term of the student's first year of study.

Withdrawal from the co-op program will be granted on an exception basis only as it must be determined that the student has no outstanding commitments to employers. Students who wish to withdraw must meet with a Co-op Coordinator and complete a withdrawal form. However, the only time a student may withdraw from an undergraduate co-op program without further co-op fee payment implications is by the 1st Friday of classes after their first co-op work term. Students who withdraw from Co-operative Education at any other time will be liable for paying the co-op fee for the term in which they are dropping and one additional term. This will help offset the costs of developing another student for placement.

In the interest of building solid partnerships with employers, students who have accepted a co-op employment offer (either by ranking a position in round 1 of the job competition or by accepting a position either verbally or in writing in later rounds) must honour that commitment. Therefore, once students have accepted an offer of employment for a work term, they will be considered registered in the appropriate work term course and must remain in the co-op program until they have completed their work term requirements. Failure to honour these commitments and/or to complete all work term requirements will lead to being required to withdraw from the co-op program and will result in a failing grade on his/her transcript for that work term.

Co-operative Program students must complete the course requirements for one of the two three Kinesiology majors (Movement Science, Sport Management, Sport Studies) and also register during their work terms in courses KINE-2990, KINE-3990, and KINE-4990 successively. Each work term will be graded on a Pass/Fail basis as a result of the successful completion of each of the following:

- Submission of learning objectives approved by the employer
- Work term assessment evaluation by the employer
- Final employer work term evaluation
- Work term report evaluation by faculty and by the employer
- Work term presentation evaluation by faculty

All Co-op positions must be full-time, paid, related to the degree program and approved by the University. The process of securing a co-op position is competitive. Co-op students will apply for work

opportunities as advertised by the Centre for Career Education using an Internet-based software program and employers will make interview and hiring decisions. Students are also encouraged to seek co-op employment outside of the advertised postings by completing a guided job search process facilitated by the Centre for Career Education.

A Co-operative Program fee is charge in each term beginning with the Winter term of Year 1. The fee is not a job-placement fee, but is levied to help defer the administrative costs associated with the program.

WORK/STUDY SEQUENCE

Option One

FIRST YEAR
Fall Term: Study term.
Winter Term: Study term.
Summer Term: Off.

SECOND YEAR
Fall Term: Study term.
Winter Term: Work term.
Summer Term: Study term.

THIRD YEAR
Fall Term: Work term.
Winter Term: Study term.
Summer Term: Work term or optional term.*

FOURTH YEAR
Fall Term: Study term.
Winter Term: Study term.
Summer Term: Work term or optional term.*

FIFTH YEAR
Fall Term: Study term.

*The requirement of a third work term may be fulfilled in the Summer of either the third or fourth year.

Option Two: Fast-Track

Students wishing to complete their co-op degree in Kinesiology may do so in four years. This requires careful planning and scheduling. Students wishing to "fast-track" through their co-op degree are advised to meet with the faculty contact for co-op in Human Kinetics to discuss a strategy.

# KINESIOLOGY PROGRAMS

## Bachelor of Human Kinetics (Honours Kinesiology - Movement Science)

Students selecting this major will be interested in entering the general field of science as it relates to human activity as teachers, physicians, chiropractors, physiotherapists, exercise consultants, sport and exercise psychology consultants, sport therapists, athletic trainers, ergonomic specialists in the biomechanics of movement, and human performance specialists in motor development and memory. This program is recognized by the Ontario Kinesiology Association. Those interested in graduate studies in Movement Science should select this major. Graduates are also qualified to enter graduate school or a Faculty of Education.

**Degree Requirements**

Total courses: forty.

(a) Human Kinetics Core: KINE-1000, KINE-2250, KINE-2690, KINE-2700.
(b) Movement Science Courses: KINE-1110, KINE-1650, KINE-1660, KINE-1800, KINE-2040, KINE-2100, KINE-2240, KINE-2600, KINE-2850; plus ten of KINE-3010, KINE-3020, KINE-3030, KINE-3060, KINE-3100, KINE-3330, KINE-3600, KINE-3610, KINE-3620, KINE-3700, KINE-4000, KINE-4040, KINE-4080, KINE-4080, KINE-4100, KINE-4530, KINE-4580, KINE-4600, KINE-4610, KINE-4620, KINE-4630, KINE-4640, KINE-4650, KINE-4660, KINE-4710, KINE-4750, KINE-4760, KINE-4770, KINE-4780*, KINE-4800, KINE-4850, KINE-4900, or KINE-4980; plus two of KINE-4910, KINE-4920, and KINE-4930.
(c) six courses from the Faculty of Engineering, the Faculty of Nursing, Department of Psychology, the Faculty of Science and/or the Faculty of Education (Minor in Organizational Learning and Teaching only).
(d) five courses from any area of study, excluding Kinesiology.
(e) two courses from any area of study, including 1000 or 2000 level courses from Kinesiology
(f) two courses from any area of study, including Practice Theory and Analysis (PTA) or 3000 level and above courses from Kinesiology

Of the eight courses in requirements (c) and (f), at least seven must be at the 2000 level or above.

[*KINE-4780 is a 6-credit course, and as such, students successfully completing KINE-4780 will be required to take only 8 of the other Movement Science courses listed after “plus ten” in section (b)]

## Bachelor of Human Kinetics (Honours Sport Management and Leadership)

Students completing this major will be interested in examining leisure from a social science perspective and/or preparing for employment opportunities related to the management and leadership of leisure, sport and physical activity programs. Graduates typically assume positions with government agencies, municipal recreation units, public and private sport organizations, public and private sport and recreation facilities, and amateur or professional sports organizations. Graduates also are prepared to enter graduate school or a Faculty of Education.

**Degree Requirements**

Total courses: forty.

(a) Human Kinetics Core: KINE-1000, KINE-2250, KINE-2690, KINE-2700
(b) Sport Management and Leadership Courses: KINE-1200, KINE-1330, KINE-1400, KINE-1500, KINE-1560, KINE-2450, KINE-2500, KINE-2520, KINE-2300, KINE-3400, KINE-4050, KINE-4330, KINE-4500; plus eight of KINE-3220, KINE-3330, KINE-3510, KINE-3550, KINE-4020, KINE- 4040, KINE- 4400, KINE-4510,

KINE-4520, KINE-4550, KINE-4560, KINE-4570, KINE-4590, KINE-4730, KINE-4750, KINE-4760, KINE-4770, KINE-4780*, KINE-4850, KINE-4890, and KINE-4980.
(c) six courses from the Faculty of Arts, Humanities and Social Sciences, the Odette School of Business, and/or the Faculty of Education (Minor in Organizational Learning and Teaching only) and/or Economics.
(d) five courses from any area of study, excluding Kinesiology.
(e) two courses from any area of study, including 1000 or 2000 level courses from Kinesiology.
(f) two courses from any area of study, including Practice Theory and Analysis (PTA) courses or 3000 level and above courses from Kinesiology

Of the eight courses in requirements (c) and (f), at least seven must be at the 2000 level or above.

[*KINE-4780 is a 6-credit course, and as such, students successfully completing KINE-4780 will be required to take only 10 of the other Sport Management courses listed in section (b)]

## Bachelor of Human Kinetics (Honours Sport Management and Leadership) for Graduates of Lambton College's Three-Year Sport and Recreation Management Program

**Admission Requirements**

A student may enter the Bachelor of Human Kinetics (Sport Management and Leadership major) program after completing the three-year Diploma in Sports and Recreation Management with a cumulative average equivalent to a 70% (B- or 3.0/4) or better. Students must have passed each of their respective College courses with a grade equivalent to a B- or better.

**Degree Requirements**

Total Courses: 20

a) Required Courses (Take all 13)
   - KINE-1330. Introduction to Sport Leadership
   - KINE-1400. Historical Perspectives on Physical Activity and Sport in Western Civilization
   - KINE-1560. Communication in the Sport Industry
   - KINE-2250. Ethics in Sport
   - KINE-2300. Sociology of Sport and Exercise
   - KINE-2520. Sport Finance
   - KINE-2690. Measurement and Evaluation
   - KINE-2700. Research Design
   - KINE-2500. Organizational Behaviour
   - KINE-3400. History of the Modern Olympic Movement
   - KINE-4050. Gender Issues in Sport
   - KINE-4330. Special Topics in Sport Leadership
   - KINE-4500. Human Resources in Sport Management

b) Sport Management and Leadership Courses (Take 7 of)
   - KINE-3220. Introduction to Leisure
   - KINE-3330. Applied Sport Psychology
   - KINE-3510. Sport Event Management
   - KINE-3550. Sport Economics

- KINE-4020. Sport Tourism
- KINE-4040. Population Health
- KINE-4400. History of Sport in Canada
- KINE-4510. Sport and the Law
- KINE-4520. Sport and Government
- KINE-4550. Global Issues in Sport Management
- KINE-4560. Sport Communication
- KINE-4570. Hockey in Canada
- KINE-4590. Sport Media
- KINE-4730. The Social Construction of Leisure
- KINE-4750. Individual Studies (01, 02)
- KINE-4760. Principles of Coaching
- KINE-4770. Outdoor Recreation
- KINE-4780. Undergraduate Thesis (6 units)
- KINE-4850. Group Dynamics in Sport
- KINE-4890. Special Topics (SML)
- KINE-4980. Internship (4 months)

## Bachelor of Human Kinetics (Honours Sport Management and Leadership) for Graduates of Durham College's Three-Year Advanced Diploma in Sport Management Program

**Admission Requirements**

A student may enter the Bachelor of Human Kinetics (Sport Management) program after completing the three-year Advanced Diploma in Sport Management with a cumulative average equivalent to a 70% or better. Students must have passed each of their respective College courses with a grade equivalent to a B or better.

**Degree Requirements**

Total Courses: 20

a) Required Courses (Take All)
- KINE-1000. Health and Wellness
- KINE-1400. Historical Perspectives on Physical Activity and Sport in Western Civilization
- KINE-1560. Communication in the Sport Industry
- KINE-2250. Ethics in Sport
- KINE-2300. Sociology of Sport and Exercise
- KINE-2500. Organizational Behaviour
- KINE-2690. Measurement and Evaluation
- KINE-2700. Research Design
- KINE-3400. History of the Modern Olympic Movement
- KINE-4050. Gender Issues in Sport
- KINE-4330. Special Topics in Sport Leadership
- KINE-4500. Human Resources in Sport Management

b) Sport Management and Leadership Courses (Take 6 of)
- KINE-3220. Introduction to Leisure

- KINE-3330. Applied Sport Psychology
- KINE-4400. History of Sport in Canada
- KINE-3510. Strategic Planning of Sports Events
- KINE-3550. Sport Economics
- KINE-4020. Sport Tourism
- KINE-4040. Population Health
- KINE-4510. Sport and the Law
- KINE-4520. Sport and Government
- KINE-4550. Global Issues in Sport Management
- KINE-4560. Sport Communication
- KINE-4570. Hockey in Canada
- KINE-4590. Sport Media
- KINE-4730. The Social Construction of Leisure
- KINE-4750. Individual Studies (01, 02)
- KINE-4760. Principles of Coaching
- KINE-4770. Outdoor Recreation
- KINE-4780. Undergraduate Thesis (6 units)
- KINE-4850. Group Dynamics in Sport
- KINE-4890. Special Topics (SML)
- KINE-4980. Internship (4 months)

c) Take 2 Non-Kinesiology courses from the Faculty of Arts, Humanities and Social Sciences, the Odette School of Business, and/or the Faculty of Education (Minor in Organizational Learning and Teaching only) and/or Economics.

## Bachelor of Human Kinetics (Honours Sport Management and Leadership) for Graduates of St. Clair College's Three-Year Sport & Recreation Management Program

**Admission Requirements**

Students may obtain the Bachelor of Human Kinetics (Honours Sport Management and Leadership) degree following completion of St. Clair college 3-year diploma in Sport and Recreation Management provided they have graduated with a cumulative average of 70% (B- or 3.0/4) or better. Students must have passed each of their respective College courses with a grade equivalent to a B- or better.

**Degree Requirements**

Total courses: 20

a) Required Courses (Take all 11):
- KINE-1000. Health and Wellness
- KINE-1400. Historical Perspectives on Physical Activity and Sport in Western Civilization
- KINE-2250. Ethics in Sport
- KINE-2300. Sociology of Sport and Exercise
- KINE-2500. Organizational Behaviour
- KINE-2560. Sport Communication
- KINE-2690. Measurement and Evaluation

- KINE-2700. Research Design
- KINE-3400. History of the Modern Olympic Movement
- KINE-4050. Gender Issues in Sport
- KINE-4330. Special Topics in Sport Leadership

b) BHK-HSML Optional Courses (Take 7 of)
- KINE-3220. Introduction to Leisure
- KINE-3330. Applied Sport Psychology
- KINE-4400. History of Sport in Canada
- KINE-3510. Strategic Planning of Sports Events
- KINE-3550. Sport Economics
- KINE-4020. Sport Tourism
- KINE-4040. Population Health
- KINE-4510. Sport and the Law
- KINE-4520. Sport and Government
- KINE-4550. Global Issues in Sport Management
- KINE-4570. Hockey in Canada
- KINE-4590. Sport Media
- KINE-4730. The Social Construction of Leisure
- KINE-4750. Individual Studies (01, 02)
- KINE-4760. Principles of Coaching
- KINE-4770. Outdoor Recreation
- KINE-4780. Undergraduate Thesis (6 units)
- KINE-4850. Group Dynamics in Sport
- KINE-4890. Special Topics (SML)
- KINE-4980. Internship (4 months)

c) Take 2 Non-Kinesiology courses from the Faculty of Arts, Humanities and Social Sciences, the Odette School of Business, and/or the Faculty of Education (Minor in Organizational Learning and Teaching only) and/or Economics.

## Bachelor of Human Kinetics (Honours Kinesiology - Movement Science) for Graduates of St. Clair College's Two-year Fitness and Health Promotion Program

**Admission Requirements**
A student may enter the Bachelor of Human Kinetics (Kinesiology-Movement Science) program after completing the two-year Diploma in Fitness and Health Promotion with a cumulative average equivalent to a 70% (B- or 3.0/4) or better.

**Degree Requirements**

Total Courses: 25

(a) Human Kinetics Core (3):
- KINE-2250. Ethics in Sport and Physical Activity
- KINE-2700. Research Design
- KINE-2690. Measurement and Evaluation

(b) Kinesiology - Movement Science Courses:

Take all of (7):

- KINE-1110. Principles of Mental Skills Training
- KINE-1100. Human Performance
- KINE-1660. Functional Anatomy II
- KINE-2240. Introduction to Occupational Biomechanics/Ergonomics
- KINE-2600. Physiology of Human Performance
- KINE-2040. Sport Nutrition
- KINE-2850. Human Growth and Development

Take 6 of:

- KINE-3010. Use and Abuse of Drugs
- KINE-3020. Exercise and Fitness Psychology
- KINE-3030. Imagery Effects on Performance
- KINE-3060. Obesity and Eating Disorders
- KINE-3100. Motor Learning and Control
- KINE-3330. Applied Sport Psychology
- KINE-3600. Physiology of Exercise and Respiration
- KINE-3610. Musculoskeletal Physiology
- KINE-3620. Human Factors and Work Performance
- KINE-3630. Cognitive Ergonomics
- KINE-4000. Human Movement and Aging
- KINE-4040. Population Health
- KINE-4080. Dynamics of Skill Acquisition
- KINE-4530. Perceptual Motor Development
- KINE-4580. The Endocrine System in Sport, Exercise and Health
- KINE-4600. Cardiovascular Physiology
- KINE-4610. Chronic Disease and Exercise Rehabilitation
- KINE-4620. Exercise in Extreme Environments
- KINE-4630. Applied Neurophysiology
- KINE-4640. The Pathophysiology of Pain
- KINE-4650. Ergonomics and Injury Prevention
- KINE-4660. Cardiac Rehabilitation
- KINE-4670. User Experience
- KINE-4710. Physiological Basis of Sports Therapy
- KINE-4750. Individual Studies
- KINE-4760. Principles of Coaching
- KINE-4770. Outdoor Recreation
- KINE-4780. Undergraduate Thesis (6 units)
- KINE-4800. Advanced Biomechanics
- KINE-4850. Group Dynamics in Sport

Take 1 of:

- KINE-4910. Lab course in Biomechanics and Ergonomics
- KINE-4930. Lab course in Motor Learning and Sport Psychology

(c) 6 (six) courses from the Faculty of Engineering, the Faculty of Nursing, Department of Psychology, the Faculty of Science and/or the Faculty of Education (Minor in Organizational Learning and Teaching only).

(d) 2 (two) courses from any area of study, excluding Kinesiology.

NOTE: Of the 6 courses in requirements (c) all must be at the 2000 level or above.
Transfer credit obtained through this articulation agreement is subject to re-evaluation in cases where the student decides to transfer into another program at the University.

## Bachelor of Human Kinetics (Honours Kinesiology – Movement Science) for Graduates of Fanshawe College's Two-Year Fitness and Health Promotion Program

**Admission Requirements**

A student may enter the Bachelor of Human Kinetics (Kinesiology-Movement Science) program after completing the two-year Diploma in Fitness and Health Promotion from Fanshawe College with a cumulative average equivalent to a 70% (B- or 3.0/4) or better.

**Degree Requirements:**

Total courses: 25

(a) Human Kinetics Core (3):
KINE-2250. Ethics in Sport and Physical Activity
KINE-2700. Research Design
KINE-2690. Measurement and Evaluation

(b) Movement Science Courses:
Take all of (7):
KINE-1110. Principles of Mental Skills Training
KINE-1100. Human Performance
KINE-1660. Functional Anatomy II
KINE-1800. Fundamental Mechanics of Human Motion
KINE-2240. Introduction to Occupational Biomechanics/Ergonomics
KINE-2040. Sport Nutrition
KINE-2850. Human Growth and Development

Take 6 of:
KINE-3010. Use and Abuse of Drugs
KINE-3020 Exercise and Fitness Psychology
KINE-3030 Imagery Effects on Performance
KINE-3060 Obesity and Eating Disorders
KINE-3100 Motor Learning and Control
KINE-3330 Applied Sport Psychology
KINE-3600 Physiology of Exercise and Respiration
KINE-3610 Musculoskeletal Physiology
KINE-3620 Human Factors and Performance
KINE-3630 Cognitive Ergonomics
KINE-4000 Human Movement and Aging
KINE-4040 Population Health
KINE-4080 Dynamics of Skill Acquisition

KINE-4100 Physical Activity for Special Populations
KINE-4530 Perceptual Motor Development
KINE-4580 The Endocrine System in Sport, Exercise and Health
KINE-4600 Cardiovascular Physiology
KINE-4610 Chronic Disease and Exercise Rehabilitation
KINE-4620 Exercise in Extreme Environments
KINE-4630 Applied Neurophysiology
KINE-4640 The Pathophysiology of Pain
KINE-4650 Ergonomics and Injury Prevention
KINE-4660 Cardiac Rehabilitation
KINE-4670 User Experience
KINE-4710 Physiological Basis of Sports Therapy
KINE-4750 Individual Studies
KINE-4760 Principles of Coaching
KINE-4770 Outdoor Recreation
KINE-4780 Undergraduate Thesis (6 units)
KINE-4800 Advanced Biomechanics
KINE-4850 Group Dynamics in Sport

Take 2 of:
KINE-4910 Lab course in Biomechanics and Ergonomics
KINE-4920 Lab course in Physiology
KINE-4930 Lab course in Motor Learning and Sport Psychology

(c) 6 (six) courses from the Faculty of Engineering, the Faculty of Nursing, Department of Psychology, the Faculty of Science and/or the Faculty of Education (Minor in Organizational Learning and Teaching only).

(d) 1 (one) course from any area of study, excluding Kinesiology.

NOTE: Of the 6 courses in requirements (c) all must be at the 2000 level or above.

Transfer credit obtained through this articulation agreement is subject to re-evaluation in cases where the student decides to transfer into another program at the University.

## Bachelor of Human Kinetics (Honours Kinesiology - Movement Science) for Graduates of Lambton College of Applied Arts and Technology’s Massage Therapy Program

Articulation Agreement: A student may enter the Bachelor of Human Kinetics (Movement Sciences) program after completing the three-year Diploma in Massage Therapy with a minimum cumulative average equivalent to a B or better and a minimum cumulative grade of B or better for each college course or group of college courses for which transfer credit may be granted. Up to ten transfer credits may be given.

For information on Course Equivalencies contact the Registrar's Office or the Office of the Head of the Department of Kinesiology.

# Bachelor of Human Kinetics for Graduates of Fanshawe College's Recreation and Leisure Services Program

Articulation Agreement: Students who have completed the two-year Recreation and Leisure Services Diploma Program at Fanshawe College with a cumulative average grade of B may receive up to ten Kinesiology credits to be determined by the Faculty of Human Kinetics, provided they passed the respective college courses with a grade of B- or better.

For information on Course Equivalencies contact the Registrar's office or the Office of the Head of the Department of Kinesiology.

# Certificate in Human Factors and Ergonomics

**Admission Requirements**
All students who have met the entrance requirements for the Bachelor of Human Kinetics – Kinesiology-Movement Science major, who are in good standing and completed the core and major courses of the first 2 years, or who have successfully been awarded a BHK (Kinesiology-Movement Science major) or equivalent Kinesiology degree are eligible to register for the certificate program.

Exemptions and credit transfer will be handled as is the current practice for existing Kinesiology majors. Student counselling will be provided by the undergraduate coordinator in the Department of Kinesiology.

**Degree requirements**

Total courses: 10

a) Required Kinesiology Courses (TAKE ALL):
   - KINE-3620-Human Factors and Work Performance
   - KINE-4650-Ergonomics and Injury-Prevention
   - KINE-3630-Fundamentals of Cognition for Ergonomics
   - KINE-4670-User Experience for Ergonomics
   - KINE-4980-Internship[1]

b) Kinesiology Electives (SELECT 1):
   - KINE-4750-Individual Study[1]
   - KINE-4910-Laboratory experiences in Biomechanics and Ergonomics

c) Kinesiology Electives (SELECT 3)
   - KINE-3100-Motor Learning and Control
   - KINE-3610-Musculoskeletal Physiology
   - KINE-4000-Human Movement and Aging
   - KINE-4080-Dynamics of Skill Acquisition
   - KINE-4530-Perceptual-Motor Development
   - KINE-4800-Advanced Biomechanics
   - KINE-4640-Pathophysiology of Pain

d) Outside electives (SELECT 1)
   - WORK-2000-Labour Law and Workers' Rights
   - WORK-2500-Worker Health and Safety

NOTES:
[1]For KINE-4980 (Internship), and for students electing to take either KINE-4750 (Individual Study), students MUST pursue research or job placements related to the human factors and ergonomics field to be eligible towards this certificate.
[2]Students are also encouraged to pursue other research, volunteer, or shadowing opportunities under the mentorship or supervision of a Canadian College Certified Professional Ergonomist (CCPE), an individual certified through an International Ergonomics Association (IEA) accredited certification body, an Association of Canadian Ergonomists (ACE) Fellow, or Faculty member in the Faculty of Human Kinetics.

## Certificate in Sport Media, Communication and Social Issues for Beijing Sport University Students

**Admission Requirements**
This Certificate is specifically designed for students of the Beijing Sport University (BSU). Applicants must:
(a) be in good standing at Beijing Sport University, as identified by the University of Windsor on an annual basis
(b) achieve an IELTS score of 6.5 (or equivalent), with no band less than 6.0
(c) have completed three years of education at BSU before admission into the certificate program.

**Degree requirements**

Total courses: 8

(a) KINE-4560 and KINE-4590.
(b) 6 courses from: KINE-2300; KINE-1400; KINE-3400; KINE-4050; KINE-4330; KINE-4510; KINE-4520; KINE-4550; KINE-4570; KINE-4730; KINE-4890.

# KINESIOLOGY COURSES

Not all courses listed will necessarily be offered each year.

Kinesiology "Core" courses are restricted to students registered as Kinesiology majors.

For Kinesiology major courses (3000 and 4000 level), non-Kinesiology majors may be admitted only with the permission of instructor.

All courses are three hours a week (3.00 credit hours) unless otherwise indicated.

**KINE-1000. Health and Wellness**
This introductory course will examine health and wellness from both a local and global perspective. Personal health and wellness will be evaluated from a physical, mental, spiritual and social perspective. Behavioural change and motivational techniques will be explored to aid in achieving a healthier lifestyle. This course will introduce various topics that impact the health and wellness of an individual including physical activity, nutrition, obesity, stress, disease prevention, high risk behaviour, health care systems,

alternative medicine, violence in society and the environment. Current health and wellness issues within the community and media will also be presented. (Open to Kinesiology majors only.)

**KINE-1030.Movement Science Perspectives**
This course will present an overview of the biophysical sub-disciplines that comprise Kinesiology. Treatment of each sub-discipline will highlight the history of the area, the current state of research and the practical application of principles in Kinesiology to sport, the workplace and activities of daily living. (Open only to non-Kinesiology majors.)

**KINE-1040. Introduction to Kinesiology: Sport Management and Sociocultural Perspectives**
An introduction and overview of key areas within the sport management and sociocultural sub-disciplines of Kinesiology. The course will explore the historical, social, cultural, and political significance of sport, and relate that significance to understanding the ways in which sport is organized, managed and promoted in contemporary society. (Open only to non-Kinesiology majors.) (3 lecture hours/week.)

**KINE-1050. Introductory Exercise Physiology**
The focus of this 1st year course in exercise physiology is to introduce students to the various physiological systems of the human body and how they respond to acute and chronic bouts of physical activity. The course will highlight how the human body responds to accommodate the exercise stimulus and the benefits of exercise. Designed to stimulate interest in the Movement Science area of our program. (Open to Kinesiology majors only.)

**KINE-1110. Principles of Mental Skills Training**
This course surveys the psychological principles underlying cognitive techniques that can be used to improve performance and enjoyment in physical activity environments such as sport and exercise. Among the topics to be explored will be goal setting, anxiety control, and attentional focus.

**KINE-1200. Introduction to the Sport Industry**
This course introduces students to macro aspects of the sport industry, including the key decision-making bodies, governance structures, funding pathways, and legal considerations in the public, non-profit, and commercial sectors of sport and recreation. This course provides an overview of current industry trends and issues, while exposing students to the wide variety of career opportunities that exist in sport and recreation. Students will gain a foundational understanding of the various sport systems that work to organize and administer sport and recreation at the community, national, and international levels. (3 lecture hours/week.)

**KINE-1330. Introduction to Sport Leadership**
This course introduces students to leadership in the context of sport organizations. Specifically, it provides an introduction to leadership theories, the implications of leadership style on individual, group, and organizational factors, and the role that a leader can play in defining organizational culture, values, and volunteer and/or staff engagement. This course will discuss various sociological issues that often dictate who and why certain individuals occupy leadership positions over others. Students will have an opportunity to engage in professional development by developing a personal leadership philosophy that reflects their individual values and leadership goals. Overall, this course provides students with a foundation to discuss the many factors that frame the ever-present debate of whether leaders are born or made. (3 lecture hours/week.)

**KINE-1400. Historical Perspectives on Physical Activity and Sport in Western Civilization**
This introductory course presents an overview of the significance of physical activity and sport in Western Civilization from ancient Greece to the present by specific reference to selected topics in

different eras through which the particular society may be examined. Within this framework, the relationship of physical activity and sport to such factors as economics, politics, and religion will be emphasized, as will its contribution to the culture. 3 lecture hours/week.

**KINE-1500. Principles of Sport Management**
An introduction to sport management as a profession and academic discipline. Special emphasis will be given to the principles associated with the management of various types of sport organizations, along with the knowledge, skills, and abilities to successfully navigate employment in the sport industry.

**KINE-1560. Communication for the Sport Industry**
The sport industry requires that people communicate effectively, persuasively, and ethically in written, verbal, and interpersonal communications. This course introduces students to academic writing, critical reasoning, and professional discourse across a variety of sport environments. Students will learn and gain confidence in their ability to communicate by practicing and receiving feedback on a number of communication skills relevant to the sport industry, while also having opportunities to improve academic and workplace language proficiency. (3 lecture hours/week.)

**KINE-1650. Functional Anatomy**
An in-depth study of the human musculoskeletal system. Emphasis will be placed on the components of skeletal, muscular, and nervous systems. Joint articulations will be covered in detail. (3 lecture hours per week; 1 lab hour per week; weekly test.)

**KINE-1660. Functional Anatomy II**
An in-depth study of the structure and function of the human cardiovascular, lymphatic, endocrine, respiratory, digestive, urinary, and reproductive systems, as well as the somatic and special senses. (3 lecture hours per week; 1 lab hour per week; weekly test.) (Pre-requisites: KINE-1650.)

**KINE-1800. Fundamental Mechanics of Human Motion**
Presents the quantitative fundamentals of mechanics as they apply to movements of the human body and the sport implements it handles.

**KINE-2040. Sport Nutrition**
This course will (1) examine the fundamental concepts of nutritional science applied to health, exercise, and sport, (2) develop an understanding of the relationship between diet and sports performance, and (3) apply sports nutrition principles to exercise science. (3 lecture hours/week.)

**KINE-2100. Human Performance**
An examination of the role perception and cognition play in our ability to sense, attend to, process, and transmit information during the performance of any motor skill. The course will focus on an information processing approach to examine the processes that underlie our ability to perform motor skills. (3 lecture hours/week.)

**KINE-2220. Introduction to Leisure**
This introductory course examines leisure and leisure delivery in Canada. Various ways of defining leisure are examined, both historically and for different groups of Canadians, as well as the benefits and challenges of leisure in everyday life. The history of leisure delivery in Canada is then reviewed, as well as current approaches and challenges to leisure delivery. (Open to Kinesiology majors only.)

**KINE-2240. Introduction to Occupational Biomechanics/Ergonomics**
This introductory course will examine topics in occupational biomechanics/ergonomics. The goal of the course will be to provide the tools, skills, and knowledge to perform basic ergonomic assessments. The

course will focus on human productivity and risk of injury of specific tissues in the workplace. (Open to Kinesiology majors only.)

**KINE-2250. Ethics in Sport and Physical Activity**
A philosophical analysis of sport and physical activity with emphasis on ethical aspects. Ethical theories will be studied as a basis for assessing and understanding decisions and actions of coaches, athletes, officials, and executive members. Case studies covering problem areas will be utilized to enable the student to analyze these decisions and actions. (Credit cannot be obtained for both KINE-2250 and 95-320)

**KINE-2300. Sociology of Sport and Physical Activities**
An examination of the relationship between sport and society from a variety of perspectives. This examination will include the interaction of sport with other societal institutions and with various social determinants.

**KINE-2450. Sport Marketing**
An application of marketing concepts and activities to the sports domain. Topics include product development, promotions, advertising, publicity, pricing, licensing, market segmentation, and research, as well as the development of a marketing plan for a sport/recreation organization. (3 lecture hours/week.)

**KINE-2500. Organizational Behaviour**
This course provides an introduction to human behaviour in the workplace and its influence on organizational effectiveness. This course focuses on the micro (study of individuals in organizations), meso (study of work groups), and macro-levels (study of how organizations behave) of organizational studies. The emphasis is on identifying issues, challenges, and potential solutions, typically encountered by sport organizations at the individual, group, and organizational levels. Through assigned readings, case studies, and lectures, students will gain a balanced perspective of theory and practice relating to how and why people interact within a variety of organizational contexts. (3 lecture hours/week.)

**KINE-2520. Sport Finance**
Introduction to basic theory in finance, budgeting, and accounting applied to the management of sport organizations. Topics may broadly include: financial issues in sport, financial systems and how they operate, types of business structures, basic accounting principles, capital structuring and other sources of revenue, principles of budgeting, taxation, financial ratio analysis, break-even analysis, time value of money, and various other financial concepts as applicable. (3 lecture hours/week.)

**KINE-2600. Physiology of Human Performance**
Discussion of the physiological systems of the human body and the adjustments seen as a result of exercise. General topic areas include examination of how aerobic and anaerobic metabolism operate and respond to energy demands, how the cardiovascular and respiratory systems maintain blood gases and total body perfusion for work, skeletal and smooth muscle function and physiology, neuromuscular function, and how the renal (kidney) and hepatic (liver) systems support work demands, among others. (3 lecture hours/week)

**KINE-2690. Measurement and Evaluation**
An introduction to descriptive and basic inferential statistical techniques with special emphasis on evaluation of data in the various Kinesiology sub-disciplines. (2 lecture, 2 laboratory hours a week.) (Antirequisite: SOSC-2500.)

**KINE-2700. Research Design**
A preliminary course to acquaint the student with proper experimental designs and research paper writing. Statistical interpretation and application are included. Current research topics will be included. (2 lecture, 2 laboratory hours a week.)

**KINE-2850. Human Growth and Development**
This course introduces human growth and maturation and examines this process across the lifespan, from prenatal development to old age. A main objective of the course is to explore the physical, psychological, and social aspects of human development as they relate to sport and physical activity. Special emphasis will be placed on factors that impact physical activity participation (e.g., gender, age, environmental influences). (3 Lecture hours/week.)

**KINE-2990. Co-op Work Experience I**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course cannot continue in the co-op program.)

**KINE-3010. The Use and Abuse of Drugs**
A concentrated study of the actions and effects of drugs, with special emphasis on the use, abuse, and/or involvement of drugs in today's sporting world.

**KINE-3020. Exercise and Fitness Psychology**
An examination of the psychological processes by which healthy and unhealthy behaviours related to physical activity develop and the methods by which behavioural change can be encouraged. Emphasis will be placed on exercise, nutrition, and injury as factors in health-related physical fitness.

**KINE-3030. Imagery Effects on Performance**
This course will be an examination of imagery use in various performance domains (e.g., sport, exercise, rehabilitation, work). Emphasis will be placed on both the theory and research used in the examination of the effects of imagery. (Prerequisites: Open to 3rd and 4th year Kinesiology majors.) (Open to non-majors if there is enrolment space.)

**KINE-3060. Obesity and Eating Disorders**
This course will provide a multidisciplinary approach to understanding of the current epidemic of obesity and eating disorders in Canada and its impact on disease development throughout the lifespan. Particular emphasis will be on translating basic science findings related to body weight to intervention and prevention strategies. (Open to Kinesiology students in the Sport Studies and Movement Science streams; open to Kinesiology students in the Sport Management stream provided they have at least 3rd year standing; also open to all other students provided they have at least 3rd year standing and permission of instructor.) (Credit may not be obtained for KINE-3060 and Special Topics courses covering the same content.)

**KINE-3100. Motor Learning and Control**
An examination of the processes which underlie the acquisition and control of goal directed human movement. Emphasis will be placed on: 1) the factors that affect learning (feedback, attention, memory), 2) the simultaneous integration and coordination of body parts involved in movement execution and control, and 3) review of motor learning and control research. (3 lecture hours/week.)

**KINE-3330. Applied Sport Psychology**
An examination of the processes by which individual and team athletic performance can be enhanced using mental training techniques based on applications of cognitive and social psychology. Emphasis will focus on individual attentional, anxiety and affect management, and team dynamics.

**KINE-3400. History of the Modern Olympic Movement**
An examination of the historical development of the Modern Olympic Movement. Areas covered include politics, nationalism, gender, commercialism, marketing, and amateurism. The contributions of various athletes and administrators who have helped to shape Olympic history will also be assessed.

**KINE-3510. Sport Event Management**
A study of the theories and techniques involved in the management of various types of sport events. Special emphasis will be given to strategic, operational, contingency, and financial planning, facility design and setup, marketing, volunteer management, and legal liability. Working in groups, students will conceive of, plan, and execute their own small-scale sport event.

**KINE-3550. Socio-Economic Aspects of Sport and Leisure**
An introduction to the interaction of sport and economics. A socio-economic approach is taken to examine such topics as the demand for sport and leisure activities, and sport consumer behaviour.

**KINE-3600. Physiology of Exercise and Respiration**
This course explores the physiology of breathing at rest, during exercise, and in disease. This course also examines the interaction of metabolism, ventilation, and kidney function during rest/exercise. Physiologic challenges, in particular acid-base balance at sea level and altitude, are explored.(3 lecture hours/week.)

**KINE-3610. Musculoskeletal Physiology**
Adaptability and function of components of the musculoskeletal (MSK) system (skeletal muscle and motor neurons, connective tissue, bone) will be examined in detail. Properties of tissues will be illustrated by examining: 1) cell types found in MSK tissues including stem cell populations, 2) cell signaling and gene expression responses to various exercise stimuli (resistance and endurance training), and 3) selected aspects of fatigue and responses to injury and disease.

**KINE-3620. Human Factors and Performance**
This course provides a foundational experience regarding the effects of human factors on performance in work and non-work environments. Human performance will be explored as a function of a variety of factors which may include: how we process, store, and attend to information; the design of products, spaces and processes; how we communicate information and interface with displays and controls; environmental factors such as lighting, sound, and temperature; and how our work and daily lives are scheduled.

**KINE-3630. Cognitive Ergonomics**
Human cognition and perception shape our interaction with the surrounding world and influence the way we use objects and tools in the workplace. While ergonomics focuses on the physical element involved in human-machine interaction, this course will concentrate on discovering how cognition and perception affect the way we perceive objects, process relevant information, and produce adequate responses. This course will also address how cognition and perception can be measured when assessing and developing effective human-machine interactions. (3 lecture hours/week.)

**KINE-3700. Scientific Basis of Conditioning**
A study of current concepts in conditioning theories and physiological evaluation. Included in this course are assessment techniques, program design, and other factors affecting physical performance. (2 lecture, 2 laboratory hours a week.)

**KINESIOLOGY PRACTICE THEORY AND ANALYSIS COURSES (KINE-3810 - KINE-3980)**

*NOTE: Enrolment in Practice, Theory, and Analysis courses (listed below as KINE-3810 through KINE-3980) are restricted to third- and fourth-year Kinesiology majors, with Semester 7 and 8 majors being given preference up to any enrolment limit. Space permitting, non-Kinesiology students may take these courses with permission of the instructor.

**KINE-3810. Practice, Theory, and Analysis of Urban Outdoor Recreation**
Utilizing sociological, historical, and philosophical viewpoints this course examines the concept of wilderness, specifically within an urban setting. Using Essex County as the "urban setting," students will explore the breadth of possible recreation activities available and consider their relevance to a broader understanding of recreation, wilderness, and ourselves. (2 lecture, 2 laboratory hours a week.)

**KINE-3820. Practice, Theory, and Analysis of Golf**
Combining physical and analytical techniques this course will assist students to understand and execute golf skills, enhance their abilities in error detection and correction, understand strategy and course management, and be aware and appreciative of golf rules and etiquette. (Additional fee applies.) (2 lecture, 2 laboratory hours a week.)

**KINE-3830. Practice, Theory, and Analysis of Hockey**
Combining physical and analytical techniques this course will assist students to understand and execute hockey skills, enhance their abilities in error detection and correction, and understand and apply the strategies to the offensive, neutral, and defensive zones. (Additional fee applies.) (2 lecture, 2 laboratory hours a week.)

**KINE-3880. Practice, Theory, and Analysis in Football**
The performance of selected football skills with a special emphasis on an applied mechanical analysis. Also involved will be an indepth study of modern offensive and defensive teams and the kicking game. Other areas of study will concentrate on scouting practices and practice planning principles. (2 lecture, 2 laboratory hours a week.)

**KINE-3920. Practice, Theory, and Analysis of Basketball**
This course combines improvement of individual offensive and defensive skills, application of mental and physical training principles by which basketball performance can be enhanced, rules of the game, and awareness of strategic concepts by which individuals and teams compete. (2 lecture, 2 laboratory hours a week.)

**KINE-3940. Practice, Theory, and Analysis of Volleyball**
Combining physical performance and analytical techniques, this course will assist students in the understanding of skill execution for each of the components of volleyball, enhance their ability to identify and correct errors in execution of skills, and apply the skills to the offensive and defensive strategies of the game. (2 lecture, 2 laboratory hours a week.)

**KINE-3950. Practice, Theory, and Analysis of Aquatics**

This course introduces students to the main components of aquatics. It will assist them in understanding the basic execution of the various swimming stroke. Students will develop their ability to identify and correct errors in the execution of swimming skills, plus be introduced to the basic aspects of water safety and lifesaving skills. (2 lecture, 2 laboratory hours a week.)

**KINE-3970. Practice, Theory, and Analysis of Track and Field**
This course introduces students to the science of track and field. They will be introduced to all track and field events and the progressions associated with each event. Students will be expected to illustrate basic movements for each event and analyze skill movements for all track and field events. (2 lecture, 2 laboratory hours a week.)

**KINE-3980. Practice, Theory, and Analysis of Physical Fitness**
This course introduces students to the main components of fitness instruction. Anatomy, exercise physiology, program design, leadership, and safety will be reviewed with direct application to fitness instruction. Students will have the opportunity to develop the ability to apply theoretical information to practical exercise experiences. (2 lecture, 2 laboratory hours a week.)

**KINE-3990. Co-op Work Experience II**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a cooperative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course cannot continue in the co-op program.)

**KINE-4000. Human Movement and Aging**
An examination of the physiological, sensory, muscular, and cardiorespiratory mechanisms underlying age-related changes in human movement and motor control. These issues will be explored from cellular to whole-body perspectives incorporating current theoretical approaches to aging. Emphasis will be placed on integrating the role of physical activity into explaining age-related changes in cognition and activities of daily living.

**KINE-4020. Sport Tourism**
Sport tourism is one of the largest and most important segments of the travel and tourism industry. With a focus on the global sports environment, this course will introduce students to the fundamentals of sport tourism, including the creation, impacts, and future trends of sport tourism development. Students will critically examine the economic, socio-cultural, and environmental impacts of sport tourism as well as the motivations of sport tourists. Finally, this course will instruct students on marketing and development principles of sport tourism products and services. (Prerequisite: Open to Kinesiology students in the Sport Management stream; open to Kinesiology students in the Sport Studies and Movement Science streams provided they have at least 3rd year standing; also open to all other students provided they have at least 3rd year standing and permission of instructor)

**KINE-4040. Population Health**
This course will examine the factors that aim to (1) improve health of the entire population and (2) reduce health inequalities among population groups. Particular emphasis will be on the Canadian health care system and the determinants of health, in addition to personal health practices and health knowledge, health policy, and behaviour change theory as it applies to the health of our society. (Prerequisite: Open to Kinesiology students in the Sport Studies stream; open to Kinesiology students in

the Movement Science and Sport Management streams provided they have at least 3rd year standing; also open to all other students provided they have at least 3rd year standing and permission of instructor) (Credit may not be obtained for KINE-3040 and Special Topics courses covering the same content.)

**KINE-4050. Gender Issues in Sport**
A comprehensive overview of the status of women, men, and LGBTIQs in sport with a view towards understanding the influence of gender and sexuality on participants and consumers of sport.

**KINE-4080. Dynamics of Skill Acquisition**
This course will introduce students to the theoretical and empirical data underlying dynamic systems "theory". Specifically, it will examine the notion of "self-organization"; individual and environmental constraints on action and the evolution of skilled motor behaviour; and discuss practical applications of this theory to normal and pathological motor activity. (Prerequisite: Open to Kinesiology students in the Movement Science and Sport Studies streams; open to Kinesiology students in the Sport Management stream provided they have at least 3rd year standing; also open to all other students provided they have at least 3rd year standing and permission of instructor)

**KINE-4100. Physical Activity for Special Populations**
An examination of populations that have special needs in the area of physical activity (sensory, cognitive, musculo-skeletal impairment). Emphasis will be placed on defining the characteristics of the population, the needs and strengths of each population, and matching the strengths with the appropriate physical activities. Issues of integration, programming, and environmental adaptation will also be considered. Laboratory experiences will focus on the application of the theoretical information. (2 lecture, 2 laboratory hours a week.)

**KINE-4150. Exercise Prescription for Athletic Populations**
Students in this course will learn the skills required to begin working with clients belonging to an athletic population. Throughout the semester students will develop the ability to critically analyze sport movement, create accurate and successful exercise prescriptions to help athletes safely and successfully reach their goals. (2 lecture, 2 lab hours per week.)

**KINE-4330. Selected Topics in Sport Leadership**
The course examines sport leadership from a variety of theoretical perspectives that include both interpersonal and intrapersonal perspectives. The course will expose you to current research and literature relating to leadership in sport. The course will examine the role of the sport leader and how to become an effective sport leader. Students will develop specific leadership skills that are of interest to them and practice these skills in exercises and class projects. The emphasis will be on applying psychological concepts to your sport leadership experiences. (Prerequisites: Open to 3rd and 4th year Kinesiology majors and students in the Certificate in Sport Media, Communication and Social Issues.) (Open to non-majors if there is enrolment space.)

**KINE-4400. History of Sport in Canada**
An examination of the issues and topics related to the historical evolution of sport in Canada. Areas of study include methodology, social class, geography, immigration, native sport, urbanization, industrialization, religion, gender, economics, and government involvement.

**KINE-4500. Human Resources in Sport Management**

An overview of the theoretical and applied aspects of human resource management in various types of sport organizations. Special emphasis will be given to the planning, recruitment, selection, orientation, training and development, motivation, performance appraisal, rewarding, and termination of our most important organizational resource: people.

**KINE-4510. Sport and the Law**
Introduces students to the principles of law as they relate to Human Kinetics. The principles of law will be related to sport or athletic administration, and to instruction and supervision as it relates to physical and health education and field activities, interscholastic and intercollegiate programs, as well as, other recreational and leisure pursuits.

**KINE-4520. Sport and Government**
An analysis of national and international sport in the context of government involvement at the provincial and national levels.

**KINE-4530. Perceptual-Motor Development**
This course examines motor skill development of children and adolescents, bringing together theoretical perspectives from psychology, biology, genetics, neuroscience, and sociology. An interdisciplinary perspective is used to study the interaction of developmental processes. The emergence, development, and assessment of selected perceptual-motor skills will be examined in detail. (3 lecture hours and 0.25 lab hours per week)

**KINE-4550. Global Issues in Sport Management**
This course provides future leaders and managers with strategies to address globalization issues in the field of sport management. The course uncovers how the social, political, cultural, economic, and technological dimensions in the global context affect the management practices of leaders in sport and leisure organizations. It will also cover how sport (developmental sport and high performance sport) is organized in different countries. Topics such as commercialization and internationalization of sport will be addressed, as well as the increasing political involvement in sport, the global media-sport complex, the migration of athletes, and the global business of sport. (Pre-requisite: Open to Kinesiology Majors and students in the Certificate in Sport Media, Communication and Social Issues.)

**KINE-4560. Sport Communication**
This course provides a comprehensive survey of the practices and techniques used for effective communication in the sport industry. Topics covered will include the development and delivery of an effective campaign, the use of mass and social media, crisis management, and public relations.

**KINE-4570. Hockey in Canada**
Starting with the nineteenth century and the origins of the game, this course moves forward chronologically and thematically through the game's evolution, paying special attention to matters of national identity, business and labour, leisure, race and ethnicity, gender, rural-urban issues, international affairs, and religion. This course uses hockey to gain a new, perhaps more personal, understanding of Canada's past and present.

**KINE-4580. The Endocrine System in Sport, Exercise and Health**
The endocrine system, in close association with the nervous system, is an important regulator of physiological homeostasis. Various components of the "milieu interieur" or internal environment must be maintained for a "free and independent life". Exercise induces several metabolic and physiological

challenges to which the endocrine system must respond in order to maintain this internal environment. Thus, this course will introduce students to the mammalian endocrine system and then examine how exercise and health affect and are affected by the endogenous hormones and chemical messengers of the human body. (Prerequisite: Open to Kinesiology students in the Movement Science stream; open to Kinesiology students in the Sport Studies and Sport Management streams provided they have at least 3rd year standing; also open to all other students provided they have at least 3rd year standing and permission of instructor)

**KINE-4590. Sport Media**
The focus of this course is to examine sport with more critical awareness by exploring the lens through which athletics is brought to and consumed by fans. We will look at conventional sport media coverage as well as sport representation in various other forms of media (e.g. novels, movies, music, documentaries, advertisements, social media etc) in order to challenge preconceived notions, uncover biases and comprehend the complicated social fabric of which sport is part.

**KINE-4600. Cardiovascular Physiology**
The study of the cardiovascular system, anatomy, electrophysiology, mechanics, and responses to stressors. (2 lecture, 2 laboratory hours a week.)

**KINE-4610. Chronic Disease and Exercise Rehabilitation**
This course is designed to provide a broad understanding of: 1) the physiological processes involved in the development of selected chronic diseases (e.g., cardiovascular, respiratory, cancer, autoimmune) and disorders (e.g., Huntington's disease), 2) the risk factors associated with their development and progression, where applicable, and 3) how exercise rehabilitation can be used as a tool for intervention, including past, current and emerging exercise recommendations. (Prerequisites: Open to 3rd and 4th year Kinesiology majors.) (Open to non-majors if there is enrolment space.)

**KINE-4620. Exercise in Extreme Environments**
Humans are a remarkably resilient species in the face of widely varying environmental conditions. In fact, humans inhabit nearly every corner of the earth (and beyond) and manage to survive and work in the extremes of cold, heat, pollution, atmospheric and water pressures, and even extreme g-forces and microgravity. The purpose of this course is to introduce students to the physiological responses to exercise (including work or play) under extreme environmental conditions and some of the countermeasures, both physiological and outside the body (e.g., clothing) humans use to protect ourselves in these environments. (Prerequisites: Open to 3rd and 4th year Kinesiology majors.) (Open to non-majors if there is enrolment space.)

**KINE-4630. Applied Neurophysiology**
Mechanisms underlying human movement in healthy, diseased, aged and trained states will be examined by studying the integrated actions of the neural, somatosensory and motor systems. Emphasis will be placed upon sensory transduction, reflexes and the descending motor system.

**KINE-4640. The Pathophysiology of Pain**
Pain is a phenomenon encountered in many of the sub-disciplines of kinesiology. This course is designed to give students an awareness of the functional significance of pain. This course will focus on the physiology and anatomy of pain from nerve endings in peripheral tissue to synaptic transmission in the central nervous system. Factors that affect pain perception, including pharmacological and non-pharmacological treatment modalities and psychological aspects of pain, will also be discussed. (Open to Kinesiology majors only.)

**KINE-4650. Ergonomics and Injury-Prevention**
Examination of topics in applied ergonomics as they pertain to reducing the risk of musculoskeletal injuries in the workplace. Students will gain practical experience in applying quantitative and qualitative ergonomic assessment tools. Topics include: the mechanisms of upper limb and low back injuries, the principles of redesigning operations to reduce injury risk, and techniques for optimizing the feasibility that ergonomic changes will be implemented. Includes experience in an occupational setting. (2 lecture, 2 laboratory hours a week.)

**KINE-4660. Cardiac Rehabilitation**
This course introduces the pathophysiological mechanisms associated with the development and progression of cardiovascular disease, namely atherosclerotic heart disease, and emphasizes its global burden. It also highlights the positive effects of Cardiac Rehabilitation on quality of life, morbidity and mortality outcomes, delivering insight into the paradigm shift toward personal responsibility for chronic disease management/secondary prevention to maximize cardiovascular health across the lifespan, and offers students an opportunity to hone leadership and communications skills via group discussions and presentations. Cardiac Rehabilitation-related career opportunities will be explored. (3 lecture hours/week.)

**KINE-4670. User Experience**
Understanding the user experience (UX) is necessary for the design of ergonomically sound products, and for ergonomics professionals to develop an all-encompassing approach to human-machine interface assessment. This lab-based course familiarizes students with how to conduct usability assessments of interfaces, and how user assessment fits into the broader ergonomic design process. This course will start by covering common UX practices, techniques and approaches (e.g., questionnaires and surveys, talking aloud, etc.). In addition, students will also conduct user assessments on everyday objects including websites, tools, car interfaces, etc. These will serve as individual and group assignments. (2 lecture and 1 lab hour per week)

**KINE-4710. Physiological Basis of Sports Therapy**
A physiological examination of athletic injuries and their therapy. Topics to include the prevention of and pathology of injuries, as well as the care of injuries and rehabilitation techniques. (Additional laboratory fee applies.) (2 lecture, 2 laboratory hours a week.)

**KINE-4730. The Social Construction of Leisure**
An examination of leisure as a social activity which is shaped by various societal institutions and social relations.

**KINE-4750. Individual Studies**
The student will select an approved topic and under direction investigate and report on it. (Prerequisite: consent of the instructor is required at least three weeks prior to the end of the Fall or Winter term preceding the term in which enrollment is anticipated.) (Hours to be arranged.)

**KINE-4760. Principles of Coaching**
A critical study of various issues that confront the modern-day coach. Areas of study involve effective coaching techniques; person attributes; motivation and discipline approaches; dealing with problem athletes; and coach-player communication. Stress will be placed upon developing a sound beginning philosophy of coaching, along with looking at the coach as a professional person.

**KINE-4770. Outdoor Recreation**

Through guided discovery and experiential learning, this course provides knowledge about the outdoors as an alternative recreational medium that fosters deeper awareness of nature, wilderness, and ourselves. Offered in the Fall term before the start of classes. (Prerequisite: demonstrated swimming competence.) (Additional fee applies.)

**KINE-4780. Undergraduate Thesis**
The Undergraduate Thesis course provides undergraduate students with an opportunity to conduct a full year independent research project under the supervision of a faculty member, culminating in a written thesis. Students enrolled in the course will attend regular meetings throughout the fall and winter terms with their faculty supervisor. Components of the course will include: (a) establishing research questions and design; (b) research proposal document; (c) data collection and analysis; and (d) written and oral presentation of the outcomes of the research project. (Students will normally be in the final year of their degree and in Good Academic Standing. Approval of the supervising faculty member and Thesis Coordinator is required. Students who have already taken two (2) Individual Studies courses (KINE-4750), are not eligible for this course. )

**KINE 4800. Advanced Biomechanics**
This course introduces students to advanced concepts and techniques required in the quantitative biomechanical analysis of human movement. (Open to non-Kinesiology majors with permission from instructor).

**KINE-4850. Group Dynamics in Sport**
The central purpose of this course is to explore individual human behavior in a sport and physical activity context from a group dynamics perspective. Emphasis will be placed on understanding group-based psychological concepts which are pertinent to the field of sport and physical activity.

**KINE-4880. Special Topics in Practice, Theory and Analysis of Sport**
This is a course in which current topics in the field of Practice, Theory and Analysis of Sport are examined.

**KINE-4890. Special Topics in Sport Management**
This is a course in which current topics in the field Sport Management are examined.

**KINE-4900. Special Topics in Movement Science**
Courses in which current topics associated with Movement Science are examined.

**KINE-4910. Laboratory experiences in Biomechanics and Ergonomics**
This advanced laboratory course will provide students the opportunity to become familiar with operating common laboratory equipment used in the field of biomechanics and ergonomics. Practical experiences will include anthropometry measurements, force platform data acquisition, gait analysis, video analysis and the use of manual digitizing software, linear and angular kinetics/kinematics analysis, biomechanical model analysis, electromyography, and the use of Microsoft Excel. Students will also have the opportunity to develop the skills required to assess and modify common office and industrial environments, workstations and hand tools found in the workplace to minimize musculoskeletal demands and help prevent injuries in the workplace. (Prerequisites: Completion of all required first and second year Kinesiology courses. Open only to Movement Science Majors.)

**KINE-4920. Laboratory Experiences in Human and Exercise Physiology**
This advanced laboratory course will provide students the opportunity to become familiar with operating common laboratory equipment used in the field of human and exercise physiology. Practical

experiences will include performing health related fitness appraisals involving screening tools, flexibility assessments, body composition measurements, heart rate and blood pressure measurements, electrocardiogram and blood lactate analysis, aerobic and anaerobic musculoskeletal fitness assessments and fitness program prescriptions, and the use of Microsoft Excel. (Prerequisites: Completion of all required first and second year Kinesiology courses. Open only to Movement Science Majors.)

**KINE-4930. Laboratory Experiences in Motor Learning and Psychology of Physical Activity**
This advanced laboratory course will provide students the opportunity to become familiar with operating common laboratory equipment in the field of motor learning and the psychology of physical activity. Practical experiences will include the use of evaluation tools/checklists used to assess motor control, motor learning and sport psychology, applying both classical and recent methodological protocols, collecting common measurement variables and evaluating personal results. Students will also examine reaction and movement time, Fitts' Law, practice, balance, and movement planning; as well as the effects of anxiety on sport performance, the use of imagery during sport performance, interviewing skills and evaluation techniques, and the use of Microsoft Excel. (Prerequisites: Completion of all required first and second year Kinesiology courses. Open only to Movement Science Majors.)

**KINE-4980. Internship**
A supervised, project-driven work experience in an approved setting. The experience will be expected to provide students with an enriched learning opportunity to integrate theory and practice. Internships are open to 4th year Kinesiology students from either major. (Offered on a Pass/Non-Pass basis.) (Prerequisite: consent of the instructor is required at least three weeks prior to the end of the Fall or Winter term preceding the term in which enrollment is anticipated.) (9 hours a week.)

**KINE-4990. Co-op Work Experience III**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course cannot continue in the co-op program.)

# FACULTY OF LAW

For information on the following programs that are offered at the University of Windsor, visit the Faculty of Law at http://www.uwindsor.ca/law/:

- Juris Doctor (JD)
- Canadian and American Dual JD
- Master of Business Administration (MBA)/Juris Doctor (JD)
- Master of Social Work (MSW)Juris Doctor (JD)
- Master of Laws (LLM) (1 Year and 2 Year Teaching Stream)
- Intellectual Property Law

## LAW SERVICE COURSES

The Law Faculty offers a number of courses which are available for credit toward university degrees and diplomas other than the full-time JD degree. These courses cannot presently be counted as credit for the JD degree because of Law Society Regulations governing qualification for call to the Ontario Bar.

**LAWS-2180. Environmental Law**
This course is intended to provide non-law students with a background in environmental law with an emphasis on Ontario environmental legislation. Topics include: introduction to common law, public participation, jurisdictional issues, environmental assessment, Ontario regulations covering air, water and waste management, enforcement, compliance and alternatives to regulations.

**LAWS-2190. Forensic Evidence and the Canadian Legal System**
This course is designed as an introduction to the Common Law legal system in Canada and the place of forensic evidence in law. The following topics will be covered: the nature of law and the constitutional basis of legal authority in Canada; the court structure; the nature of the adversarial system and the criminal and civil process; burdens of proof and onus; a primer on the rules of evidence with special emphasis on the opinion of rule and the use of real and demonstrative evidence.

# NURSING

**MISSION STATEMENT**
As partners, the Faculty of Nursing at the University of Windsor with St. Clair College (Windsor and Thames Campuses) and Lambton College undertake the shared commitment to excellence in the preparation of Bachelor of Science in Nursing (BScN) candidates who embody our core values and the best elements of the art and science of nursing, education, leadership, research, and practice in their professional journeys.

**VISION**
Excellence in Nursing education, practice, and research.

**CORE VALUES**
In the spirit of collaboration, and through values clarification and group decision-making, the following concepts have been selected to identify and signify the core values of the University of Windsor Collaborative BScN Program. These concepts reflect the foundation upon which knowledge, skills, judgement, communications, relationships, behaviours, and intent of our mission and vision are built. Health and well-being; Safety; Caring; Collaboration; Professionalism; Leadership; Social Justice; Scholarship; Research; Innovation.

**PHILOSOPHY**
The philosophy of the Faculty of Nursing at the University of Windsor is outlined in the following statements about our beliefs relative to health, individuals, nursing, learning, teaching, and environments:

**HEALTH**
Health is a dynamic process whereby the individual, family, or group is able to realize aspirations, satisfy needs, and change or cope with the environment. Health is a resource for everyday life. It is a positive concept emphasizing social and personal resources as well as physical capacity. Health is the goal of all nursing behaviours.

**INDIVIDUALS**
Individuals are unique holistic persons with inherent dignity and are worthy of respect and care. Individuals have freedom of choice and are accountable for these choices. Individuals are capable of entering reciprocal caring relationships which foster health, growth, and self-actualization.

**NURSING**
Nursing is a humanistic, caring process, the goal of which is to help individuals, families, groups, and communities achieve and maintain an optimal level of health consistent with their abilities and desires. Nurses, in collaboration with members of the health team and other service providers build on strengths and address health variations to facilitate client maturation and adaptation.

**LEARNING/TEACHING**
Learning is an individualized activity and involves learners' personal goals, perceptions and unique learning style. Learning is goal oriented and an active life-long process of change and development. Teaching is a facilitative process through which learners are guided and supported. It involves communication, clearly defined goals, appropriate learning activities and a climate conducive to growth.

The curriculum is multi-disciplinary and aims to provide the learners with opportunities for intellectual and professional development.

**ENVIRONMENTS**
Environments are milieus within which individuals, families, groups, and communities strive to achieve optimal health. As human beings attempt to mature and adapt within their environments, there are dynamic interactions which can serve as a source of growth. Environments encompass psycho-social, cultural, religious, political, economic, and physical contexts which impact upon the efforts of all.

# ADMISSION REQUIREMENTS

**Degrees in Other Disciplines**
Special consideration may be given to applicants holding degrees in other disciplines.
University of Windsor Senate Admission Requirements for the Bachelor of Science in Nursing (BScN): Successful completion of the Ontario Secondary School Diploma (OSSD) and a minimum 70% average of the top six Grade 12 U or M courses. ENG4U, SBI4U, SCH4U, and one Grade 12 mathematics required. A minimum grade of 65% in Grade 12U English (ENG4U) is required. A second minimum average of 70% is required in chemistry (SCH4U) and biology (SBI4U). These averages may be higher, depending on the number of applicants. For additional details, please see the Senate Policy on Admission Requirements (Undergraduate).

**Program Transfers**
Please refer to the University of Windsor Policy on Transferring to Another Program.

**Admission by Transfer**
Please refer to the University of Windsor Policy on Advanced Standing and Transfer Credit.

Applications for transfer to Nursing are subject to a March 1 deadline for Fall admission. Transfer is based on academic achievement and the availability of space. A minimum 75% cumulative average is required to be considered for a transfer to Nursing. Applicants must have taken ENG4U, SBI4U, SCH4U, and any grade 12 math or courses that have been deemed equivalent. In addition, all Nursing applicants are required to submit the Applicant Profile form no later than March 1. It must be submitted directly to the University of Windsor, Office of the Registrar, Windsor, Ontario, N9B 3P4. The Applicant Profile form can be found on the Nursing website.

**Admission Requirements for Mature Students**
Please refer to the University of Windsor Undergraduate Calendar Admission Requirements for Mature Students.

**Applicant Profile**
All Nursing applicants are required to submit the Applicant Profile Form no later than March 1. It must be submitted directly to the University of Windsor, Office of the Registrar, Windsor, Ontario, N9B 3P4.

**Prior Nursing Courses**
University courses taken within seven years prior to admission or readmission to any nursing program may be considered for credit.

**Selection for Admission**
Preference will be given to applicants with the best qualifications. Selection of candidates for admission to the various programs will be based on criteria determined by the Faculty of Nursing Admissions Committee.

**Medical Requirements**
Students in all nursing programs must be cleared for clinical via a pre-clearance process prior to the start of their clinical course(s). This is the financial responsibility of the student.

**Other Requirements**
1) Students are responsible for their own transportation and living expenses incurred in clinical nursing experiences, including the consolidation experiences. Additional costs may be incurred for participation in some clinical placements. Inability to comply with this requirement may necessitate voluntarily withdrawal from the course to avoid risk of failure due to missed clinical hours.

2) Students are responsible for supplying their own uniforms and equipment. Details pertaining to uniforms and accessories will be sent to those admitted to the program.

3) A vulnerable sector (or extended) Police Clearance is mandatory before beginning clinical courses, and entry, and must be updated annually, or more frequently as required by the program or, clinical placement agencies. This is the financial responsibility of the student.

4) Applicants who accept admission into the undergraduate nursing program are required to obtain certification in First Aid and Cardiopulmonary Resuscitation (CPR): Basic Life Support (BLS) for health care providers before starting the clinical courses. Annual CPR re-certification is necessary even if a student's card indicates that certification is valid for longer than one year. This is the financial responsibility of the student. Details pertaining to other non-medical program requirements are available on the Faculty of Nursing website.

**COLLABORATIVE HONOURS BScN PROGRAM ADMISSION REQUIREMENTS**

1) For admission requirements, go to the Policy on Admission Requirements (Undergraduate) at http://www.uwindsor.ca/policies.

2) An interview with the Faculty of Nursing Admissions Committee may be required.

**ADMISSION REQUIREMENTS for Graduates of the St. Clair College or Lambton College One-year Pre-Health Science Program**

Students at Lambton College who successfully complete the one-year Pre-Health Science-Nursing Program with a minimum overall grade point average of 2.7 (B), and a minimum science subject average of a 2.7 (B) in BIO 120, BIO 220, CHM 125 and CHM 225, will be considered for admission to the BScN Program.

Students at St. Clair College who successfully complete the one-year Pre-Health Science Program with a minimum overall grade point average of 2.7 (B), and a minimum science subject average of (2.7) (B) in BIO 50, BIO51, CHM 50 and CHM 51, will be considered for admission to the BScN Program.

**ADMISSION REQUIREMENTS for Graduates of Lambton College's and St. Clair College's Practical Nursing Programs**

The following are the admission requirements for Registered Practical Nurses to enter the BScN Program:

- Registered Practical Nursing diploma from a College of Applied Arts and Technology with an overall B (73%) average and no grade less than a C (63%).
- Minimum one year full-time equivalent work experience as a Registered Practical Nurse (RPN) (i.e. 2000 hours).
- Current Registration with the College of Nurses of Ontario (CNO) as an RPN with no practice restrictions.

To demonstrate competency in health assessment and other clinical skills, students must complete and pass an objective structured clinical examination (OSCE). This examination will be scheduled at program entry and/or prior to beginning the first clinical course in the program. If a student performs below the expected level of clinical competence on the OSCE, the student may seek remediation at the College, at the student's expense. Students must demonstrate clinical competence at the expected level prior to taking any clinical courses.

Prior to beginning clinical, students must provide documentation of current CPR certification: (BasicLife Support (BLS) for health care providers, and a Vulnerable Sector (or extended) police clearance. Clinical agencies will require a record of immunization. (see policies for the Faculty of Nursing, Collaborative Nursing Program)

# PROGRAM REGULATIONS

Students must become familiar and comply with the general regulations of the University, which apply to all students. Additionally, students must comply with the regulations particular to Nursing programs within the Faculty of Nursing.

1) For promotion and graduation, nursing students are required to achieve a minimum grade of a 60% in each nursing course for which a numerical grade is provided, and must achieve a "pass" in each clinical course Students must maintain both cumulative and major averages of at least 60%.

2) Students who fail a clinical course may require remediation in a lab or clinical setting prior to re-taking the course to ensure competence for safe practice at the expected level. Clinical courses in the nursing program require the application of theory to practice. Therefore, a student who fails a required theory course may be advised to repeat its paired clinical course to ensure continuing safe clinical practice:

3) Students will be required to withdraw from the Nursing Program if they have failed three required nursing courses, or if they have failed the same required nursing course more than once. Students with a cumulative or major average of < 55% (or < 50% for first year students) will also be required to withdraw from the nursing program (For further information, see Standing Required for Continuation in Programs at www.uwindsor.ca/policies)

4) Students who wish to repeat a previously passed nursing course for any purpose may be permitted to do so only if there is space in the course with approval. Students are not encouraged to repeat previously passed courses.

5) The program of studies for the four-year BScN degree must be completed within seven years from the first Nursing course (NURS-xxxx) taken.

6) All option courses must be successfully completed prior to the start of Year 4 (NURS-4XXX).

7) Clinical placements will be arranged by the Faculty of Nursing to enable students to meet the Entry to Practice expectations of the College of Nurses of Ontario.

8) The Faculty of Nursing administration/staff reserve the right to change students' schedules, including clinical, theory and lab courses, according to operational needs and course availability, subject to Bylaw 54.

9) Students are required to meet all Faculty of Nursing clinical placement policy requirements and to conform to any additional agency-specific policies. Students will be denied access to a clinical placement site if they fail to be cleared for clinical placement. The Faculty of Nursing is not responsible for providing an alternative clinical experience for students who do not meet these requirements.

10) Any change in status related to a student's police clearance after clearance has been obtained must be immediately disclosed by the student to the Associate Dean.

11) If students are convicted of a criminal offense after admission to the program (or if a prior criminal conviction becomes known after admission to the program), they will be denied access to clinical placements as per clinical placement agencies' policies, and will be required to withdraw from the clinical course.

12) Attendance at all clinical nursing practica and experiential learning laboratories is mandatory. Non-attendance at a clinical placement by the University of Windsor's add/drop date for the semester will require that a student withdraw from the clinical course. A student may not miss more than 20% of the required hours in a clinical course. Time spent completing alternative learning activities will not be counted toward the student's clinical hours. A student who misses more than 20% of the required hours will be required to withdraw from the course without academic penalty if they are otherwise in good standing in the course.

13) To pass clinical courses, students must achieve all course learning outcomes.

14) Students are expected to attend clinical shifts as scheduled by the Faculty of Nursing. Shifts may be scheduled during the days, evenings, and/or weekends. Students should expect to have up to 8-hour shifts during the first two years of the program, except during Consolidated Practicum courses, when some 12-hour shifts may be required. In year four, students in precepted experiences may work 8 or 12 hour day, afternoon or night shifts. Students are not permitted to attend clinical more than 3 days in a row if they are scheduled for 12 hour shifts (i.e., three consecutive 12 hour shifts), and a minimum break of 48 hours must occur before starting the next set of shifts.

15) During consolidated practicum courses, students engage in full-time clinical learning that is scheduled daily. Students should not schedule conflicting commitments during consolidated practicum courses, such as employment or registration in other courses. Requests to be excused from attending

consolidation due to these types of conflicts will be denied. A letter to employers explaining the consolidation course requirements is available upon request to students in the Nursing Office.

16) Auditing of clinical courses is not permitted.

17) Students in good standing who are absent for more than one semester and wish to return to nursing must complete and submit the “Returning Nursing Student Form” available at the Nursing Main Office and/or on the Nursing website prior to registering for any courses, and may be required to demonstrate clinical competence before taking any clinical course. The deadlines for submitting the Returning Nursing Student Form are April 15 (for return in Fall), September 15 (for return in Winter), or January 15 (for return in consolidation/intersession/summer). Students who fail to meet these deadlines will not be guaranteed a clinical placement.

18) Students who wish to return to the Nursing Program after an absence of more than one year may be re-admitted with special permission from the Dean’s Office. Each case will be assessed on an individual basis. Students will be required to demonstrate continued competency in specific nursing courses, which may include any combination of OSCE and/or skill testing, challenge exams, and/or re-taking specified courses. Students will be charged a fee for this assessment. Students must follow the same process and deadlines as described in Regulation 17 (above).

19) Students with disabilities who require academic accommodations in any nursing course must contact an Advisor in Student Accessibility Services (SAS) to complete SAS registration and receive the necessary Letters of Accommodation. After registering with SAS, students must present their Letter of Accommodation and discuss their needs with their professor(s) as early in the term as possible. Deadlines for submission of documentation and completed forms to SAS are available on the website: http://www.uwindsor.ca/studentaccessibility/.

20) Students of the Faculty of Nursing are required to demonstrate behaviours consistent with the University of Windsor standards of acceptable behaviour (see Senate Bylaw 31) the Practice Standards and Practice Guidelines of the College of Nurses of Ontario (http://www.cno.org/en/learn-about-standards-guidelines/standards-and-guidelines/); and of the academic policies of the University of Windsor.

Failure of any Nursing student to conform to the principles of these documents may result in dismissal from any of the Faculty of Nursing programs.

The Faculty of Nursing reserves the right to remove a nursing student from the clinical placement in instances where the instructor has reason to believe that the student is rendering unsafe and/or unprofessional and/or unethical nursing care, or that the student's safety is at risk. A student who is removed from a clinical placement course due to rendering unsafe and/or unprofessional and/or unethical nursing care may attempt to retake the same course only once. Students will be required to withdraw from the nursing program if they are removed from the same or any other clinical placement course for a second time due to rendering unsafe and/or unprofessional and/or unethical nursing care.

Note: The College of Nurses of Ontario requires that in order to obtain permission to write Nurse Registration Examinations and/or apply for Nurse Registration in Ontario, a person must provide a declaration of one's status regarding:

(a) any conviction of a criminal offense under the Narcotic Control Act and the Food and Drugs Act;
(b) being a subject of proceedings with respect to professional misconduct, incompetence, or incapacity in Ontario in another health profession or in another jurisdiction in nursing or in another health profession;

(c) any mental or physical disorder which makes it desirable in the public interest that the person not practice;
(d) a current police clearance within six months of examinations.

**Further Information**
Applicants wishing to discuss the program or visit the Faculty of Nursing should contact the campus (519-253-3000, Ext.2265). Information may also be obtained from the Internet: www.uwindsor.ca/nursing

**Major Clinical Resources**
Nursing is a profession of diverse opportunity. Students will engage in learning in diverse clinical settings. Clinical placements include, but are not limited to hospitals, public health agencies, home health care or visiting nurse agencies, family support services, primary care offices and clinics, day care centres and preschools, elementary and high schools, new Canadian multicultural programs, First Nations groups, long-term care homes, and seniors residences and services.

**Awards and Scholarships**
Nursing Awards and Scholarships are available to students enrolled at the University of Windsor, Faculty of Nursing.

# PROGRAMS

## Collaborative Bachelor of Science Honours Nursing Program

This program is four years in length and is designed for individuals who are seeking to prepare for a career in nursing at the baccalaureate level.

The curriculum is designed on the premise that professional nursing is multidisciplinary in nature, applying nursing, biological and social sciences, as well as the arts, to the care of individuals, families and communities. As inquiring, caring, competent practitioners, nurses serve the needs of society through health promotion, health maintenance, prevention of disease and care of the sick and dying.

The Faculty of Nursing programs are approved and accredited. National Accreditation was granted in 1998 by the Board of Accreditation, Canadian Association of Schools of Nursing (CASN). The collaborative program was granted candidacy status by the Board of Accreditation of CASN in 2004. In 2016, CASN Accreditation Bureau granted the University of Windsor, Lambton College and St. Clair College Collaborative Nursing Program a 7-year term in response to the on-site review that took place in November 2015.

Upon successful completion of the program, students are eligible to write nurse registration examinations and pursue graduate studies.

**Degree Requirements**

Total courses: 46 (127 credits = 42.33 course equivalents)

(a) NURS-1110, NURS-1900, NURS-1210, NURS-1511, NURS-1120, NURS-1220, NURS-1521, NURS-1310, NURS-1410, NURS-1512, NURS-1612, NURS-2130, NURS-2531, NURS-2420, NURS-2522, NURS-2810, NURS-2320, NURS-2541, NURS-2532, NURS-2820, NURS-2920, NURS-2520, NURS-2622, NURS-3551,

NURS-3542, NURS-3830, NURS-3940, NURS-3950, NURS-3960, NURS-3140, NURS-3561, NURS-3552, NURS-3840, NURS-3970, NURS-3632, NURS-4150, NURS-4571, NURS-4980, NURS-4990, NURS-4562*, NURS-4572*
(b) SOSC-2500 or STAT-2910, One of NURS-4000, NURS-4010, or NURS-4020; BIOM-1073; PSYC-3390.
(c) Indigenous Studies course with a focus on health (to be developed by FAHSS. Subject to be changed depending on course created.)

Note: NURS-4150, NURS-4571, NURS-4980, NURS-4990, NURS-4000 (or NURS-4010 or NURS-4020) must be taken in same semester; NURS-4562 and NURS-4572 must be in the same semester.

* NURS-4562, NURS-4572 are double-weighted courses that will be offered as half-semester (6 week) courses. If NURS-4562 is taken during the first 6 weeks of the semester, then NURS-4572 will be taken during the second 6 weeks. If NURS-4572 is taken during the first 6 weeks of the semester, then NURS-4562 will be taken during the second 6 weeks.

Courses used to calculate the major average are: All NURS courses

## BScN Program for Graduates of Lambton College's and St. Clair College's Practical Nursing Programs – Degree Completion Pathway

Qualified students will be given one year of credit for their previously completed two-year diploma in Practical Nursing that includes all relevant clinical experiences. Each student who enters the program will complete accredited courses from years one and two of the collaborative nursing program on the Lambton College or St. Clair College site. The courses that have been selected bridge the gap between what was previously studied and what needs to be completed to enter year three at the University of Windsor to complete the BScN. Students will be required to demonstrate competency with their health assessment skills prior to entering their first clinical experience in the program.

**Degree Requirements:**

Total courses: The students entering into the program at Lambton College or St. Clair College will receive credit for 12 courses towards the BScN. They will complete an additional 14 courses at Lambton College or St. Clair College that are a combination of year one and year two collaborative nursing course requirements.

The Registered Practical Nurse Pathway will include:
(a) NURS-1900, NURS-2130, NURS-2531, NURS-2810, NURS-2320, NURS-2541, NURS-2532, NURS-2820, NURS-2920, NURS-2520, NURS-2622, NURS-3551, NURS-3542, NURS-3830, NURS-3940, NURS-3950, NURS-3960, NURS-3140, NURS-3561, NURS-3552, NURS-3840, NURS-3970, NURS-3632, NURS-4150, NURS-4571, NURS-4980, NURS-4990, NURS-4000, NURS-4562*, NURS-4572*
(b) BIOM-1073, STAT-2910 or SOSC-2500; PSYC-3390
(c) one Arts course

*Will be offered as half-semester (6 week) courses.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

Students who come to the University of Windsor at the end of the year at Lambton College or St. Clair College will enter year three of the collaborative BScN.

Note: If NURS-4562 and NURS-4572 are is taken in the Fall term, then NURS-4150, NURS-4571, NURS-4980, NURS-4990, and NURS 4000 are taken in the Winter term. If NURS-4150, NURS-4571, NURS-4980, NURS-4990, and NURS 4000 are taken in the Fall term, then NURS-4562 and NURS-4572 are taken in the Winter term.

# NURSING COURSES

Note 1: Only NURS-3990, NURS-3510, and NURS-3910 are open to non-nursing students. These courses will not necessarily be offered each year.
Note 2: Theory courses are marked with a “(T)” next to the course title. Clinical courses are marked with a "(C)" next to the course title.
Note 3: For all nursing students, a minimum of 60% is required to complete/pass any nursing theory course. A minimum 60% grade is required to meet any nursing theory course prerequisites. (i.e. courses that are coded NURS-xxx).

**NURS-1110. Professional Nursing I (T)**
This is the first in a series of five courses that address professional nursing practice. The learner is introduced to the roles and responsibilities of registered nurses and fundamental concepts of professional nursing practice. Emphasis is on exploring the concept of health and professional nursing skills (i.e. critical thinking, therapeutic communication, evidence-informed decision-making, teaching and learning) that promote patient/client and family-centred care. (Prerequisite: Admission to the collaborative undergraduate nursing program. Corequisites: Registration in all courses required for first year fall semester) (3 lecture hours per week). 3 credits

**NURS-1120. Professional Nursing II (T)**
This is the second in a series of five courses addressing professional nursing practice. The learner will explore concepts that contribute to safer, high quality patient/client-centered health care systems. Examples include: leadership, collaboration, quality, and nursing informatics. The learner is introduced to the history and structure of the Canadian health care system. They explore the legal and professional roles and responsibilities of registered nurses in various care settings, and how nurses promote community and population health. (Prerequisite: NURS 1110, NURS 1900.) (3 Lecture hours per week) 3 credits

**NURS-1210. Human Anatomy and Physiology I (T)**
This is the first of two courses that introduce the learner to the foundations of anatomy and physiology within the context of nursing and health. Content includes an overview of the structure, function, and organization of the human body (from the cellular level, to tissues, organs, and organ systems) and review of selected organ systems such as the integumentary, nervous, endocrine, hematologic, and musculoskeletal systems. Review of systems will incorporate the anatomy and physiology of the system and its relevance, and importance to patient/client care. (Prerequisite: Admission to the collaborative undergraduate nursing program. Co-requisite: Registration in all courses required for first year fall semester) (3 lecture hours per week; 2 lab hours every other week) 3 credits

**NURS-1220. Human Anatomy and Physiology II (T)**
This is the second of two courses that introduce the learner to the foundations of anatomy and physiology within the context of nursing and health. Emphasis is on interrelationships among the

cardiovascular, immune, respiratory, digestive, urinary, and reproductive systems. The learner will also examine the regulation of physiological functions involved in maintaining homeostasis. (Prerequisite: NURS 1210.) (3 lecture hours per week; 2 lab hours every other week) 3 credits

**NURS-1310. Pharmacology and Medication Management I (T)**
This is the first in a sequence of two pharmacology courses. This course introduces the learner to the fundamentals of the science of pharmacology and safe medication management. Selected herbal, over-the-counter, and major drug classifications are introduced. (Prerequisite: Successful completion of all year one fall required courses) (Co-requisite: Registration in all courses required for first year Winter semester) (3 Lecture hours per week) 3 credits

**NURS-1410. Holistic Health Assessment I (T)**
This is the first of two courses that introduce the learner to concepts and principles underlying the holistic health assessment of the well adult. In this introductory course, the focus is on the development of interviewing and history taking skills, and foundational health assessment skills (physical, psychosocial, cultural, and spiritual). The learner will recognize normal findings and deviations from normal, and communicate assessment findings to promote health. (Prerequisite: Successful completion of all year one fall required courses) (Co-requisite: Registration in all courses required for first year winter semester) (3 Lecture hours per week) 3 credits

**NURS-1511. Experiential Learning Lab I (C)**
This is the first in a series of seven onsite experiential learning labs in which the learner will apply theory to clinical practice through a variety of interactive and simulated activities. In this course, the learner is introduced to clinical and communication skills for the professional nurse. (Prerequisite: Admission to the undergraduate collaborative nursing program) (Corequisite: Registration in all courses required for first year fall semester) (2 hours per week) (1 credit)

**NURS-1512. Clinical Practicum I (C)**
This is the first in a series of clinical practica that provide the learner with the opportunity to apply knowledge and skills in clinical practice settings. The learner will practice professionalism, components of holistic health assessment, and communication skills with the adult population, in the context of family and community. (Prerequisite: Successful completion of all year one fall required courses) (Co-requisite: Registration in all courses required for first year winter semester) (36 hours per semester) 1.5 credits

**NURS-1521. Experiential Learning Lab II (C)**
This is the second in a series of seven onsite experiential learning labs in which the learner will apply theory to clinical practice through a variety of interactive and simulated activities. In this course, the learner will apply introductory holistic health assessment skills, and selected clinical and communication skills for professional nursing. (Prerequisite: Successful completion of all year one fall required courses) (Co-requisite: Registration in all courses required for first year winter semester; this course must be taken concurrent with Holistic Health Assessment I) (36 hours per semester) (1 credit)

**NURS-1612. Consolidated Practicum I (C)**
This course provides the learner with the opportunity to consolidate knowledge and skills in a clinical practice setting. The learner will practice professionalism, selected clinical and health assessment skills, and communication skills with the adult population in the context of family and community. (Prerequisite: Successful completion of all required year one required courses) (72 hrs over two weeks) 3 credits

**NURS-1900. Writing for the Professional Nurse (T)**
This course introduces the principles of effective written communication that are essential in the diverse roles of a nursing professional. The aim is to help the learner develop the skills to accurately and reliably communicate written information in a variety of forms: personal reflections, documentation in charts/records, and scholarly writings (e.g., educational materials, abstracts, posters, journal articles, project reports). (Prerequisite: Open only to Nursing students. Corequisites: Registration in all courses required for first year fall semester) (3 lecture hours per week). 3 credits

**NURS-2130. Professional Nursing III (T)**
This course is the third in a sequence of five courses addressing professional nursing practice. The overarching focus is on competency development in intra-and inter-professional collaboration. Instructional content and learning activities will prepare the learner to collaborate with patients/clients/families/communities and other care providers to promote health. Examples of major topics include models of health promotion/prevention, communication and leadership in groups, cultural competency, teaching and learning, and evaluating practice guidelines for evidence- informed decision-making. (Prerequisite: Successful completion of all year one required courses.) (Co-requisite: Registration in all courses required for second year fall semester.) (3 Lecture hours per week) (3 credits.)

**NURS-2320. Pharmacology and Medication Management II (T)**
This is the second in a sequence of two pharmacology courses. This course builds on the knowledge the learner gained in Pharmacology and Medication Management I (NURS 1310). Major drug classifications will be examined and discussed. Particular emphasis will be placed on the nurse's responsibilities in drug therapy and the development of critical thinking skills necessary for the safe administration of medications in a variety of settings and during transitions in care. (Prerequisite: Successful completion of all year one winter required courses.) (Co-requisites: Registration in all courses required for second year fall semester.) (3 Lecture hours per week.)

**NURS 2420. Holistic Health Assessment II (T)**
This is the second of two courses that introduces and expands upon holistic health assessment concepts and principles of the well adult. The focus is on continued development of interviewing and history taking skills, and foundational health assessment skills related to specific systems. The learner will recognize normal findings, deviations from normal, and communicate assessment findings to promote health. (Prerequisite: Successful completion of all year one fall required courses) (Co-requisite: Registration in all courses required for first year winter semester) (3 Lecture hours per week)

**NURS-2522. Clinical Practicum II (C)**
This is the second in a series of clinical practica that provide opportunities for learners to integrate knowledge and skills in a clinical practice setting. The focus of this course is on application of the nursing process to provide holistic person-family centred care for adults experiencing health alterations. The learner will apply sub-concepts of critical thinking (clinical reasoning and clinical judgment). They will develop skills in evidence-informed decision-making and intra- and interprofessional collaboration to support the delivery of safe, quality nursing care. (Prerequisites: Successful completion of all required year one courses.) (Co-requisite: Registration in all courses required for second year fall semester.) (96 hours per semester; 3 credits.)

**NURS-2531. Experiential Learning Lab III (C)**
This is the third in a sequence of seven onsite experiential learning labs in which the learner will apply knowledge-based principles to practice by engaging in a variety of interactive and simulated activities that foster clinical reasoning and clinical judgment. Learners will build proficiency in therapeutic and profession communication techniques (intra and interprofessional), holistic health

assessment skills, safe medication administration principles, and selected psychomotor skills to care for adults with health alterations, and those undergoing surgical interventions. (Prerequisite: Successful completion of all year one winter required courses) (Co-requisite: Registration in all courses required for second year fall semester: this course must be taken concurrent with Holistic Health Assessment II) (36 hours per semester) (1 credit)

**NURS-2532. Clinical Practicum III**
This is the third in a series of clinical practica that provide the learner with the opportunity to apply knowledge and skills in clinical practice settings. The learner will apply the nursing process in the holistic care of patients/clients/families within the context of their community in collaboration with health care providers and in a variety of care settings and populations across the lifespan (e.g., child-bearing families, individuals experiencing alterations in physical and/or mental health). (Prerequisites: successful completion of all required fall year 2 courses) (Co-requisites: NURS 2541; NURS 2820; NURS 2920; NURS 2520). 8 hr/week; 3 credits

**NURS-2541. Experiential Learning Lab IV (C)**
This is the fourth in a sequence of seven onsite experiential learning labs in which the learner will apply knowledge-based principles to practice by engaging in a variety of interactive and simulated activities that foster clinical reasoning and clinical judgment. Learners will integrate therapeutic and professional communication techniques (intra and interprofessional), holistic health assessment skills, safe medication administration principles, and selected psychomotor skills to provide patient and family centered care for adults with health alterations, childbearing women and newborns, and individuals with psychiatric and mental health concerns. (Prerequisite: Successful completion of all year two fall required courses) (Co-requisite: Registration in all courses required for second year winter semester) (24 hours per semester) (1 credit)

**NURS-2622. Consolidated Practicum II**
This is the second in a series of consolidated clinical practica that provide the learner with the opportunity to consolidate knowledge and skills in clinical practice settings. The learner will apply the nursing process in the holistic care of patients/clients/families within the context of their community, in collaboration with health care providers and in a variety of care settings and populations across the lifespan (e.g., child-bearing families, individuals experiencing alterations in physical and/or mental health). (Prerequisites: successful completion of all Year 2 Winter courses) (72 hrs over two weeks) 3 credits

**NURS-2810. Adult Health and Health Alterations I (T)**
This is the first in a sequence of four courses that address the concepts and principles associated with the nursing care of adults experiencing alterations in health, across health care settings and throughout the care continuum. This course focuses on foundational knowledge-based concepts (e.g., stress, pain, oxygenation) that are common across a variety of health alterations, and on the care of adults undergoing surgery. The course also focuses on the care of adults experiencing selected common acute or chronic health alterations (e.g., respiratory disorders, vascular disorders, diabetes). Principles of pathophysiology, assessment, pharmacology, nutrition, collaborative management and quality and evidence-based care are emphasized. (Prerequisites: Successful completion of all year one required courses.) (Co-requisites: Registration in all courses required for second year fall semester.)

**NURS-2820. Adult Health and Health Alterations II (T)**
This is the second in a sequence of four courses that address the concepts and principles associated with the nursing care of adults experiencing alterations in health across health care settings and throughout the care continuum. Building upon the knowledge acquired in Adult Health and Health Alterations I, this course continues to focus on the care of adults experiencing selected common acute

or chronic health alterations (e.g. infectious diseases, disorders of the gastrointestinal, urinary, and cardiovascular systems). Principles of pathophysiology, assessment, pharmacology, nutrition, collaborative management and quality and quality and evidence-based care are emphasized. (Prerequisites: Successful completion of all year two fall required courses.) (Co-requisites: Registration in all courses required for second year winter semester.)

**NURS-2902. Individualized Clinical Nursing Experience (C)**
This clinical practice course is intended for students who were unable to sequentially complete NURS-2722, NURS-2742, or NURS-2782 due to extenuating circumstances. The course emphasizes the practice of professional and technical skills in a clinical setting that will enable to students to obtain course competencies that are consistent with the course that student could not complete as a result of extenuating circumstances. This course may be taken only with special permission, and will be offered only if required resources are available. (Prerequisite: Completion of all year 2 non-clinical nursing courses; clinical course pre-requisites to be determined by the Faculty of Nursing on an individual basis). (Offered on a Pass/Non Pass basis) (40 hours/week for 2 weeks if used to replace NURS-2722, NURS-2742 or 40 hours/week for 4 weeks if used to replace NURS-2782.) (Students who completed NURS-2722, NURS-2742, or NURS-2782 are not eligible to take this course.)

**NURS-2920. Maternal and Newborn Care (T)**
This course introduces the learner to concepts related to the provision of nursing care for childbearing women, their newborns and families. The focus of this course is on the application of critical thinking and clinical judgement related to reproduction, pregnancy, labour and delivery and postpartum care. Culture, situational crises, ethical considerations, risk assessment and intervention strategies will be explored to promote the health of childbearing women, their newborns and families. (Prerequisites: Completion of all year 2 fall semester courses) (Corequisites: Registration in all required nursing and courses in winter semester) (3 lecture hours a week.)

**NURS-2930. Mental Health Nursing**
This course introduces the learner to specialized nursing knowledge required to understand, promote, and maintain mental health and wellness across the lifespan. This course focuses on the nursing care of individuals experiencing major mental health disorders. Comprehensive and focused mental health assessments; crisis intervention and prevention; therapeutic communication techniques/skills; and the promotion of positive mental health outcomes are addressed. Through a trauma-informed lens, principles of physiology; pharmacological and non-pharmacological interventions; and collaborative, quality, and evidence-based care are explored. (Prerequisite: Successful completion of all year two fall required courses.) (Co-requisite: Registration in all courses required for second year winter semester.) (3 Lecture hours per week.) (3 credits.)

**NURS-3140. Professional Nursing IV**
This is the fourth in a sequence of five courses addressing professional nursing practice. This course prepares learners to apply tools and frameworks for leading and managing change at the team, organizational and systems levels. Learners will analyze and apply theories of change, and quality improvement tools and processes to actual/hypothetical scenarios from various practice situations and settings. Emphasis is on continued development of leadership, critical thinking, oral and written communication skills, evidence-informed decision-making, cultural safety, patient safety, and nursing informatics. (Prerequisite: Successful completion of all year 3 fall required courses.) (Co-requisites: Registration in all courses required for Year 3 winter semester.)

**NURS-3510. The Human Meaning of Death (T)**

An examination of the human experience of death and dying, the meaning of human life, ethical and cultural aspects, euthanasia, and advanced directives. Lectures, readings, films, and discussions will explore a variety of significant thinkers and concepts concerning death. Through various exercises and shared experiences, students will be encouraged to examine their own feelings and attitudes toward death. (Open to non-nursing students and may be taken as an Arts courseby B.Sc.N. students.) (3 lecture hours a week.)

**NURS-3542. Clinical Practicum IV**
This is the fourth in a series of clinical practica that provide the learner with the opportunity to apply knowledge and skills in clinical practice settings. The learner will apply the nursing process in the holistic care of patients/clients/families/communities in collaboration with health care providers and in a variety of care settings and populations across the lifespan (e.g., child-bearing families, pediatrics, individuals experiencing complex alterations in physical and/or mental health). (Prerequisites: successful completion of all Year 2 courses.) (96 hours (8 hrs x 12 wks).) (3 credits.)

**NURS-3551. Experiential Learning Lab V**
This is the fifth in a sequence of seven onsite experiential learning labs in which the learner will combine knowledge-based principles to formulate, evaluate, and revise care to specialized populations across the lifespan, in various settings. Learners will demonstrate clinical reasoning and clinical judgment through a variety of interactive and simulated activities including safe medication administration, laboratory values interpretation, and selected psychomotor skills. Learners will demonstrate therapeutic and professional communication techniques to identify and implement change. (Prerequisite: Successful completion of all year two winter required courses.) (Co-requisite: Registration in all courses required for third year fall semester.) (2 hrs every other week; 0.5 credit.)

**NURS-3552. Clinical Practicum V**
This is the fifth in a series of clinical practica that provide the learner with the opportunity to apply knowledge and skills in clinical practice settings. The learner will apply the nursing process in the holistic care of patients/clients/families/communities in collaboration with health care providers and in a variety of care settings and populations across the lifespan (e.g., child-bearing families, pediatrics, older adults, individuals experiencing alterations in physical and/or mental health). (Prerequisites: successful completion of all Fall Year 3 courses.) (Co-requisite: Registration in all courses required for third year Fall semester.) 96 hours (8 hr x 12 weeks) 3 credits.

**NURS 3561. Experiential Learning Lab VI**
This is the sixth in a sequence of seven onsite experiential learning labs in which the learner will combine knowledge-based principles to formulate, evaluate, and revise care to specialized populations across the lifespan, in various settings. Learners will demonstrate clinical reasoning and clinical judgment through a variety of interactive and simulated activities including safe medication administration for adult patients and specialized populations, laboratory values interpretation, and learning or mastering selected psychomotor skills and assessments. Learners will demonstrate therapeutic and professional communication techniques to identify and implement change. (Pre-requisites: Successful completion of all year 3 fall required courses.) (Co-requisite: Registration in all courses required for Year 3 winter semester.)

**NURS-3632. Consolidated Practicum III**
This is the third in a series of three consolidated clinical practica that provide the learner with the opportunity to consolidate knowledge and skills in clinical practice settings. The learner will apply the nursing process in the holistic care of patients/clients/families/communities in collaboration with health care providers and in a variety of care settings and populations across the lifespan (e.g., child-bearing

families, pediatrics, older adults, individuals experiencing alterations in physical and/or mental health). (Prerequisites: successful completion of all fall and winter Year 3 courses.)

**NURS-3760. Advanced Health Assessment (T)**
This course is intended to help senior level BScN students strengthen their assessment skills through presentation of cases, experiential learning, helping student to effectively and consistently differentiate their assessments and focus their plans of care. The student will be expected to integrate prior and current learning in deciding what data to collect and what data is important in developing differential nursing diagnoses. Provides an opportunity to focus on critical thinking, diagnostic-reasoning skills as students transition to the novice RN role. (Prerequisite: NURS-2782.) (1 lecture hr/week plus 2 laboratory hrs/week)

**NURS-3830. Adult Health and Health Alterations III**
This is the third in a sequence of four courses that address the concepts and principles associated with the nursing care of adults experiencing alterations in health across health care settings and throughout the care continuum. Building upon the knowledge acquired in Adult Health and Health Alterations I and II, this course focuses on the care of adults experiencing selected complex acute or chronic health alterations (e.g., cardiovascular, endocrine, renal, hematology, and oncology disorders, and end of life care). Principles of pathophysiology, assessment, pharmacology, nutrition, collaborative management, and quality and evidence-based care are emphasized. (Prerequisites: Successful completion of all year two winter required courses.) (Co-requisites: Registration in all courses required for third year fall semester.) (3 lecture hours per week.) 3 credits

**NURS-3840. Adult Health and Health Alterations IV**
This is the fourth in a sequence of four courses that address the concepts and principles associated with the nursing care of adults experiencing alterations in health across health care settings and throughout the care continuum. Building upon the knowledge acquired in Adult Health and Health Alterations I, II and III, this course focuses on adults experiencing complex and multi-system health alterations (e.g. cardiac arrhythmia and disorders, hemodynamic monitoring, shock states, burns, acute respiratory and neurological disorders and emergency care), and includes concepts and interventions associated with care of the critically ill adult. Principles of pathophysiology, assessment, pharmacology, nutrition, collaborative management and quality and evidence-based care are emphasized. (Prerequisites: Successful completion of all year three fall required courses.) (Co-requisites: Registration in all courses required for third year winter semester.)

**NURS-3902. Individualized Clinical Nursing Experience (C)**
This clinical practice course is intended for students who were unable to sequentially complete NURS-3722, NURS-3742, or NURS-3782 due to extenuating circumstances. The course emphasizes the practice of professional and technical skills in the care of individuals across the life span who are experiencing complex or multi-system health disruption within the context of family and community. This course may be taken only with special permission, and will be offered only if required resources are available. (Prerequisite: Completion of all year 3 non-clinical nursing courses; clinical course pre-requisites to be determined by the Faculty of Nursing on an individual basis; all non-specified courses). (Offered on a Pass/Non Pass basis.) (40 hrs/week for 2 weeks).

**NURS-3940. Nursing Care of Infants, Children, and Youth**
This course focuses on the health promotion and nursing care needs of infants, children and youth with alterations in health. Principles of growth and development; and the physiological, psychosocial, cultural and spiritual care needs of children with the context of family are emphasized. (Prerequisites:

Successful completion of all year two winter required courses.) (Co-requisites: Registration in all courses required for third year fall semester.) (3 lecture hours per week.) 3 credits

**NURS-3950. Course Title: Nursing Research**
Building on knowledge and skills developed in Professional Nursing I and III, this course will enhance the learners' ability to formulate questions for evidence-informed decision-making and apply critical appraisal skills to selected research methodologies and studies. Learners will critically use relevant information, knowledge and communication technologies to support evidence-informed nursing practice. (Prerequisite: Successful completion of all year two winter required courses.) (Co-requisite: Registration in all courses required for third year fall semester.) (3 lecture hours per week.) 3 credits

**NURS-3960. Community Health Nursing**
This course will focus on the registered nurses' role in caring for, and working with, communities in Canada. Emphasis will be placed on applying relevant community health nursing practice standards, community health nursing theories, the social determinants of health, and social justice concepts. The learner will explore the use of evidence-informed information and therapeutic relationships in advocating for and promoting the health of communities. (Prerequisites: Successful completion of all year two winter required courses.) (Co-requisites: Registration in all courses required for third year semester.) (3 lecture hours per week.) 3 credits

**NURS-3970. Health Issues in Gerontology**
This course is designed to focus on contemporary biopsychosocial changes inherent in human aging. It includes an exploration of the theories, the meaning, and the epidemiology of aging; and public policy relevant to the diverse aging population in Canada. The course examines debates on health care rationing, self-determined death, mistreatment of older adults, and the impact of age on creativity and sexuality. It provides an overview of the influence of chronic illnesses and the social determinants of health on age, aging, and later life. The course also considers normal aging patterns and abnormal circumstances such as cognitive and mental health decline; and discusses implications for nursing and other service providers across disciplines as well as the health care and long-term care sectors in Ontario, Canada, and beyond. (Prerequisites: Successful completion of all year 3 fall required courses.) (Co-requisites: Registration in all courses required for third year winter semester.)

**NURS-3990. Selected Topics in Nursing (T)**
This selected topics course will offer students an opportunity to study in-depth a topic of interest to individuals preparing for a career in a health profession. The selection of topics will vary from term to term, depending on the expertise of available instructors. May include a lab component depending on the topic. Possible special topics include, Women's Health, Indigenous Health, etc., but for a complete list of approved courses from within Nursing, please contact the Faculty of Nursing. (Open to non-Nursing students and may be taken to fulfill non-specified course requirements by BScN students.)(3 lecture hours a week, with possible lab component depending on the topic). (May be repeated for credit if content changes)

**NURS 4150. Professional Nursing V**
This is the last in a sequence of five courses addressing professional nursing practice. This course is designed to facilitate mastery of the skills and competencies needed to transition from the role of nursing student to registered nurse. Emphasis is placed on the nurse's role and responsibilities in coordinating patient/client care across settings, sectors, and systems, including supporting continuity of care and safe care transitions. Selected curricular concepts (i.e., knowledge-based practice, clinical reasoning, clinical judgement, safety) are integrated to promote independent nurse decision-making and to help prepare learners for nursing registration examinations (NCLEX-RN, Jurisprudence Exam).

(Prerequisite: Successful completion of all year 3 required courses.) (Co-requisites: NURS-4571, NURS-4980, NURS- 4990.) (Anti-requisite: NURS-4730.)

**NURS-4562. Integrated Clinical Practicum: Community**
This precepted clinical experience engages the learner in opportunities to synthesize cumulative knowledge and skills in a variety of community practice settings, and with populations across the lifespan. The emphasis is on demonstrating proficiency in select entry-to-practice competencies and enacting the role of nurse as care coordinator to support safe transitions in care and client/family navigation of the healthcare system. The learner will independently apply all core curricular concepts (i.e., critical thinking, knowledge-based practice, evidence-informed decision making, health, teaching/learning, professional practice, communication, leadership, collaboration, quality, safety, person-family centred care and health informatics) within the context of community as client. This course includes experiential integrated rounds. (Prerequisites: successful completion of all year 3 courses; corequisite: NURS-4572)

**NURS 4571. Experiential Learning Lab VII**
This is the seventh in a sequence of seven onsite experiential learning labs in which the learner will integrate knowledge-based principles with clinical reasoning and clinical judgment to formulate, evaluate, and revise nursing care for specialized populations across the lifespan, in various settings, and in changing contexts. Interactive simulated scenarios assess mastery of competencies required for entry-to-nursing practice. The case-based scenarios will emphasize the nurse coordination role and enable the learner to apply concepts of leadership, followership, collaboration, communication, and principles of delegation and prioritization. (Prerequisite: Successful completion of all year 3 fall required courses.) (Co-requisites: NURS- 4150, NURS- 4980, NURS- 4990.)

**NURS-4572. Integrated Clinical Practicum: Hospital**
This precepted clinical experience engages the learner in opportunities to synthesize cumulative knowledge and skills in a variety of acute care practice settings, and with populations across the lifespan. The emphasis is on demonstrating proficiency in select entry-to-practice competencies and enacting the role of nurse as care coordinator to support safe transitions in care and patient/family navigation of the healthcare system. The learner will independently apply all core curricular concepts (i.e., critical thinking, knowledge-based practice, evidence-informed decision making, health, teaching/learning, professional practice, communication, leadership, collaboration, quality, safety, person-family centred care and health informatics) to the care of patients and families with complex and changing health needs. This course includes experiential integrated rounds. (Prerequisite: Successful completion of all year 3 required courses.) (Co-requisite: NURS-4562.)

**NURS-4722. Clinical Nursing Experience (C) (This course will be discontinued Fall 2022.)**
This course is a precepted clinical practice experience, which enables the student to synthesize theory, research, and professional and technical skills in clinical nursing practice. The expected student outcome is a beginning skill level in the competencies identified by the College of Nurses of Ontario. (Prerequisites: Completion of all required 3000-level Nursing courses, and all non-specified courses.) (Offered on a Pass/Non Pass basis.) (192 clinical hours over 6 or 12 weeks). Total hours (including orientation, clinical, simulation and evaluation) = 204.

**NURS-4730. Concepts of Leadership in Nursing Practice (T) (This course will be discontinued Fall 2022.)**
This course focuses on the leadership and management roles of the nurse within the context of nurses' scope of practice as defined by current legislation and professional standards and expectations. The course is designed to assist nurses to become effective members of health care organizations both as employees, leaders and future managers. Content will address leadership and management theories,

organizational structure, planned change, conflict resolution, organizational communication, problem solving, decision making, strategies for effective delegation, motivation, nursing care delivery approaches, and total quality management. (Prerequisites: Completion of all required 3000-level Nursing courses, and all non-specified courses.) (36 lecture hrs over 6 or 12 weeks)

**NURS-4762. Clinical Nursing Experience (C) (This course will be discontinued Fall 2022.)**
This course is a precepted clinical practice experience within the context of community as client which enables the student to synthesize theory, research and professional and technical skills in clinical nursing practice. The expected student outcome is a beginning skill level identified by the College of Nurses of Ontario. (Prerequisites: Completion of all required 3000-level Nursing courses, and all non-sepcified courses.) (Offered on a Pass/Non Pass basis.) (16 clinical hrs/week; or 192 total clinical hrs.) Total hours (including orientation, clinical and evaluation) = 201.

**NURS-4790. Issues in Global Health (T) (This course will be discontinued Fall 2022.)**
This course will explore selected health issues, trends and epidemiological principles that relate to global health. This will include current research related to social determinants of health; primary health care; health care in low-resource regions and the burden of disease in developed and developing countries. Topics will also include the impact of migration, marginalization, and the effects of globalization and climate change on the health of populations. (Prerequisites: Completion of all required 3000-level Nursing courses, and all non-specified courses.) (3 lecture hours a week. Course co-requisites: NURS-4730 and one of NURS-4722 or NURS-4762) (36 lecture hrs over 6 or 12 weeks)

**NURS-4810. Transition to Professional Practice (T) (This course will be discontinued Fall 2022.)**
Transition to Professional Practice is a capstone course designed to facilitate transition from the role of nursing student to employment as a professional nurse. Topics discussed will include the ethical, legal, political, professional and interprofessional issues as they relate to professional accountability and safe, competent and compassionate nursing practice. This course culminates in a student designed project. (Pre-requisites NURS-3890, NURS-4730 and NURS-4790. Co-requisites NURS-4722 or NURS-4762). (3 lecture hours/week plus scholarly writing lab)

**NURS-4902. Individualized Clinical Nursing Experience (T)**
This clinical practice course is intended for students who were unable to complete a required Level 4 clinical course (NURS-4722 or NURS-4762) due to extenuating circumstances. This course emphasizes the practice of professional and technical skills in a clinical setting that will enable to students to obtain course competencies that are consistent with the course that student could not complete as a result of extenuating circumstances. This course may be taken only with special permission, and will be offered only if required resources are available. (Prerequisite: Completion of all non-clinical nursing courses in the level in which the student is enrolled; clinical course pre-requisites to be determined by the Faculty of Nursing on an individual basis). (Offered on a Pass/Non Pass basis) (192 hours over 6-12 weeks) (Students who have successfully completed all of the usual clinical courses for their current academic year are not eligible to take NURS-4902.)

**NURS-4980. Palliative and End-of-Life Care**
This course prepares the learner to apply a palliative approach to care for patients/clients/families who are experiencing progressive life-limiting illnesses and/or nearing end of life. The focus of this course is on the application of critical thinking and decision-making in the assessment and planning of evidence-informed person and family-centred palliative care and with emphasis on symptom assessment and management, communication, collaboration, psychosocial, cultural and spiritual support, loss and grief, and end of life care in the last days and hours. The learner will analyze ethical, legal, and systems-based issues in palliative care and nursing roles and responsibilities in coordinating culturally safe care across

sectors and settings. (Prerequisite: Successful completion of all year 3 required courses.) (Co-requisites: NURS-4571, NURS-4150, NURS-4990).

**NURS-4990. Issues in Global and Planetary Health**
The learner will explore the foundational concepts of global and planetary health, as well as current and emerging issues, trends, and research that impact human, global and planetary health. The learner will apply concepts of critical thinking, health, safety, professional practice, leadership, collaboration, and evidence informed practice when examining the roles, responsibilities and contributions of nurses, the nursing profession, and other stakeholders in addressing global and planetary health trends, issues, and concerns. (Pre-requisites: Successful completion of all year 3 required courses.) (Co-requisites: NURS-4571, NURS-4150, NURS-4980.)

# FACULTY OF SCIENCE

Students are directed to become familiar and to comply with the general regulations of the University which apply to all students. Additionally, the Faculty, and individual programs within the Faculty of Science may have particular regulations. Students enrolled in programs in the Faculty of Science also must comply with these particular requirements which may be found in the program sections of the Faculty. We strongly encourage students to seek counselling in the Departments or in the Faculty of Science Office to clarify the requirements of their particular degree programs.

## General Information About Science Programs

**Bachelor of Science General Programs**
The Bachelor of Science (General Science) requires the completion of thirty courses.

**Bachelor of Science Honours Programs**
Programs leading to an Honours B.Sc. require the completion of forty courses. Specific requirements differ depending upon the Honours Major(s). Course selection may provide for further specialization in a single subject or in a combination of related subjects. Students who achieve a major average of 70% or higher will receive the Honours degree.

**BSc Honours with Thesis Programs**
Programs leading to an Honours B.Sc. with Thesis require the completion of forty courses, of which two course credits would result in a thesis in the final year of study. Honours standing (major average of 70% or higher) is required for graduation in all B.Sc. with Thesis programs. In any program some degree of specialization is possible; course selection may provide for further specialization in a single subject or in a combination of related subjects.

**Bachelor of Computer Science Programs**
Computer Science - Both general and honours programs are offered, leading to the degree of Bachelor of Computer Science (B.C.S.). Each permits the student to augment a specialized study of computers with an extensive study of one of a number of related fields, or with a broad spectrum of other courses. A Co-operative Education program is offered in Honours Computer Science. Also offered are B.Sc. programs leading to degrees in Computer Information Systems Specialization, or with Software Engineering Specialization.

**Bachelor of Arts in Economics**
Economics - Both general and honours programs are offered leading to the Bachelor of Arts degree in Economics. Combined degrees are also available.

**Bachelor of Science Honours in Economics**
Economics - Honours program leading to the Bachelor of Science degree in Economics.

**Bachelor of Mathematics**
Mathematics and Statistics - Both general and honours programs lead to the Bachelor of Mathematics (B.Math.) degree. Mathematics also may be combined with Computer Science or another major leading to the Honours B.Math. degree.

# Co-operative Education Programs

The Co-operative Education Program offers students the opportunity to combine their classroom experiences with related work experiences. Students seeking admission to the co-operative Education Program must be admitted to the Faculty of Science and enrolled as a full-time student. The Faculty of Science offers the following Co-op programs:

Computer Science:
Bachelor of Computer Science (Honours)
Bachelor of Science (Honours Computer Information Systems)
Bachelor of Science (Honours Computer Science with Software Engineering Specialization)

Physics:
Bachelor of Science in Physics
Bachelor of Science in Physics (Physics and High Technology)
Bachelor of Science in Physics (Medical Physics)

**ADMISSION AND APPLICATION**
Students can apply for admission to the co-op program in high school and in September during the second year of study. Students applying for Co-op during their second year of study will be required to submit an application form and a resume. Second year admission will be based on academic achievement, previous volunteer and paid work experience, and in some cases, an interview.

NOTE: Each Co-op program within the Faculty of Science has particular regulations and guidelines. Students are directed to the program sections of the Faculty.

# Pre-medical and Pre-professional Programs

In addition to the degree programs, the Faculty of Science offers combinations of course selections for students intending to apply to professional schools such as medicine, dentistry, optometry, pharmacy, physiotherapy, alternative medicine, chiropractic, radiation therapy, etc. All students intending to apply for admission to a professional school are advised to study carefully the requirements of the particular schools) to which admission is sought because there is some variation, both with respect to choice of subjects and number of years of study required for entrance. Institutions may also change their requirements from time to time.

# PROGRAMS ADMINISTERED BY THE OFFICE OF THE DEAN OF SCIENCE

## Bachelor of Science (General Science)

**Degree Requirements**

Total courses: thirty.

(a) two sets of six courses from two different Departments or School as listed:

- Biological Sciences: BIOL-1101 and BIOL-1111; and *four BIOL-XXXX courses at the 2000 level or above
- Chemistry and Biochemistry: CHEM-1100 and CHEM-1110; and *four CHEM-XXXX or BIOC-XXXX courses at the 2000 level or above
- Computer Science: COMP-1400 and COMP-1410; and *four COMP-XXXX courses at the 2000 level or above
- School of the Environment: ESCI-1100 and ESCI-1111; and *four ESCI-XXXX courses at the 2000 level or above
- Economics: ECON-1100 and ECON-1110; and *four ECON-XXXX courses at the 2000 level or above
- Mathematics and Statistics: MATH-1720 (or MATH-1760) and MATH-1730; and *four MATH-XXXX or STAT-XXXX courses at the 2000 level or above
- Physics: PHYS-1400 and PHYS-1410; and *four PHYS-XXXX courses at the 2000 level or above

*NOTE: These courses must be from among the courses listed to calculate the major average for a degree program in the Department or School.

(b) one set of two courses from a third Department or School as listed:

- Biological Sciences: BIOL-1101 and BIOL-1111
- Chemistry and Biochemistry: CHEM-1100 and CHEM-1110
- Computer Science: COMP-1400 and COMP-1410, or COMP-1047 and COMP-2057, or COMP-2067 and COMP-2057
- School of the Environment: ESCI-1100 and ESCI-1111
- Economics: ECON-1100 and ECON-1110
- Mathematics and Statistics: MATH-1760 and STAT-2910, or MATH-1720 and STAT-2910, or MATH-1760 and MATH-1730, or MATH-1720 and MATH-1730.
- Physics: PHYS-1400 and PHYS-1410 or PHYS-1300 and PHYS-1310

(c) four Science courses at the 300 level or above which are from the courses listed to calculate the major average for a degree program of the Department or School in the Faculty of Science that offers the courses.
(d) four courses from Arts/Languages and Social Sciences, with at least one from each
(e) eight courses from any area of study excluding BIOM-1003, BIOL-1013, CHEM-1000, BIOC-1303, CHEM-2003, MATH-1280, MATH-1780, MATH-1980, ESCI-1000 and ESCI-1010

**Calculation of Major Average**
The major average is calculated from the grades of all Science courses, excluding the grades obtained in the following courses: ECON-2000, ECON-2010, BIOM-1003, BIOL-1013, BIOM-2093, CHEM-1000, BIOC-1303, CHEM-2003, CHEM-2305, BIOC-2015, COMP-2077, COMP-2097, COMP-2707, COMP-3057, COMP-3077, ESCI-1000, ESCI-1010, ESCI-2300, ESCI-2010, ESCI-2630, MATH-1280, MATH-1780, MATH-1980, PHYS-1000, PHYS-1010, PHYS-2050, PHYS-2060 and ESCI-2000.

Note: COMP-1047 or COMP-2067 and COMP-2057 count as a 'science pair' (see requirement (b) above) and will be included in the calculation of the major average.

**Standing Required for Continuation in the BSc (General Science) Program**

1) the minimum requirement for continuation "in good standing" in the General Science program is a minimum cumulative average of 60% and a minimum average of 60% in the required Science courses of this program.

2) If a student has not met the minimum cumulative and science course average requirements by the end of the Summer or Fall term, the student automatically will be placed on probation.

3) If, at the end of the Winter term, a student has not met the minimum cumulative and science course average requirements, the student's record will be referred to the Academic Standing Committee for a decision.

(a) If one average is at least 60%, but the other is between 55% and 59.9% (or if both averages are between 55% and 59.9%), the student normally will be allowed to continue on probation until the next evaluation period.
By the subsequent evaluation period, both averages must be raised to at least 60% or the student will be required to withdraw.
(b) If both averages are below 55%, the student normally will be required to withdraw.
(c) If only one average is below 55%, the student may be required to withdraw.

4) A student who has been required to withdraw may not register in the Faculty of Science for twelve months and may not apply for re-admission before the subsequent Summer term. The student must apply for re-admission to the Faculty through the Office of the Registrar by the appropriate deadline date for the term desired and must with the application include a statement of rationale and any documentation of academic success attained elsewhere.

Readmission to the Faculty is not automatic and will be dependent upon the Academic Standing Committee's assessment of the applicant's prospects for successful completion of the program. If readmitted, the student will be placed on probation and must raise the cumulative and science course averages to 60% by the next evaluation period and must satisfy any additional conditions of readmission which may have been imposed. If the student fails to meet such requirements, he or she normally will be required to withdraw. A student who has been required to withdraw a second time will not be eligible for readmission under any conditions. Students receiving the BSc. (General Science) degree will have the designation, "General Science" respectively indicated on their transcripts.

## Bachelor of Science (General Science) for Graduates of a College Diploma Program in Medical Laboratory Technology

This program is for graduates of a College diploma program in Medical Laboratory Technology (Science) and may be completed by Flexible Learning (HyFlex or Distance Education) depending on program demand and course offerings. Students admitted to this program should seek academic counselling in the Faculty of Science Office by contacting scienceundergrad@uwindsor.ca.

## Concurrent General Bachelor of Science (General Science)/ Bachelor of Education

Direct admissions from high school only.

This is a joint offering between the Faculty of Science and the Faculty of Education. See Faculty of Education for program requirements.

## Honours Bachelor of Forensic Science (BFS)

Forensic Science is the study of evidence in modern criminal investigation for presentation in courts of law. The Bachelor of Forensic Science (Hons.) Program will provide students with an education in both the Arts and the Sciences, with a focus on acquiring the skills and knowledge essential to the practice of professional Forensic Science. The program will enable students to develop as inquisitive researchers, have an understanding of scientific processes and processes and protocols, lab procedures, criminality, judicial systems, (physical) evidence, the significance of high ethical standards, sophisticated interpersonal skills, and effective report writing and public speaking skills.

**Degree Requirements**

Total courses: forty

(a) FRSC-1101; FRSC-2007; FRSC-2100; FRSC-3010; FRSC-3101; FRSC-3105; FRSC-3111; FRSC-4002; FRSC-4207; FRSC-4217; FRSC-4900 (two semester course); SACR-2150; LAWS-2190;
(b) any three of the following (if not required in chosen area of concentration): FRSC-3201; FRSC-3217; FRSC-4018; FRSC-4227; FRSC-4237; SACR-3230; SACR-4120
(c) ten additional courses from one of the four following areas of concentration: Biology, Chemistry, Life Sciences, or Information Technology. At least four of these courses must be at the 3000 level or above. The area of concentration must be declared prior to entry of second year studies.
(d) BIOL-1101; BIOL-1111; CHEM-1100; CHEM-1110; CHEM-2300 OR CHEM-2320 (CHEM 2300 if CHEM 2310 is required in chosen area of concentration); MATH-1720; STAT-2910; one pair of PHYS-1300 and PHYS-1310 OR PHYS-1400 and PHYS-1410 (PHYS-1400 and PHYS-1410 are required in Chemistry concentration); COMP-1047;
(e) three courses from any area of study.

Courses that are used to calculate the major average: courses listed under requirements (a) and (b), and courses in the chosen area of concentration

**Area of Concentration: Life Sciences**

Required Courses
BIOL-2040 Human Physiology
BIOL-2111 Genetics
BIOM-2131 Introductory Molecular Biology
CHEM-2200 Analytical Chemistry
BIOC-2010 Organic Chemistry of Biomolecules
SACR-3230. Forensic Anthropology
FOUR Additional courses from BIOL, BIOC, FRSC, CHEM, or SCIE.

**Area of Concentration: Biology**

Required Courses
BIOL-2101 Ecology
BIOL-2111 Genetics
BIOL-3250 Population and Community Ecology

BIOL-3142 Evolution
BIOL-3291 Invertebrate Biology OR FRSC-3201 Insect Evidence
BIOC-2010 Organic Chemistry of Biomolecules
SACR-3230 Forensic Anthropology
THREE Additional courses from BIOL, FRSC, CHEM, or BIOC, or SCIE

**Area of Concentration: Chemistry**

Required Courses
CHEM-2310 Introduction to Organic Chemistry II
CHEM-2400 Introduction to Physical Chemistry I
CHEM-2410 Introduction to Physical Chemistry II
CHEM-2500 Introduction to Inorganic Chemistry I
CHEM-2510 Introduction to Inorganic Chemistry II
CHEM-2200 Analytical Chemistry
CHEM-3210 Principles of Instrument Analysis
BIOC-2010 Organic Chemistry of Biomolecules
TWO Additional courses from BIOL, FRSC, CHEM; SCIE, or BIOC

**Area of Concentration: Information Technology**

Required Courses
COMP-2067 Programming for Beginners
COMP-2057 Introduction to the Internet
COMP-2077 Problem Solving and Information on the Internet or COMP-2097 Social Media and Mobile Technology for end users (one of the two)
COMP-2707 Advanced Web Design, Construction and Deployment
COMP-3057 Cyber Ethics
COMP-3077 Web-based Data Management
FOUR Additional courses from BIOL, FRSC, CHEM; COMP; SCIE, or BIOC

## Combined Bachelor of Arts in Forensics

The program provides training in the identification, collection and presentation of evidence in criminal investigations, as well as an education in a second area of study.

**Degree Requirements**

Total courses: forty.

(a) Forensics: PHIL-2260 or HIST-2870 or GART-2090; SACR-2150; SACR-3230; BIOL-1101; BIOL-1111; any one from COMP-1047, PSYC-1150 or ESCI-1100; one of SOSC-2500 or STAT-2910; FRSC-1101; FRSC-2007; FRSC-2100; FRSC-3010; FRSC-3105; FRSC-3111; LAWS-2190; FRSC-4207; any three of the following: FRSC-3217; FRSC-4018; FRSC-4227; FRSC-4237; FRSC-4002; FRSC-4900 (two credit course); SACR-4120, FRSC-4217.
(b) Course requirements-Other Subject in Arts, Humanities and Social Sciences: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) additional courses (if required) to a total of forty courses. MATH-1760/MATH-1720 is strongly recommended.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

**RECOMMENDED COURSE SEQUENCING**
First Year: ten courses, including: BIOL-1101; BIOL-1111; FRSC-2007; MATH-1720 (or MATH-1760)
Second Year: ten courses, including: BIOL-2111; SACR-2600; SACR-2150; STAT-2910 (or SOSC-2500); GART-2090
Third Year: ten courses, including: FRSC-3010; FRSC-3105; FRSC-3111; SACR-3230;
Fourth Year: ten courses, including: LAWS-2190; HIST-2870 or PHIL-2260

## Combined Bachelor of Arts in Forensics and Criminology (Applied Forensic Science Stream) - Degree Completion Pathway

This program is for graduates of a two-year Ontario College Diploma in Police Foundations from a qualifying Ontario College of Applied Arts and Technology (CAAT) or for graduates of any program from an Ontario CAAT or other Canadian College deemed equivalent by the Dean of Science or their designate.

**Admission Requirements**
1) Graduates of a two-year Ontario College Diploma in Police Foundations (MCU Code 53008) from a qualifying Ontario or equivalent College of Applied Arts and Technology (CAAT), with a cumulative average of at least a B (73%) grade), are eligible for admission to the Combined Bachelor of Arts in Forensics - Applied Forensic Science Stream degree program offered by the Faculty of Science at the University of Windsor under the provisions of this agreement. The Dean of Science or their designate has the authority to admit students from qualifying colleges in equivalent diploma programs within Canada pending that they meet all other admission requirements.
2) In addition to the appropriate two-year Diploma and grade point average, applicants of the Combined Bachelor of Arts in Forensics - Applied Forensic Science Stream are required to have successfully completed MHF4U and SBI4U or their equivalent courses. Students who have not completed these courses or their equivalents will be required to complete the equivalent courses within the Foundations of Science Preparation Program.
3) Students admitted to the Combined Bachelor of Arts in Forensics - Applied Forensic Science Stream will obtain the equivalent of 2 years of Advanced Standing (or awarded up to 20 course transfers).
4) Students are required to complete twenty (21) courses at the University of Windsor in fulfillment of the requirements of the Combined Bachelor of Arts in Forensics - Applied Forensic Science Stream.

Recognized programs include:
- Police Foundations (MCU Code 53008)
- Any program from a qualifying Ontario CAAT or other Canadian College deemed equivalent by the Dean of Science or their designate.

Note: Three-year diplomas programs in relevant fields will be analyzed for additional potential credit transfer on an ad-hoc basis, while considering minimum residency and core course requirements.

**Degree Requirements**

Total Courses: 21 (list of remaining courses required for completion of degree program.)

(a) Forensics (12 courses): SACR-2150; SACR-3230; BIOL-1101; BIOL-1111; SOSC-2500 or STAT-2910; FRSC-2007; FRSC-2100; FRSC-3105; FRSC-3111; LAWS-2190; FRSC-4207; one of the following: FRSC-3217, FRSC-4018, FRSC-4227, FRSC-4237, SACR-4120 or FRSC-4217.

(b) Criminology (9 courses): SACR-1100 or SACR-1000; SACR-2910; SACR-2900; SACR-3080; SACR-3900; SACR-3730 or SACR-3910 or SACR-3560; one of the following: SACR-3620, SACR-3630, SACR-3650, SACR-3670, SACR-3700, SACR-3500, SACR-3740, SACR-3820 or SACR-3710; two SACR-4000-level courses, including one of SACR-4210, SACR-4500, SACR-4910, SACR-4600, SACR-4610, SACR-4640, SACR-4650 or SACR-4670.

**RECOMMENDED COURSE SEQUENCING**
[Note: Courses in bold must be taken in the semester listed in order to allow for sequencing. Courses in italics are only offered once a year. * indicates course may be offered during summer session.]

Year 1:
Fall: FRSC-2100, BIOL-1101, SOSC-2500*, SACR-1100*, SACR-2150
Winter: FRSC-2007, BIOL-1111, SACR 3230, SACR-2900, SACR-3080* or SACR-3730
Intersession: FRSC-3105

Year 2:
Fall: FRSC-4207, LAWS-2190, SACR-2910, SACR-4XXX (suggested 4210), SACR-3080 or SACR-3730
Winter: FRSC-3111, SACR-4XXX, SACR-3900, FRSC-XXXX*, SACR-3620/3630

## Certificate in Forensic Science

**Admission Requirements**
All students who have met the entrance requirements for Science or who are in good standing are eligible to register for the certificate program. Open only to students currently enrolled in a degree program and in good academic standing in their program.

**Degree Requirements**

Total courses: 8

(a) Fundamentals of forensic science (four required courses):
- FRSC 1101/1107 Introductory Crime Scene Investigation
- FRSC 2007 Introduction to Forensic Science
- FRSC 2100 Crime Scene Evidence Analysis
- SACR 2150 Principles of Physical Anthropology

(b) Hands on skills (1 course): Students must select one course from the following:
- FRSC 3105 Forensic Identification
- FRSC 3101 Forensic Science Laboratory

(c) Legal Context (1 course): Students must select one course from the following:
- LAWS 2190 Forensic Evidence and the Canadian Legal System
- FRSC 3010 Expert Witness in Forensic Science

(d) Advanced Knowledge and Skills (2 courses): Students must select two courses from the following:

- SACR 3230 Forensic Anthropology
- FRSC 3201 Applied Entomology
- FRSC 3217 Forensic Serology and DNA Analysis
- FRSC 4207 New Perspectives in Forensic Evidence Analysis
- FRSC 4217 Advances in Human Identification
- FRSC 4227 Forensic Medicine: Toxins and Pathology
- FRSC 4237 Bioterrorism

This certificate program is designed for Science but is also available to any student with an interest in forensic sciences who has available open courses.

## Certificate in Film and Media for Sciences

**Admission Requirements**

Open only to students currently enrolled in a degree program, are in good academic standing in their program, and meet the admission requirements for Faculty of Science or the Faculty of Arts, Humanities, and Social Sciences programs.

**Certificate Requirements**

Total Courses: 10

1) Introduction to Science Communication
   a. SCIE-1000
2) Scientific Principles and Knowledge (4 courses)
   a. Three of the following (only one from each of i – viii)
      i. BIOL 1003, BIOL 1101, BIOL 1111
      ii. CHEM 1000, CHEM 1100
      iii. ESCI 1100, ESCI 1130
      iv. PHYS 1300, PHYS 1400
      v. MATH 1720, 1250 (MATH 1760, MATH 1260 if MCV4U not taken)
      vi. ECON 1100
      vii. COMP 1000, COMP 1400
      viii. PSYC 1150
   b. STAT 2910 OR STAT 2920 OR SOSC 2500
3) Filmmaking and Media Communications (4 courses)
   a. CMAF-1010, CMAF-1120, CMAF-1130, CMAF-2320
4) Capstone: Bringing it all together
   a. SCIE-4000: Science in the Media

# Certificate in Science Communication

**Admission Requirements**
Open only to students currently enrolled in a degree program, are in good academic standing in their program, and meet the admission requirements for Faculty of Science or the Faculty of Arts, Humanities, and Social Sciences programs.

**Certificate Requirements**

Total Courses: 10

1) Introduction to Science Communication
   a. SCIE-1000 Communicating Science in the Wider World
2) Scientific Principles and Knowledge (4 courses)
   a. Three of the following (only one from each of i – viii)
      i. BIOL 1003, BIOL 1101, BIOL 1111
      ii. CHEM 1000, CHEM 1100
      iii. ESCI 1100, ESCI 1130
      iv. PHYS 1300, PHYS 1400
      v. MATH 1720, 1250 (MATH 1760, MATH 1260 if MCV4U not taken)
      vi. ECON 1100
      vii. COMP 1000, COMP 1400
      viii. PSYC 1150, PSYC 1160
   b. STAT 2910 OR STAT 2920 OR SOSC 2500
3) Knowledge, Ethics and Practice in Science (1 course)
   a. Science students: ESCI 3801 OR BIOL 3022 OR PHYS 4000 OR ECON 4070 (where available as a requirement or option within a degree program) OR PHIL 2550 OR PSYC-2300
   b. FAHSS students (or non-science student): PHIL 2550 OR PSYC-2300 OR One 2000+ level course in science that counts as a credit for a major.
4) Journalism, Communications and Media Principles (or other courses in the spirit of this requirement, with the permission of the Dean or Delegate) (3 courses)
   a. CMAF 1010 and two of FILM-1100, FILM-1110, CMAF-2250, CMAF 2130, CMAF 2610, CMAF 3610, SCIE-3700 (if appropriate)
5) Capstone: Bringing it all together
   a. SCIE-4000: Science in the Media

# Certificate in Biological Conservation

**Admission Requirements**
Open only to students currently enrolled in a degree program, are in good academic standing in their program, and meet the admission requirements for Faculty of Science programs.

**Certificate Requirements**

Total courses: 10

Complete all three courses:

BIOL 2101 Ecology
BIOL 3142 Evolution
BIOL 4270 Conservation biology

Select three courses from the following:
BIOL 3291 Invertebrate biology
BIOL 3241 Fish and fisheries
BIOL 3261 Ornithology
BIOL 3201/FRSC 3201 Applied entomology
BIOL 3281 Plant ecology
BIOL 2080 Economic botany

Select three courses from the following:
BIOL 3230 Animal Behaviour
BIOL 4280 Limnology
BIOL 4212 Speciation
BIOL 4241 Stream Ecology
BIOL 3250 Population and Community Ecology
BIOL 4232 Pollution Ecology

Select one course form the following:
BIOL 4904 Undergraduate Research in Biology
SCIE 3900 Undergraduate Research Experience
BIOL 4864 Great lakes Field Biology
BIOL 4874 Field course in Tropical Ecology
ESCI 3735- (abroad section) Field methods for Environmental Science
Any field course from the OUPFB
SCIE 3990 Internship

## Certificate in Environmental Assessment

**Admission Requirements**
Open only to students currently enrolled in a degree program, are in good academic standing in their program, and meet the admission requirements for Faculty of Science programs.

**Certificate Requirements**

Total courses: 10

Select one course from the following:
SCIE 1000 Communicating Science in the Wider World
ESCI 3801 Scientific Writing and Data Management

Select two courses from the following:
ESCI 2131 Introduction to Geochemistry
ESCI 2141 Hydrology
ESCI 2210 Introduction to Climate Change

Complete all five courses (with the exception of choosing between two field courses):
ESCI 1151 Fundamentals of Geographical Information Systems

ESCI 2111 Aerial photography and Introductory Remote Sensing
ESCI 2705 Applied Geophysics
ESCI 3711 Principles of Instrumental Analysis
ESCI 3735 Field Methods for Environmental Sciences OR ESCI 3755 Methods in Great Lakes Geomicrobiology

Complete both courses:
ESCI 3610 Environmental Impact Assessment
ESCI 4710 Environmental Site Assessment

## Certificate in Greenhouse Science

**Admission Requirements**

Open only to students currently enrolled in a degree program, are in good academic standing in their program, and meet the admission requirements for Faculty of Science programs.

**Certificate Requirements**

Total courses: 10

Complete the following 8 courses:
ESCI 1100 Introduction to Environmental Science
ESCI 2131 Introduction to Geochemistry
ESCI 2201 Climatology
BIOL 2080 Economic Botany
BIOL 3281 Plant Ecology
BIOL 3201/FRSC-3201 Applied Entomology
SCIE 3990 Internship
ESCI 4808-section 25 Integrated Pest Management

Select two courses from the following:
ESCI 4721 Biogeochemistry
ESCI 3751 Environmental Geochemistry
ESCI 2421 Soils and sediments
ESCI 2600 Principles of Resource Management
ESCI 2210 Introduction to Climate Change
ESCI 3735 Field Methods for Environmental Science or ESCI-3755 Methods in Great Lakes Geomicrobiology
BIOL 3250 Population and Community Ecology

# FACULTY OF SCIENCE COURSES

## SCIENCE COURSES

**SCIE-1000. Communicating Science in the Wider World**
Through the lenses of UWindsor's "grand challenges" (Environment, Health, Advanced Materials and Big Data), students will learn fundamental written and oral communication skills using both online and face-

to-face methods. Lessons, labs, group work, and writing and presentation assignment will be incorporated in increasing literacy, numeracy and critical thinking skills. (1 lecture hours and 2 laboratory hours per week)

**SCIE-1001. Exploring Science**
This course will introduce students to the principles of scientific research and provide practical experience in a field and/or lab environment. Students will be exposed to the methods and techniques of conducting research, including data collection, sampling, analysis, and knowledge dissemination. Current research topics and techniques in science will be included. This is a one-week course where students are required to participate in field and/or lab work. This course is only available for prospective undergraduate students and cannot be counted for credit for any current University of Windsor student. Students need approval from the Dean of Science (or designate). Grading as Pass/Fail based on successful completion of the course.

**SCIE-1900. First-Year Seminar in Science**
First-year students in the Faculty of Science will engage with faculty experts on a specific science topic of broad, interdisciplinary interest. Enrolment is limited to 24 students per section to allow for rich engagement between faculty and students, group discussions, and creative lines of inquiry. Classes will meet on average for an hour per week, and assessments will be based on in-class reflective exercises. The science topic of the First-Year Seminar will vary depending on the instructor(s) of that section. Course is open to first-year Science students only. A student may take the First-Year Seminar course only once. (Non-credit course. However, the course will appear on the student transcript. Participation will count towards activities leading to the L.E.A.D. medallion in the Faculty of Science.)

**SCIE-3700. Special Topics in Science**
Selected topics of current interest in Science. Example include: Science on the Stage: exploring the use of drama to enhance understanding of the role of science in society; Debating Science with Non-scientists: debate and argumentation techniques; The Science of Wine. (Prerequisite: consent of instructor and a program advisor.) (3 lecture or project hours a week.) (May be repeated for credit if content changes.)

**SCIE-3800. Service Learning**
Participation in experiential learning with community partners to provide students direct experience with the subject matter they are studying in the curriculum. Students are given an opportunity to enhance their academic learning by engaging with community partners to analyze and address community needs and solve problems related to social issues and community needs. Students will also reflect on their service experiences, and personal growth. May be repeated 2 times for credit. Prerequisite: Approval from the Course Instructor and the Dean of Science (or designate). This course will be graded Pass or Fail (3.0 credits). Students may take 2 courses from SCIE-3800, SCIE-3900, and SCIE-3990 for credit, including repeating one of the three courses twice. However, students may not take more than one of the courses from SCIE-3800, SCIE-3900, and SCIE-3990 in the same semester.

**SCIE-3900. Undergraduate Research Experience**
Participation in discipline specific research activities under the direction of a faculty member in the Faculty of Science. Students will gain experience in the methods, techniques and ethical conduct of research. Grading as Pass/Fail based on successful participation in research and submission of reflective assignment. Prerequisite: Students need approval from the faculty mentor and the Dean of Science (or designate). This course will be graded Pass or Fail (3.0 credits). Students may take 2 courses from SCIE-SCIE-3800, SCIE-3900, and SCIE 3990 for credit, including repeating one of the three courses twice.

However, students may not take more than one of the courses from SCIE-3800, SCIE-3900, and SCIE-3990 in the same semester.

**SCIE-3990. Internship**
Students will participate in a 12-week work placement and complete an Internship Report. The internship is designed to enhance and complement their academic learning. The course requirements are structured to enable students to make connections between academic learning and on-the-job training, to further develop analytical and interpersonal skills, and to practice business writing skills. The internship experience also helps students gain a clearer sense of potential career paths and provides an opportunity to build professional networks. Prerequisite: Approval from the Course Instructor and the Dean of Science (or designate). This course will be graded Pass or Fail. (3.0 credits). Students may take 2 courses from SCIE-3800, SCIE-3900, and SCIE-3990 for credit, including repeating one of the three courses twice. However, students may not take more than one of the courses from SCIE-3800, SCIE-3900, and SCIE-3990 in the same semester.

**SCIE-4000. Science in the Media**
In this project-driven course, the students will choose (or be assigned) a scientific topic and focus on preparation of a portfolio of communications: from a critical analysis of the topic to newspaper articles to social media posts to interviews for broadcast to multi-media presentations. Topics may include broad concepts such as climate change or air pollution, or may be more narrowly focused onto a single scientific journal article. (Prerequisite: SCIE-1XXX (to be developed). Restricted to Semester 6, 7 and 8 students.) (1 lecture hours and 2 seminar/tutorial hours per week.)

## FORENSIC SCIENCE COURSES

**FRSC-1101. Introductory Crime Scene Investigation and Techniques**
This course will introduce students to the theoretical background of scientific methods used in Forensic Science and their practical applications to crime scene investigation. The focus of the course is exploration and examination of evidence found at crime scenes. The students learn and practice the discovery, identification, collection, examination and processing of various types of forensic evidence. Restricted to BFS and BA (Forensics Combined) students. (Credit may not be obtained for both FRSC-1107 and FRSC-1101.) (This course is offered on campus.) (Lecture 1.5 hours, Laboratory 1.5 hours).

**FRSC-1107. Introductory Crime Scene Investigation**
This course will introduce students to the theoretical background of scientific methods used in Forensic Sciences and their practical applications to crime scene investigation within the multidisciplinary Forensic fields. The focus of the course is exploration and examination of evidence found at crime scenes. The students learn the discovery, identification, collection, examination and processing of various types of Forensic evidence.

**FRSC-2007. Introduction to Forensic Science**
This course will survey the many specialties of Forensic Science, including forensic pathology, entomology, anthropology, biology, botany, geology, etc. Special guest lectures by practicing forensic scientists will give students direct contact with the role they play in the extraction and meaning of evidence.

**FRSC-2100. Crime Scene Evidence Analysis**
This course builds upon the protocols developed in the Introductory Crime Scene Investigation (FRSC-1107) and it is designed to familiarize students with the diverse scientific techniques utilized by Forensic

professionals. The techniques for analyses of forensic evidence span natural sciences, social sciences and computer sciences. Pre-requisite: (FRSC-1107 or FRSC-2007 or permission by course instructor).

**FRSC-3010. Expert Witness in Forensic Science**
Examination of current concepts and controversies in the collection, preservation, and analysis of forensic evidence, and the role of the expert witness. While exploring various forensic specializations students will practice the presentation of evidence in various formats and contexts including short and long presentations, reports, cross-examination, mock trials, etc. (Prerequisite: FRSC-2007. Enrolment in this course is limited to Bachelor of Forensic Science Program Majors and majors in BA Combined in Forensics.)

**FRSC-3101. Laboratory in Forensic Science**
Laboratory methods used by forensic scientists are very broad. This course is a survey of the instruments used and the interpretation of the results. The goal of the course is to familiarize the student with not only the instruments, but also their limitations, and the range of practices employed by professionals for the analysis of evidence. (Prerequisite: FRSC-2007 and enrollment in this course is limited to Bachelor of Forensic Science Program Majors.)

**FRSC-3105. Forensic Identification**
Practical application of principles and protocols used in forensic identification. Topics range from the expectations of the public in forensic practices to the legal responsibilities of crime scene specialists for evidence identification. Fingerprint theory and practice, image capture and enhancement, crime scene protocols and management, biometrics, and identification as contrasted to systematics are studied. (Prerequisite: FRSC-2007. Enrolment in this course is limited to Majors in Forensic Science, Combined Bachelor of Arts in Forensics and Criminology (Applied Forensic Science Stream), and BA Combined in Forensics.)

**FRSC-3111. Digital Photography in Forensic Science**
Use of photography in forensic investigations covers a range of techniques. This course builds on students' introduction to forensic photography from FRSC-3105 Forensic Identification. Students will become familiar with different methods of solving problems of focal length, lighting conditions, lens and filter considerations and apply this knowledge in the practical application of crime scene photography. The course will cover the equipment, methodology and preparation of photographic evidence, as well as the current state of technology in the use of digital photography and photographic evidence. (Prerequisites: FRSC-3105).

**FRSC-3201. Applied Entomology**
Students will become familiar with insect taxonomy, anatomy, physiology, behaviour and ecology and apply this knowledge in studying the utility of insects within the applications of pest management, disease transmission and legal investigations. The course will cover the detection, collection, identification and analysis of insect evidence, as well as the current state of knowledge in the use of insect evidence. (Prerequisites: BIOL-2101 and semester 5 standing or above) (Cross-listed with BIOL-3201)

**FRSC-3217. Forensic Serology and DNA Applications**
This course introduces the detailed types, techniques, and analysis of the various important biological fluids and DNA. The course will provide insight into new emerging technologies and tools in forensic serological and DNA analysis. The course will also be important in understanding the issues and ethics involved in the analysis and presentation of these evidence types in court. (Pre-requisites: FRSC-1107 or FRSC-1101, or Instructor approval)

**FRSC-4002. Practicum in Forensic Sciences**
Students are assigned a mentor in the profession of Forensic Science. The student will be required to spend 100 hours during the semester with the mentor. This time will be utilized to develop skills in a laboratory setting or related facility (Prerequisite: A FRSC-3XXX course. Instructor approval required. Enrolment limited to majors in Forensic Sciences and majors in B.A. Combined in Forensics)

**FRSC-4018. Special Topics in Forensic Science**
Selected topics of current interest which may vary from year to year, and by instructor. (May be repeated for credit if content changes.)(Prerequisites: FRSC-2007 or consent of instructor).

**FRSC-4207. New Perspectives in Forensic Evidence Analysis**
This course builds on the basic techniques learned in the previous crime scene investigation courses and applies them to the advanced approaches to forensic evidence analysis. The course will provide insight to the latest techniques available spanning histology and pathology, human remains, advance analytical techniques for organic and inorganic analysis, new frontiers in DNA analysis, microbial forensics, medical forensic imaging techniques, digital evidence and mobile forensics, as well as new instrumentation and future considerations in the fields of forensic evidence analysis. (Prerequisites: FRSC-2007 and FRSC-2100 or permission of the instructor).

**FRSC-4217. Advances in Human Identification**
This course is designed to familiarize students with latest advances in Forensics human identification and identity management techniques. Traditional identification techniques and latest identification techniques from hard and soft tissues, biological and non-biological evidences, human scent evidence, digital and biometric methods and future considerations will be covered. (Prerequisites: FRSC-2007 and FRSC-2100 or permission of the instructor)

**FRSC-4227. Forensic Medicine: Toxins and Pathology**
This course is designed to provide students with knowledge and skills in Forensic Medicine investigations. Students will learn diverse aspects of fields like autopsy, injuries, trauma, drugs of abuse and toxins. This course will utilize the latest technologies in Forensic medicine such as virtual autopsy. (Prerequisites: FRSC-2007, FRSC-2100 or consent of instructor).

**FRSC-4237. Bioterrorism, Food and Environmental Forensics**
This course in Forensic Sciences builds on the techniques learned in previous crime scene investigation courses and applies them to the issues of bioterrorism, food safety, and environment forensics. (Prerequisites: FRSC-2007, FRSC-2100 or consent of instructor).

**FRSC-4900. Research Thesis in Forensic Sciences**
Research on an approved topic should be original and under the direction of a faculty member. The research should make a contribution to the body of knowledge known generally as forensic sciences. Student must present three seminars discussing their research thesis. (Prerequisites: FRSC-3101 and FRSC-3010. Instructor approval required. Enrolment limited to majors in Forensic Sciences and majors in B.A. Combined Forensics) (1 lecture, 12 laboratory hours per week over two terms.) (2-semseter, 6 credit course.)

# BIOMEDICAL SCIENCES

## PROGRAMS

### Honours Biomedical Science

**Degree Requirements:**

Total courses: 40

(a) BIOL-1101, BIOL-1111, BIOL-2111, BIOL-2040, BIOL-2071, BIOM-2131, BIOM-3500, BIOM-3530.
(b) Eight courses from: BIOM-2021, BIOL-2480*, BIOM-3070 or BIOM-3071, BIOM-3400, BIOM-3540, BIOM-3550, BIOM-3560, BIOM-3581**, BIOM-3750, BIOM-4008, BIOM-4440* BIOM-4510, BIOM-4530, BIOM-4540, BIOM-4550, BIOM-4560, BIOM-4590, BIOM-4904**, BIOL-4450*, BIOL-4481*, BIOL-4904**, CHEM-4900**
(c) CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010, BIOC-3100, BIOC-3110, BIOC-3130.
(d) MATH-1720 (or MATH-1760)***, STAT-2910, and one pair of both PHYS-1400 and PHYS-1410 or both PHYS-1300 (or PHYS-1400) and PHYS-1310
(e) Three courses from: BIOL-2050, BIOL-3022, BIOL-3142, BIOL-3571, CHEM-2200, CHEM-2310, CHEM-2500, CHEM-3210, BIOC-4010, BIOC-4030, BIOC-4050, PHYS-3700.
(f) Six courses from any Science area.
(g) Four courses from any area of study. (Recommended: at least one Arts course and one Social Science course).

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area of study.

**Recommended Course Sequence**
*First Year:* ten courses, including BIOL-1101, BIOL-1111, CHEM-1100, CHEM-1110, MATH-1720 (or MATH-1760)***, PHYS-1300 or PHYS-1400, PHYS-1310 or PHYS-1410, and STAT-2910.
*Second Year:* ten courses, including BIOL-2040, BIOL-2071, BIOL-2111, BIOM-2131, CHEM-2300, and BIOC-2010.
*Third Year:* ten courses, including BIOM-3500, BIOM-3530, BIOC-3100, BIOC-3110, and BIOC-3130.
*Fourth Year:* ten courses.

*BIOM-4440, BIOL-4450, and BIOL-4481 require the pre-requisite BIOL-2480.
**BIOM-3581, BIOM-4904, BIOL-4904 and CHEM-4900 are 6 credit, 2 semester courses. Only students who have maintained a major average of 70% and a cumulative average of 60% will be considered for enrolment in BIOM-4904. Registration in BIOM-4904 is competitive and requires the consent of the Head of Department.
***It is recommended that students also take MATH-1730, particularly those students interested in PHYS-1410.

# Honours Biochemistry and Biomedical Science (Health Stream)

This program is jointly offered with the Department of Chemistry and Biochemistry.

**Degree Requirements:**

Total courses: forty.

(a) twenty courses including BIOL-1101, BIOL-1111, BIOM-2021, BIOL-2040, BIOL-2050, BIOL-2111, BIOM-2131, BIOL-2071, BIOL-2480, BIOM-3500 or BIOM-3530, BIOL/BIOC-3581(6.0 credits), CHEM-1100, CHEM-1110, CHEM-2200, CHEM-2300, CHEM-2310, BIOC-2010, BIOC-3100, BIOC-3130.
(b) six courses from the following: BIOM-3550, BIOM-3070*, BIOC-3110, BIOC-3310, BIOC-3030, BIOM-3500, BIOM-3071*, BIOM-3530, BIOL-3571, CHEM-2400, CHEM-3210, CHEM-3310, CHEM-3300, BIOM-4440, BIOL-4481, BIOL-4904**, CHEM-4900**
BIOM-4530, BIOM-4540, BIOM-4550, BIOM-4560, BIOM-4590, BIOL-4904**, BIOM-3400, BIOM-3560, BIOM-3750, BIOM-3540, BIOM-4510, BIOM-4008, BIOM-4904**, CHEM-4900**, BIOC-4010, BIOC-4030, BIOC-4050, BIOC-4020, CHEM-4308, CHEM-4520, CHEM-4680, PHYS-3700, of which at least two must be at the 4000 level.
(c) five science courses, including: PHYS-1400, PHYS-1410, MATH-1720, MATH-1730, STAT-2910;
(d) four courses from Arts/Languages or Social Sciences, with at least one from each;
(e) five courses from any area of study, and CHEM-4007 is recommended.

* Note that BIOM-3070 and BIOM-3071 are antirequisites.

** Undergraduate research courses are taken both in Fall and Winter (as two courses). Only students who have maintained a major average of 70% and a cumulative average of 60% will be considered for enrolment in BIOM-4904 and BIOL-4904. Similarly, students who have maintained a major average of 70% and a cumulative average of 70% will be considered for enrolment in CHEM-4900. Registration in BIOL-4904 and CHEM-4900 is competitive and requires the consent of the appropriate Head of Department.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

Students considering application to some Pharmacy schools are advised to take CHEM-2400.
Students planning to write the MCAT may wish to take PSYC-1150 and PSYC-1160 as Social Science courses.

Qualified students who find a supervisor may complete a thesis option (BIOM-4904, BIOL-4904 or CHEM-4900) as part of their degree program.

Students considering applying to professional schools are advised to look at individual admission requirements for programs of interest when choosing courses. Regular (annual) academic advising is strongly recommended for all students in this program.

# BIOMEDICAL SCIENCES COURSES

**BIOM-1003. Biology of Organisms**
Properties of living organisms from the level of the cell through tissues, organs and organ systems, genetics, to the functioning, integrated organism. This course is offered on-campus and as a distance course. (Intended for non-majors and students requiring preparation for BIOL-1111 and BIOL-1101) (Not counted for credit in any Faculty of Science program.) (2 lecture hours a week.)

**BIOM-1073. Introductory Medical Microbiology**
This introductory course provides a foundation in microbiology relating to Nursing. Key concepts in the biology of infectious agents, human-microbe interactions, mechanisms of microbial diseases, control of microbial growth, immunology, epidemiology, and public health. (Open only to Nursing students. May not be used for credit in any Science program.) (Co-requisite: Registration in all courses required for 1st year fall semester.) (Antirequisites: BIOL-2070, BIOL-2071, BIOM-3070, BIOM-3071.)

**BIOM-2021. Human Anatomy**
Systemic analysis of the structure of the human body, including gross and microscopic morphology. Topics include anatomical terminology and structures of cells, tissues and the major organ systems. Practical laboratory work will complement lectures with emphasis on gross dissection. (Prerequisites: BIOL-1101 or KINE-1650.) (3 lecture, 2 laboratory hours a week.)

**BIOM-2033. Introductory Molecular Biology**
Basic introduction to the molecular biology of the cell with emphasis on basic life processes in animals. The major topics covered include: Regulation of eukaryotic gene expression, genome structure, chromosomal structure, fundamental aspects of recombinant DNA technology, DNA cloning, microarrays, and protein structure and function. (Antirequisite: BIOM-2131; Prerequisite: BIOL-1111 and BIOL-1101) (3 lecture hours or equivalent a week.) (A distance course restricted to graduates of programs in Medical Technology from a College of Applied Arts and Technology with more than 100 hours of certified laboratory experience; or by consent of the instructor.)

**BIOM-2093. Genetics**
The course reviews transmission genetics and principles of inheritance. The material also includes non-nuclear inheritance and gene linkage, gene expression and regulation, mechanisms and phenotypic effects of DNA mutation and repair, and the principles and applications of population and quantitative genetics. Students will be exposed to molecular genetic techniques such as PCR and DNA sequencing. This is a distance course designed primarily for graduates of programs in Medical Technology from a College of Applied Arts and Technology. This course may not count as a major requirement for Biology Majors. (Antirequisite: BIOL-2111; prerequisites: BIOL-1111 and BIOL-1101, or the equivalent.) (3 lecture hours or equivalent a week.)

**BIOM-2131. Introductory Molecular Biology**
Basic introduction to the molecular biology of the cell with emphasis on basic life processes in both plants and animals, including metabolism, energy transformations, transport mechanisms, signal transduction, and other general functions. The major topics covered include: Regulation of eukaryotic gene expression, fundamental aspects of recombinant DNA technology, DNA cloning, hybridization analysis, microarrays, and protein structure and function. Practical laboratory work will complement the lectures. (Antirequisite: BIOM-2033; Prerequisite: BIOL-1111, BIOL-1101, and BIOL-2111.) (Suggested Corequisite: BIOC-2010.) (3 lecture, 3 laboratory hours or equivalent a week.)

**BIOM-3070. Medical Microbiology**
Viral and bacterial pathogenesis, including the processes and genetic control of human diseases. This course is offered on-campus and as a distance course. (Antirequisite: BIOM-3071; Prerequisite: BIOL-2070 or BIOL-2071.) (3 lecture hours a week.)

**BIOM-3071. Medical Microbiology and Techniques**
Viral and bacterial pathogenesis, including the processes and genetic control of human diseases. (Antirequisite: BIOM-3070; prerequisite: BIOL-2071.) (3 lecture, 3 laboratory hours a week including follow-up visits outside scheduled lab times.)

**BIOM-3400. Neurobiology of the Synapse**
Synapses are specialized structures where nerve cells communicate with each other through a process called synaptic transmission. Synapses are the functional units of the brain and are targets of many diseases and drugs. The ability of synapses to transmit information from one neuron to another, changes with experience (synaptic plasticity) in processes such as learning and memory. This course will help students understand aspects of synapses from a cellular and molecular perspective. Topics such as synaptic vesicle cycling, synaptic plasticity, learning and memory, and neurological diseases originating at the synapse will be covered. Synapses from both the peripheral and central nervous systems of invertebrates and vertebrates will be discussed. (Prerequisite: BIOL-2480.) (Recommended for 3000/4000 level student.) (3 lecture hours/week.)

**BIOM-3500. Molecular Cell Biology**
An integration of recent findings in molecular and cell biology with those in genomics. The course emphasizes the general behaviour of biological macromolecules and energy transfer mechanisms, leading to in-depth review of the regulation of genome replication and recombination, gene transcription, protein translation, and epigenetic mechanisms governing gene regulation. This course is offered on-campus and as a distance course. (Prerequisites: BIOL-2111 and BIOM-2131, or BIOM-2093, and BIOM-2033 with appropriate laboratory experience and signature of instructor.) (3 lecture hours a week.)

**BIOM-3530. Advanced Cell Biology**
This course will examine, at the molecular level, the basic working of a cell; dealing with several aspects of eukaryotic cell biology including intracellular transport, cell-to-cell communication and signal transduction, the cytoskeleton, cell growth and division, apoptosis, cell adhesion and cell migration. In addition to exploring the current state of the field, lecture material will highlight some of the critical experiments in diverse areas of molecular biology, genetics, biochemistry and cell imaging that have contributed to our current understanding. (Prerequisites: BIOL-2111 and BIOM-2131, or BIOM-2093 and BIOM-2033 with appropriate laboratory experience and permission of instructor.) (3 lecture hours a week.)

**BIOM-3540. Immunology**
This course is an introduction to cellular and molecular immunology. Students will be introduced to topics, such as cells and organs of the immune system, development and differentiation of immune cells, innate and adaptive immune responses, structure and function of immune receptors, antigen processing and presentation, immune cell activation, and immune system in health and disease. (Prerequisite: BIOL-2111 and BIOM-2131.) (Recommended for 3rd year students.) (3 lecture hours/week.)

**BIOM-3550. Embryology**
Cellular, molecular, and biochemical mechanisms of gametogenesis, fertilization, cleavage, and organogenesis in a variety of animal systems. A major paper is required. (Prerequisites: BIOL-2111, and BBIOM-2131.) (3 lecture hours a week.)

**BIOM-3560. Homeostasis in Human Physiology**
This course will explore the amazing variety of signals in the animal body, and how they are sent and received by cells in different tissues to maintain homeostasis. Particular attention will be paid to the cellular and molecular mechanisms underlying blood pressure, thermoregulation, circadian rhythms and sleep, metabolism, inflammation and stress, and adult tissue stem cells. This course will focus on how signals are propagated between and within cells of different tissues, and how they relate to animal biology, health and disease. (Prerequisite: BIOM-2131) (3 lecture hours a week)

**BIOM-3581. Biotechnology Laboratory**
This intensive laboratory course will primarily simulate the discovery and rapid protein characterization of genes and gene products. Laboratory experiments will include cutting edge biotechnology techniques and traditional biochemical and molecular biology methodology. For example, DNA/plasmid isolation, cloning, DNA sequencing and analysis, introduction to bioinformatics and microarray technology, characterization of cloned products, protein isolation and characterization, and determination of enzymatic catalysis and regulation will be used to study this enzyme on a genetic and protein level. Other topics include forensic genetics and plant biotechnology. (Prerequisite: BIOM-2131 and BIOC-2010.) (1 tutorial/lecture hour and 6 laboratory hours per week over two terms, 6 credit course.) (Registration priority will be given to students for which this course is a program requirement.)

**BIOM-3750. Cancer Undergraduate Research Education (CURE).**
CURE will engage students in learning about the science of cancer and directions in cancer research. Students will interact with scientists conducting a spectrum of multidisciplinary research and will work in collaborative teams to design and implement tools to communicate cancer research to the public, to patients, to other students and to the government. Students will discuss ethical fundraising and marketing of research and will compose ideas to support cancer research. This course will be hands on learning where your ideas will directly contribute to moving cancer research forward in Windsor-Essex. (Prerequisites: BIOL-1101 and registration in third year of a program.) (Previously offered as SCIE-3750, this course does not count towards a major course credit in Biological Sciences or BCN degrees but can be used as an additional Science course or any area of study credit.) (3 hours a week lecture/ experiential learning).

**BIOM-4008. Special Topics in Biomedical Sciences**
Selected topics of current interest in the fields of Biomedical Sciences which may vary from year to year. (May be only repeated for credit if content changes. Will be covered with a different section number.)(Prerequisites: BIOM-3530 or BIOM-3500.)

**BIOM-4440. Neurophysiology**
This course examines functions of the brain and physiological processes that are responsible for these functions at the system, cellular, and molecular levels. Topics include the generation, transmission, and integration of neural signals. They also include neural signaling related to the processing of sensory information, controlling of movement, and generation of complex mental activity Modern research methods that are used in the study of brain functions and underlying physiological processes are also discussed. (Prerequisite: BIOL-2480 or permission from the instructor.) (3 lecture hours a week.)

**BIOM-4510. Stem Cells**
Stem cells are populations of cells present in the body that divide to make all the cells that compose specific tissues and organs. What we know about stem cells is the result of rapidly evolving, and sometimes controversial, research. This seminar course deals with current research topics in stem cell biology. Topics will include: stem cell potency, embryonic precursors vs adult tissue stem cells, symmetry of division versus clonal drift, regeneration and healing, and whether stem cells contribute to ageing. The purpose of this course is to develop a knowledge of core concepts that guide research in this area. (Prerequisites: BIOL-2111 and BIOM-2131.) (3 lecture hours a week.)

**BIOM-4530. Biology of Cell Transformation**
Molecular and cellular mechanisms of cell transformation and tumor development with emphasis on the role of oncogenes and environmental factors in cell transformation, and on the cellular and molecular biology of malignantly transformed (cancerous) cells, experimental analysis and applications. A major paper and/or seminar is required. (Prerequisites: BIOM-3500 or BIOM-3530, CHEM-2300, BIOC-2010, and consent of instructor.) (3 lecture hours).

**BIOM-4540. Regenerative Biology and Disease**
With the explosion of knowledge from molecular biology and the burgeoning interest in generating or regenerating tissues or organs through various bioengineering or stem cell approaches, this course will explore the phenomenon of regeneration and continual post-natal development from a broad biological perspective. This will involve analysing molecular pathways regulating stem cell differentiation, how specialized cells proliferate and undergo programmed cell death and how the architecture of tissues is preserved despite the constant replacement of old cells by new. We will also discuss how abrogation of these programs underlie a large number of disease states. (Prerequisites: Any 1 course chosen from BIOM-3500, BIOM-3530 or BIOM-3550.) (3 lecture hours a week.)

**BIOM-4550. Developmental Signaling and Developmental Genetics**
Analysis at the molecular level of the activation and control of genes and proteins during oogenesis and early development in lower and higher eukaryotes. (Prerequisite: Any 2 courses chosen from BIOM-3500, BIOM-3530 or BIOM-3550.) (3 lecture hours a week.)

**BIOM-4560. Molecular Biotechnology**
Introduction to the techniques and applications of recombinant DNA technology and genetic engineering. Topics include the generation of transgenic organisms (microbes, plants, and animals) and their impact on agriculture and medicine. The social ramifications of these technologies will be discussed. (Prerequisites: BIOM-3500 or BIOM-3530.) (3 lecture hours a week.)

**BIOM-4590. Epigenetics**
This course will examine our current understanding of “Epigenetics”, the study of heritable changes in gene expression that occur without a change in DNA sequence. Epigenetics is an area under intensive scientific investigation. The goal of the course is to provide an introduction to the fundamentals of epigenetic control along with an understanding of the interplay between epigenetics and disease, health, behaviour, and the environment. (Prerequisite: BIOM-3500 or BIOM-3530.)

**BIOM-4904. Undergraduate Research in Biomedical Sciences I**
Completion of an undergraduate research project, including an oral presentation at an annual colloquium and submission of written final report. (10 laboratory hours a week; offered over two terms.) (A 6.00 credit hour research project which counts as two courses.) (Registration and selection of a supervisor requires the consent of the Department Head) (Prerequisites: major average of 70% and a cumulative average of 60%.) (Prerequisites: BIOM-3530 or BIOM-3500.)

**BIOM-4914. Undergraduate Research in Biomedical Sciences**
Completion of an undergraduate research project, including an oral presentation at an annual colloquium and submission of written final report. (10 laboratory hours a week; offered over two terms.) (A 6.00 credit hour research project which counts as two courses.) (Registration and selection of a supervisor requires the consent of the Department Head) (Prerequisites: BIOM-4904 and major average of 70% and a cumulative average of 60%.)

# CHEMISTRY AND BIOCHEMISTRY

## PROGRAMS

## Chemistry and Biochemistry Program Regulations

1) The prerequisite for CHEM-4900 is a major average of 70% and a cumulative average of 70%.

2) Unless otherwise stated, students in Chemistry and Biochemistry must take the course with laboratory where two offerings differing only in the presence or absence of a laboratory component are listed. This regulation is effective beginning Fall 2010 for all Chemistry and Biochemistry courses counted towards the major requirements, regardless of the student's calendar.

**Standing Required for Continuation in Programs**
For Continuation in any Chemistry or Biochemistry program at the second level, a student must obtain a minimum of 60% in both Chemistry CHEM-1100 and CHEM-1110, or the equivalent. Students in Biochemistry also must obtain a minimum of 60% in both Biology BIOL-1101 and BIOL-1111.

**Canadian Society for Chemistry Accreditation**
The Department offers three Honours programs which are accredited by the Canadian Society for Chemistry: Honours Chemistry, Honours Chemistry and Physics, and Honours Biochemistry, as well as a program in Honours Biochemistry and Biotechnology.

**Preparation for Graduate and Professional Schools**
Courses are available to permit the student to become fully prepared for entry into medical, dental, and pharmacy schools, as well as graduate programs in the physical and life sciences. Students should determine as early as possible the specific requirements for graduate or professional schools and programs that they may wish to apply for after completing all or part of a Chemistry or Biochemistry program. Academic advisors are available. Since many graduate schools have language requirements, students who may subsequently choose to enter graduate school are strongly advised to consider a selection of courses which includes the prominent scientific languages, French and German.

## Program Regulations for Internship Option in Chemistry and Biochemistry Programs

**Internship Degree Requirements**
2-4 internship courses over and above 40 course degrees in Chemistry and Biochemistry programs.

CHEM-3909. Internship I
CHEM-4908. Internship II

# Honours Chemistry

**Degree Requirements**

Total courses: forty courses

(a) CHEM-1100, CHEM-1110, CHEM-2200, CHEM-2300, CHEM-2310, CHEM-2400, CHEM-2410, CHEM-2500, CHEM-2510, CHEM-3210, CHEM-3300, CHEM-3310, CHEM-3400, CHEM-3500, CHEM-3710, BIOC-2010, one BIOC or CHEM at 3XXX or 4XXX level, and three additional courses from CHEM 4XXX (excluding CHEM-4007).
(b) MATH-1760 or MATH-1720, MATH-1730, PHYS-1400 and PHYS-1410;
(c) MATH-1250 and a minimum of two additional courses from the following list: COMP-2067, MATH-2780, MATH-2790, PHYS-2200 or PHYS-2250;
(d) four courses from Arts, Languages or Social Sciences;
(e) nine courses from any area of study (CHEM-4007 is recommended).

Note: An internship option is available.

**Recommended Course Sequence**
First Year: ten courses, including CHEM-1100, CHEM-1110, MATH-1250, MATH-1720, MATH-1730, PHYS-1400 and PHYS-1410.
Second Year: ten courses, including CHEM-2200, CHEM-2300, CHEM-2310, CHEM-2400, CHEM-2410, CHEM-2500 and CHEM-2510.
(Recommended: fulfill at least two requirements from (c) above).
Third and Fourth Years: twenty courses, including BIOC-2010, CHEM-3210, CHEM-3300, CHEM-3310, CHEM-3400, CHEM-3500, CHEM-3710 and five additional Chemistry and Biochemistry courses at the 3XXX or 4XXX level (see (a) above).

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

# Honours Chemistry with Thesis

**Degree Requirements**

Total courses: forty courses

(a) CHEM-1100, CHEM-1110, CHEM-2200, CHEM-2300, CHEM-2310, CHEM-2400, CHEM-2410, CHEM-2500, CHEM-2510, CHEM-3210, CHEM-3300, CHEM-3310, CHEM-3400, CHEM-3500, CHEM-3710, CHEM-4900, BIOC-2010, one CHEM or BIOC at 3XXX or 4XXX level, and one additional course from CHEM-4XXX (excluding CHEM-4007).
(b) MATH-1760 or MATH-1720, MATH-1730, PHYS-1400 and PHYS-1410;
(c) MATH-1250 and a minimum of two additional courses from the following list: COMP-2067, MATH-2780, MATH-2790, PHYS-2200 or PHYS-2250;
(d) Four courses from Arts, Languages or Social Sciences;
(e) Nine courses from any area of study (CHEM-4007 is recommended).

Note: An internship option is available.

**Recommended Course Sequence**
First Year: ten courses, including CHEM-1100, CHEM-1110, MATH-1250, MATH-1720, MATH-1730, PHYS-1400 and PHYS-1410.
Second Year: ten courses, including CHEM-2200, CHEM-2300, CHEM-2310, CHEM-2400, CHEM-2410, CHEM-2500 and CHEM-2510. (Recommended: fulfill at least two requirements from (c) above).
Third and Fourth Years: twenty courses, including BIOC-2010, CHEM-3210, CHEM-3300, CHEM-3310, CHEM-3400, CHEM-3500, CHEM-3710, CHEM-4900, and three additional CHEM or BIOC courses at the 3XXX or 4XXX level (see (a) above).

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

## Honours Chemistry (Applied Chemistry Stream)

**Admission Requirements**

Pathway for St. Clair College:

1) Graduates of a three-year Ontario College Advanced Diploma in Chemical Laboratory Technology programs (MCU 61302) from a qualifying Ontario or equivalent College of Applied Arts and Technology (CAAT), with a cumulative average of a least a B (73%) grade), are eligible for admission to Honours Chemistry - Applied Chemistry Stream degree program offered by the Department of Chemistry and Biochemistry at the University of Windsor under the provisions of this agreement. The Dean of Science or their designate has the authority to admit students from qualifying colleges in equivalent diploma programs within Canada pending that they meet all other admission requirements.

2) Students admitted to the Honours Chemistry - Applied Chemistry Stream will obtain the equivalent of 3 years of Advanced Standing (or awarded up to 27 course transfers).

3) Students are required to complete eighteen (18)* courses at the University of Windsor in fulfillment of the requirements of the Honours Chemistry - Applied Chemistry Stream.

*Through the completion of specific optional courses at St. Clair College, students can reduce the number of required courses to 13.

Recognized programs include:
- Any chemistry-related program from a qualifying Ontario CAAT or other Canadian College deemed equivalent by the Dean of Science or their designate.

**Note:** Two-year diplomas programs will be analyzed for potential credit transfer on an ad-hoc basis, while considering minimum residency and core course requirements.

**Degree Requirements**

Pathway for St. Clair College:

Total courses: 18*

(a) PHYS-1400, PHYS-1410, MATH-1720 or MATH-1760, MATH-1730, MATH-1250, BIOC-2010, CHEM-2500, CHEM-2510, CHEM-3300, CHEM-3310, CHEM-3400, CHEM-3500, CHEM-3710, three of CHEM-4XXX (excluding CHEM-4007), two of COMP-2067, MATH-2780, MATH-2790, PHYS-2200 or PHYS-2250.

*Through the completion of specific optional courses at St. Clair College, students can reduce the number of required courses to 13:

- SCC MTH 605 (optional math course) credit towards UWin MATH 1720 or MATH-1760 and MATH-1730. At minimum, it is strongly recommended that students complete MTH 605 at St Clair College to ensure a seamless and efficient transfer pathway.
- SCC MTH 505 (optional math course) credit towards UWin MATH-1250
- SCC MTH 705 (optional math course) credit towards UWin MATH-2780
- SCC MTH 805 optional math course) credit towards UWin MATH-2790

**Notes:**

- Students wishing to complete a research project will also complete CHEM-4900 in addition to the fulfilling the aforementioned degree requirements. However, this is a 6-credit course and so it would result in those students taking a supernumerary course and complete an additional year of study.

Courses used to calculate the major average are: All courses listed under section (a).

## Combined Honours Chemistry Programs

Programs combining Chemistry with another major will consist of the following:

**Degree Requirements**

Total courses: forty.

(a) Chemistry and Biochemistry: CHEM-1100, CHEM-1110, CHEM-2200, CHEM-2300, CHEM-2310, CHEM-2400, CHEM-2410, CHEM-2500, CHEM-2510, CHEM-3210, CHEM-3300 (or CHEM-3310), CHEM-3400, and BIOC-2010; plus two additional courses at the 3XXX or 4XXX level.
(b) Course requirements - Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) MATH-1250, MATH-1760 or MATH-1720, MATH-1730, PHYS-1400, PHYS-1410 and PHYS-2200;
(d) additional courses, if necessary, from any area of study to a total of forty courses.

Note: An internship option is available.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

# Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Chemistry

Major Concentration: CHEM-2200; CHEM-2300; CHEM-2310; CHEM-2400; CHEM-2410; CHEM-2500; CHEM-2510; BIOC-2010; four of CHEM-3210, CHEM-3300, CHEM-3310, CHEM-3400, CHEM-3500, CHEM-3710

Minor Concentration: two of CHEM-2300, CHEM-2400, CHEM-2500; four of CHEM-2200 or, CHEM-2310 or, CHEM-3210 or, CHEM-2410 or, CHEM-2510 or, one pair of courses at the 3XXX-level. (or permission of instructor). (Additional requirements: CHEM-1100, CHEM-1110, MATH-1760 or MATH-1720, MATH-1730.)

# Minor in Chemistry

The minor in Chemistry consist of six courses, including CHEM-1100 and CHEM-1110, plus four courses at the 200 level or above, one of which must be at the 3XXX level or above. All four courses at the 2XXX level and above must be in organic, inorganic, physical and/or analytical chemistry. Selected courses leading to the minor may not consist of anti-requisites to courses in the student's degree program. Students must also remember to select only courses, which may be otherwise counted for credit towards their degree programs. The following courses cannot be used towards the minor in Chemistry: BIOC-1303, BIOC-2015, CHEM-2003, CHEM-2305, CHEM-3305, CHEM-3315. An overall average of 67% or higher must be obtained, with no individual course having a grade lower than 60%.

# Honours Biochemistry

**Degree Requirements**

Total courses: forty courses

(a) CHEM-1100, CHEM-1110, CHEM-2200, CHEM-2300, CHEM-2310, CHEM-2400, CHEM-2410, CHEM-2500, CHEM-2510, CHEM-3210, BIOC-2010, BIOC-3100, BIOC-3110, BIOC-3130, BIOC-3581 (6-credit, 2 semester course) and four additional courses at the 3XXX or 4XXX level.
(b) BIOL-1101, BIOL-1111, BIOL-2111, BIOM-2131, MATH-1760 or MATH-1720, MATH-1730, PHYS-1400, PHYS-1410 and STAT-2910;
(c) Four courses from Arts, Languages or Social Sciences;
(d) Seven courses from any area of study.

Note: An internship option is available.

**Recommended Course Sequence**
Note: STAT-2910 can be taken anytime in second, third or fourth year.
First Year: ten courses, including BIOL-1101, BIOL-1111, CHEM-1100, CHEM-1110, MATH-1720, MATH-1730, PHYS-1400, PHYS-1410 and two other courses.
Second Year: ten courses, including BIOL-2111, BIOM-2131, CHEM-2300, CHEM-2310, CHEM-2400, CHEM-2410, CHEM-2500, CHEM-2510, BIOC-2010 and one other course.
Third and Fourth Years: twenty courses, including CHEM-2200, CHEM-3210, BIOC-3100, BIOC-3110, BIOC-3130, BIOC-3581 (6-credit, 2 semester course) and four additional courses at the 3XXX or 4XXX level.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

## Honours Biochemistry with Thesis

**Degree Requirements**

Total courses: forty courses.

(a) CHEM-1100, CHEM-1110, CHEM-2200, CHEM-2300, CHEM-2310, CHEM-2400, CHEM-2410, CHEM-2500, CHEM-2510, CHEM-3210, BIOC-2010, BIOC-3100, BIOC-3110, BIOC-3130, BIOC-3581 (6-credit, 2 semester course), CHEM-4900 (6-credit, 2 semester course) and two additional CHEM or BIOC courses at the 3XXX or 4XXX level.
(b) BIOL-1101, BIOL-1111, BIOL-2111, BIOM-2131, MATH-1760 or MATH-1720, MATH-1730, PHYS-1400, PHYS-1410 and STAT-2910;
(c) Four courses from Arts, Languages or Social Sciences;
(d) Seven courses from any area of study, and CHEM-4007 is recommended.

Note: An internship option is available.

**Recommended Course Sequence**
Note: STAT-2910 can be taken anytime in second, third or fourth year.
First Year: ten courses, including BIOL-1101, BIOL-1111, CHEM-1100, CHEM-1110, MATH-1720, MATH-1730, PHYS-1400, PHYS-1410 and two other courses.
Second Year: ten courses, including BIOL-2111, BIOM-2131, CHEM-2300, CHEM-2310, CHEM-2400, CHEM-2410, CHEM-2500, CHEM-2510, BIOC-2010 and one other course.
Third and Fourth Years: twenty courses, including CHEM-2200, CHEM-3210, BIOC-3100, BIOC-3110, BIOC-3130, BIOC-3581 (6-credit, 2 semester course), CHEM-4900 (6-credit, 2 semester course) and two additional CHEM and BIOC courses at the 3XXX or 4XXX level.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

## Honours Biochemistry and Biomedical Science (Health Stream)

This is a joint offering between the Department of Chemistry and Biochemistry and the Department of Biomedical Sciences. See Department of Biomedical Sciences for details.

# Combined Honours Biochemistry Programs

Programs combining Biochemistry with another major will consist of the following:

**Degree Requirements**

Total courses: forty.

(a) Chemistry and Biochemistry: CHEM-1100, CHEM-1110, CHEM-2200, CHEM-2300, CHEM-2310, CHEM-2400, CHEM-2410, CHEM-2500, CHEM-2510, CHEM-3210, BIOC-3100, BIOC-3110, BIOC-3130, BIOC-2010, and one additional course at the 3XXX or 4XXX level.
(b) Course requirements-Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) BIOL-1101, BIOL-1111, BIOL-2111, BIOM-2131, MATH-1760 or MATH-1720, MATH-1730, PHYS-1400, and PHYS-1410;
(d) additional courses, if necessary, from any area of study to a total of forty courses.

Note: An internship option is available.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

# Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Biochemistry

Major Concentration: CHEM-2200, CHEM-2300, CHEM-2400, CHEM-2500, BIOC-2010, five of BIOC-3100, BIOC-3110, BIOC-3130, BIOC-4030, BIOC-4050, BIOC-4XXX; plus BIOL-2111 and BIOM-2131. (additional requirements: CHEM-1100, CHEM-1110, BIOL-1111, BIOL-1101.)

Minor Concentration: CHEM-2300, BIOC-2010; four of BIOC-3100, BIOC-3110, BIOC-3130, CHEM-2200, CHEM-2310. (additional requirements: BIOL-1111, BIOL-1101, CHEM-1100, CHEM-1110, MATH-1760 or MATH-1720, MATH-1730)

# Minor in Biochemistry

The minor in Biochemistry consists of seven courses, including CHEM-1100, CHEM-1110, CHEM-2300, and BIOC-2010, plus three courses chosen from BIOC-3XXX and BIOC-4XXX, one of which must be at 4XXX level. Selected courses leading to the minor may not consist of anti-requisites to courses in the student's degree program. Students must also remember to select only courses, which may be otherwise counted for credit towards their degree programs. The following courses cannot be used towards the minor in Biochemistry: BIOC-1303, BIOC-2015, CHEM-2003, CHEM-2305, CHEM-3305, CHEM-3315. An overall average of 67% or higher must be obtained, with no individual course having a grade lower than 60%.

# CHEMISTRY AND BIOCHEMISTRY COURSES

All courses listed will not necessarily be offered each year.

The prerequisite of all 2000-level courses, unless otherwise indicated, will be both CHEM-1100 and CHEM-1110.

The prerequisite for all 4000-level courses will be the consent of the instructor, except as noted.

## BIOCHEMISTRY COURSES

**BIOC-1303. Organic and Biological Chemistry for Health Sciences**
A course primarily intended for students in the Collaborative Four-Year B.Sc.N Program. The subject matter includes a survey of organic functional groups, the organic chemistry of biomolecules, and a survey of the major metabolic pathways. (Prerequisite: Grade 12"U" Chemistry or equivalent.) (Not open to students in any Science program. May not be used for credit in any Science program.) (2 lecture hours, 1 tutorial hour a week.)

**BIOC-2010. Organic Chemistry of Biomolecules**
An extension of the principles covered in CHEM-2300 to the structure and properties of organic molecules of biological significance (i.e., proteins, nucleic acids and lipids). (Prerequisite: CHEM-2300.) (3 lecture, 3 laboratory hours a week.)

**BIOC-2015. Organic Chemistry of Biomolecules**
The same as BIOC-2010 but without the laboratory. (Prerequisite: CHEM-2300 or CHEM-2305 or consent of the department.) (3 lecture hours a week.) (Not available for credit to students majoring in Chemistry, Biochemistry, Biochemistry-Biotechnology, Biology-Biotechnology or Biological Sciences or students minoring in Chemistry or Biochemistry.) (BIOC-2015 may not be used as a pre-requisite for BIOC-3100, BIOC-3110, BIOC-3130 or BIOC-3581 nor as one of the eight additional Science courses at the 200 level or above for students majoring in General Science)

**BIOC-3030. Natural Health Products and Their Mechanisms of Actions**
The applications of chemical and biochemical processes used in the isolation, identification and evaluation of bioactive constituents found in plants. Topics may include (i) the principle of medicinal chemistry in which plant extracts are prepared and tested for their biological actions, (ii) how Natural-Health Products (NHP) which are plant extracts with medicinal properties are subjected to scientific validation for their further development into natural product drugs, and (iii) the challenges associated with the NHP quality controls (Prerequisite: BIOC-2010). 3 lecture hours/week and 1 tutorial hour/week.

**BIOC-3100. Metabolism I**
Catabolism and the generation of phosphate bond energy. Introduction to chemistry of life, principles of bioenergetics, glycolysis, glycogen breakdown, citric acid cycle, electron transport/oxidative phosphorylation, pentose phosphate pathway, fatty acid oxidation - ketone bodies, amino acid degradation energy metabolism. (Prerequisite: BIOC-2010.) (3 lecture hours a week.)

**BIOC-3110. Metabolism II**

The utilization of phosphate bond energy will be illustrated by carbohydrate, fatty acid, nucleotide and lipid biosynthesis, hormonal (G-proteins) and metabolite regulation, biological membranes (structure and transport mechanisms) and contractile processes (muscle biochemistry). (Prerequisite: BIOC-3100.) (2 lecture hours a week.)

**BIOC-3130. Protein and Nucleic Acid Chemistry**
The covalent and three dimensional structures of these macromolecules will be described in conjunction with study of the chemical and physical methods used in their purification and characterization. (Prerequisite: BIOC-2010.) (2 lecture hours a week.)

**BIOC-3140. Protein and Enzyme Engineering**
The objective of this course is to explore current methods and approaches to design, modify and characterize proteins and enzymes for applications in biotechnology and medicine. We will start from the fundamental principles of molecular genetics, as well as protein and enzyme structure and function to better understand the current opportunities and challenges to engineering proteins and enzymes for specific applications. At the end of the course, you should have a deeper understanding of how the fundamental principles in molecular biology and protein biochemistry can be harnessed to help develop practical solutions to a wide range of important applications. (Prerequisite: BIOC-2010.) (3 lecture hours a week.)

**BIOC-3310. Pharmacology for Health Sciences**
A lecture course of particular interest to students in the health sciences areas. The course material includes the principles of pharmacokinetics and pharmacodynamics, and is aimed at developing an understanding of the function of the human body with respect to the use and effects of drugs in health and disease. (Prerequisites: One of BIOC-2010 or BIOC-2015.) (3 lecture hours a week.)

**BIOC-3581. Biotechnology Laboratory**
This intensive laboratory course will primarily simulate the discovery and rapid characterization of genes and gene products. Laboratory experiments will include cutting edge biotechnology techniques and traditional biochemical and molecular biology methodology. For example, DNA/plasmid isolation, cloning, DNA sequencing and analysis, introduction to bioinformatics and microarray technology, characterization of cloned products, protein isolation and characterization, and determination of enzymatic catalysis and regulation will be used to study gene products on a genetic and protein level. Other topics include forensic genetics and plant biotechnology. (Prerequisites: BIOC-2010 and BIOM-2131, Recommended co-requisites: BIOC-3100, BIOC-3110, and BIOC-3130.) (6 laboratory hours per week over two terms, 6 credit course.)

**BIOC-4008. Special Topics in Biochemistry**
This course will present advanced and contemporary topic(s) in biochemistry, which may vary from year to year. (May be repeated for credit if content changes.) (Prerequisite: BIOC-2010 or consent of instructor.)

**BIOC-4010. Bioinformatics/Genomics/Proteomics**
Introduction to informatics, flow of genetic information from nucleic acid sequence to amino acid sequence, gene expression profiling at the mRNA level, gene micro arrays, application of genomic database (Swissprot, gene bank). Introduction to functional genomics, proteomics, protein profiling, 2D gel electrophoresis, mass spectrometry of proteins eluted from 2D gels, peptide mass fingerprinting, comparative proteome analysis, application of 2D protein database and MS peptide database, high throughput analysis of protein-protein interactions, antibodies and phage-display technologies for protein micro array analysis, application of the biomolecular interaction network database (BIND) to

find and predict protein-protein interactions. (Prerequisite: BIOC-3130 or BIOM-3500.) (2 lecture hours and 1.5 computer lab hour per week.)

**BIOC-4020. Lipids, Lipoproteins, and Signaling**
Biochemistry and cell biology of lipids and their role in cellular signaling, with a special emphasis on the experimental basis of current knowledge. Topics covered include lipid and membrane biochemistry, lipoprotein structure and metabolism, small molecules such as steroids and leukotrienes, and an integrative assessment of the role of lipids in cellular processes such as protein trafficking and intracellular signaling. (Prerequisites: One of BIOC-2010 or BIOC-2015 or permission of the instructor.)

**BIOC-4030. Enzymology and Biotechnology**
This course will focus on the structural and mechanistic properties of biological enzymes. Topics to be covered include, chemical catalysis, kinetics, activity inhibition, catalytic mechanisms, and an overview of modern approaches to studying enzymes. Molecular mechanisms regulating the activities of enzymes in the cell will be discussed. (Prerequisite: BIOC-2010.) (2 lecture hours per week.)

**BIOC-4050. Drug Design**
Lectures cover various aspects of drug discoveries and designs. Beginning with basic knowledge in pharmacokinetics and pharmacodynamics, students should learn how lead is discovered and how the lead is modified to yield potent therapeutic agents. Several techniques in the area of molecular biology, biochemistry, organic chemistry and computational biology will be discussed and presented. (Prerequisite: BIOC-3310.) (3 lecture hours per week.)

**BIOC-4580. The Human Subject: Animal-Free Methods in Biomedical Research and Toxicology**
The future of biomedical research and chemical safety testing is human-centred In line with emerging global trends, this course exposes students to key concepts and methodologies in alternatives to animal testing. From genomics to whole body physiology and systems biology to personalized medicine and computational toxicology, the course offers a comprehensive overview of human biology-based in vitro platforms for disease modeling and toxicology. Content will be complemented by case studies in biomedical research and chemical safety testing from academic, industry, and government experts. (Prerequisites: One of BIOC-2010 or BIOC-2015 or permission of the instructor.) (3 lecture hours per week).

## CHEMISTRY COURSES

**CHEM-1000. Introduction to Chemistry**
This course stresses fundamental principles of chemistry, and is intended for students lacking SCH4U or equivalent, or requiring additional preparation for CHEM-1100 (General Chemistry I), CHEM-1103 (Topics in General Chemistry) and BIOC-1303 (Organic and Biological Chemistry for Health Sciences) . Topics include: basic atomic theory, the periodic table, stoichiometry, properties of gases and liquids, acid-base concepts and chemical equilibria, organic and polymer chemistry. This course can serve as a prerequisite for CHEM-1100, but may not be taken for credit in any Science program. (4 lecture hours and 2 tutorial hours per week; or 3 lecture hours and 1 tutorial hour) (Students who first completed CHEM-1100 may not subsequently enrol in CHEM-1000.)

**CHEM-1003. Alchemy to Chemistry: Science Through the Ages**
Science and technology shape the world in which we live. Nevertheless, sometimes the societal impact of scientific breakthroughs is not realized for a generation or more. In this course, key scientific discoveries and developments will be examined and discussed through the lens of a Chemist. Starting with the “ancients”, the course works through time to the present looking at how theories and the

scientific method has developed and evolved over time. The course will focus on topics pertaining to chemistry, the science of substances and interactions. (It may be taken by Science students for credit, but does not count as a Science option towards the fulfilment of the specified requirements for a Science degree.) (3 lecture hours per week)

**CHEM-1100. General Chemistry I**
Introductory concepts in chemistry, including reactions of atoms, ions, and molecules, solution stoichiometry, thermochemistry, electronic structure of atoms, basic chemical bonding and molecular geometry, periodic properties of the elements, and the theory of gases. (Prerequisite: Grade 12"U" Chemistry or equivalent (CHEM-1000), or consent of the instructor.) (3 lecture, 3 laboratory/tutorial hours a week.)

**CHEM-1103. Topics in General Chemistry**
An introduction to selected topics in modern chemistry for engineering: atomic and molecular structure, properties of matter and the periodic table, macroscopic chemical systems, stoichiometry, properties of the equilibrium state and applications to thermochemistry and electrochemistry. (Prerequisite: Grade 12"U" Chemistry or equivalent.) (3 lecture, 3 laboratory hours a week.)

**CHEM-1110. General Chemistry II**
A continuation of CHEM-1100 covering topics such as chemical kinetics, general equilibrium theory, acid-base theory, chemical thermodynamics, and introduction to organic chemistry. (Prerequisite: CHEM-1100.) (3 lecture, 3 laboratory/tutorial hours a week.)

**CHEM-2003. Contemporary Chemistry**
What has chemistry done for you lately? Chemistry is a branch of science that investigates molecules – the fundamental building blocks of matter. It surrounds us (inside and out!), affecting everything from what we eat and how we feel, to the cell phone in our pocket and the computer that sits on our desk. Chemistry is an enabling technology that will deliver solutions to many of our planet's problems, including topics related to clean energy production, environmental health, and sustainable food production. This course provides a venue to interpret the underlying chemistry in our everyday lives – we will start with a "big bang", surveying how the universe first began, moving quickly to a broad array of special topics including clean energy production, environmental toxicology, metals in biology, the fundamental science underlying display technologies, and more! The course is intended for students with no formal background in chemistry. (Not open to first-year students. May not be used for credit as a Science Course in any Science program.) (2 lecture hours per week.)

**CHEM-2200. Analytical Chemistry**
Fundamental chemical principles and theory that are important to classical, or "wet" analytical chemistry are presented, and illustrated using practical applications. The topics covered in this course include aqueous-solution chemistry, equilibria in complex systems, electrolytes, and titrimetric methods of analysis (gravimetric, precipitation, acid-base, complexiometric and reduction-oxidation). Theory and applications of electrochemical techniques include potentiometric and amperometric titrations. (Prerequisite: CHEM-1110 or consent of instructor.) (3 lecture hours, 3 laboratory hours a week.)

**CHEM-2300. Introductory Organic Chemistry**
Introduction to organic chemistry, with emphasis on structure, stereochemistry, and reactions of aliphatic and alicyclic compounds and their functionalized derivatives. (Prerequisites: CHEM-1100 and CHEM-1110, or CHEM-1103.) (Antirequisite: CHEM-2305.) (3 lecture, 3 laboratory hours a week.)

**CHEM-2305. Introductory Organic Chemistry**

The same as CHEM-2300 but without the laboratory. (Prerequisites: CHEM-1100 and CHEM-1110.) (Antirequisite: CHEM-2300.) (3 lecture hours a week.) (Not available for credit to students majoring in Chemistry, Biochemistry, or Biological Sciences or students minoring in Chemistry or Biochemistry.)

**CHEM-2310. Introductory Organic Chemistry II**
A continuation of CHEM-2300. Topics include the chemistry of nitrogen-containing compounds, aromatic chemistry and an introduction to spectroscopic methods. (Prerequisite: CHEM-2300.) (2 lecture hours a week.)

**CHEM-2320. Fundamentals of Organic Chemistry**
This course is for students who want to take only one organic chemistry course in their studies and covers the very essentials of what is taught in CHEM-2300, CHEM-2310, and CHEM-3310. It gives a general introduction to organic chemistry, with emphasis on molecular structure, stereochemistry, intermolecular interactions, physical properties of organic compounds, and the chemistry of important functional groups (halides, alcohols, thiols, amines, carboxylic acids, esters, amides and aromatic compounds). The course functions as a prerequisite for BIOC-2010 (Organic Chemistry of Biomolecules) but not CHEM-2310 (Introductory Organic Chemistry II). High scoring students may be admitted into CHEM-2310 by the consent of the instructor. (Prerequisites: CHEM-1110 or CHEM-1103.) (Antirequisites: CHEM-2300, CHEM-2305, CHEM-2325/Credit may be obtained for only one of CHEM-2300, CHEM-2305, CHEM-2320, and CHEM-2325.) (3 lecture, 3 laboratory hours a week.) (Not available for credit to students majoring in Honours Chemistry and Biochemistry programs.)

**CHEM-2325. Fundamentals of Organic Chemistry**
The same as CHEM-2320 but without the laboratory. (Prerequisites: CHEM-1100 and CHEM-1110.) (Antirequisite: CHEM-2300, CHEM-2305, CHEM-2320/Credit may be obtained for only one of CHEM-2300, CHEM-2305, CHEM-2320, and CHEM-2325.) (3 lecture hours a week.) (Not available for credit to students majoring in Chemistry, Biochemistry, or Biological Sciences or students minoring in Chemistry or Biochemistry.)

**CHEM-2400. Introductory Physical Chemistry I**
Properties of ideal and real gases, first and second laws of thermodynamics, physical transformations of substances, mixtures of substances and phase diagrams are applied to changes of state, chemical reactions and spontaneous processes. (Prerequisites: CHEM-1110, MATH-1760 or MATH-1720, and MATH-1730.)(3 lecture hours/week, 3 lab hours or 1.5 tutorial hours/week or equivalent)

**CHEM-2410. Introductory Physical Chemistry II**
Physical and chemical equilibrium, equilibrium electrochemistry, molecular motion and collisions, chemical reaction rates, kinetics and introduction to statistical mechanics.(Prerequisite: CHEM-2400) (3 lecture hours/week, 3 laboratory hours or 1.5 tutorial hours/week or equivalent.)

**CHEM-2500. Introductory Inorganic Chemistry I**
Introduction to inorganic chemistry. Topics include: the origin of trends in the periodic table, molecular symmetry, and chemical bonding (including ionic bonding and the molecular orbital and valence bond models for covalent bonding). These approaches will be used to explain the chemistry and properties of selected classes of main group compounds. Photoelectron, NMR, and vibrational spectroscopy are introduced as complementary tools in the examination of these molecular species. (Prerequisite: CHEM-1110.) .(3 lecture hours/week, 1.5 tutorial hours/week.)

**CHEM-2510. Introductory Inorganic Chemistry II**

The coordination chemistry of transition metals will be discussed, with particular reference to the means of physical and spectroscopic characterization. Relevance of such compounds to bio-inorganic systems will also be discussed. (Prerequisite: CHEM-2500.) (3 lecture hours/week, 3 laboratory hours or 1.5 tutorial hours/week or equivalent.)

**CHEM-3210. Principles of Instrumental Analysis**
The fundamental principles of operation and practical application of modern chemical analytical instrumentation are presented. This course will focus on the acquisition and assessment of qualitative and quantitative data from synthetic, biochemical and natural materials using instruments and methods that describes the elemental, isotopic, and molecular composition and structure of matter. Topics covered in this course may include atomic and molecular absorption and emission (photoluminescence) spectroscopy, atomic and molecular mass spectroscopy, X-ray spectroscopy, vibrational spectroscopy, and separation methods such as gas and liquid chromatography. (Prerequisite: CHEM-2200 or consent of instructor; Prerequisite for School of the Environment Majors: ESCI-2131 or consent of instructor.)(3 lecture, 3 laboratory hours a week.) (Cross-listed with ESCI-3711.)

**CHEM-3300. Spectroscopic Structure Identification**
Structure elucidation and the use of spectroscopic techniques in synthetic chemistry. The experimental and theoretical principles of mass spectrometry, UV/visible, infrared and nuclear magnetic resonance spectroscopy, with focus on applications of spectroscopic techniques to structure analysis. (Prerequisite: CHEM-2310 or consent of instructor.) (3 lecture, 3 laboratory hours a week.)

**CHEM-3305. Spectroscopic Structure Identification**
The same as CHEM-3300 but without the laboratory. Not available for credit to students minoring in Chemistry or Biochemistry.(Prerequisite: CHEM-2310 or consent of instructor.) (3 lecture hours a week.)

**CHEM-3310. Intermediate Organic Chemistry**
The methods of organic synthesis and the reaction mechanisms involved. (Prerequisite: CHEM-2310 or consent of instructor.) (3 lecture, 3 laboratory hours a week.)

**CHEM-3315. Intermediate Organic Chemistry**
The same as CHEM-3310 but without the laboratory. Not available for credit to students minoring in Chemistry or Biochemistry.(Prerequisite: CHEM-2310 or consent of instructor.) (3 lecture hours a week.)

**CHEM-3400. Quantum Chemistry**
Quantum chemistry is the application of quantum mechanics to the study of chemical systems. It is foundational to computational chemistry – the use of computers to model chemical systems – which has established itself as an important tool for studying chemical systems ranging from an atom to proteins, and in the design of new therapeutic drugs and materials. In this course we examine foundational principles and concepts of quantum chemistry relevant to understanding systems ranging from a single one-electron atom to multi-electron molecules. The study of multi-electron systems requires the use of approaches and approximations (e.g., Variational, Perturbation, or Molecular Orbital theory) that also lie at the core of the various possible computational methods. We will also gain experience in using computational chemistry to determine or predict the properties and behaviours of chemical systems. (Prerequisite: CHEM-2410.) (3 lecture, 3 laboratory hours per week.)

**CHEM-3500. Organometallic Chemistry**
This course provides an introduction to the organometallic chemistry of the transition metals. (Prerequisite: CHEM-2510 or consent of instructor.) (3 lecture, 3 laboratory hours a week.)

**CHEM-3510. Heavy Metal Easy Listening**
What are all those metals in the periodic table good for? The course focuses on applications of metals and inorganic in the modern society, with the assumption that the audience are not specialists and thus requires only a basic background in chemistry. Select topics include: metals in medical diagnosis/imaging; treatment of diseases such as cancer; the irreplaceable roles metals play in modern drug synthesis; electronic and clean energy applications; and a balanced consideration of the impacts of metals in the environment. The course will also consider how scientific discoveries are presented to non-specialized audiences in the modern media. (Prerequisite: BIOC-2010/2015.) (3 lecture hours a week.)

**CHEM-3710. Materials Chemistry**
Modern topics in materials science and solid state chemistry are discussed with an emphasis on properties, applications, and methods of characterization. The areas covered will include biometric materials, nanoscale engineering, liquid crystals, semiconductors, superconductors, organic metals, ferromagnetism and the ferroelectric effect, non-linear optical materials, thermochromic solids, scanning tunneling microscopy, and atomic force microscopy. Emphasis on applications to biomaterials engineering. (Prerequisite: CHEM-2510.) (3 lecture hours/week.)

**CHEM-3909. Internship Work Term I**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The internship work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Students must be enrolled in the Bachelor of Science Honours Chemistry/Biochemistry with Internship stream). Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course cannot continue in the internship program.)

**CHEM-4007. Development of Leadership Skills**
Selected seminars will expose students to new research ideas and techniques as wells as different presentation styles. Students will engage in service, outreach and leadership activities. Students will attend twelve research seminars over the course of two terms and submit written summaries of three seminars. (36 hours of service activities over two terms); (3 credit hours over two terms); (pass/fail grading). (Open to students in Honours Chemistry, and Honours Biochemistry, and Biochemistry and Biomedical Science). (Prerequisites: major and cumulative average of 72%).

**CHEM-4308. Special Topics in Organic Chemistry**
Topics may include polymer chemistry, natural product chemistry, advanced synthetic methodology, or design and execution of organic syntheses. (Prerequisite: CHEM-3310 or consent of instructor.) (2 lecture hours a week.) (May be repeated for credit if content changes.)

**CHEM-4320. Dyes and Pigments - Design, Synthesis, and Properties**
This course describes essential design criteria for organic dyes and pigments and common synthetic strategies for their preparation. Also covered are basic structure-property relations regarding their absorption and emission properties. This is an advanced organic chemistry course and requires a good understanding of intermediate organic chemistry and spectroscopic techniques. Pre-requisite: CHEM-2310 (Inorganic Chemistry II) or consent of instructor. (Cross-listed with CHEM-8320)

**CHEM-4350. Advanced Organic Chemistry**
Physical organic chemistry. Includes molecular orbital theory, stereochemistry, thermodynamics, and reaction mechanisms. (Prerequisite: CHEM-3310 or consent of instructor.) (2 lecture hours a week.)

**CHEM-4410. Statistical Thermodynamics**
This course covers the following topics: laws of thermodynamics, heat capacities, distribution laws, partition functions, and chemical equilibria and kinetics. The subject will be further illuminated by discussions of low temperature phenomena and spectroscopy. (Prerequisite: CHEM-2410.) (3 lecture hours a week.)

**CHEM-4420. Nuclear Magnetic Resonance (NMR) Spectroscopy**
Theory and applications of Nuclear Magnetic Resonance (NMR) in chemical problems, including the origin of the NMR phenomenon, Fourier transforms and spectral processing, spectrometer hardware, pulse sequences, NMR interactions, relaxation and chemical exchange, double-resonance experiments and two-dimensional NMR. (3 lecture hours a week.)

**CHEM-4450. Advanced Physical Chemistry**
Special topics in physical chemistry. (2 lecture hours a week.)

**CHEM-4460. Molecular Spectroscopy**
Symmetry elements, group theory, character tables, rotational and vibrational spectroscopy, electronic spectroscopy transitions, astrochemistry, lasers, photoelectron spectroscopy. , introduction to nuclear magnetic resonance, electron spin resonance. (Prerequisite: CHEM-3400 or consent of instructor.) (Cross-listed with course CHEM-8468)(3 lecture, 3 laboratory hours per week.)

**CHEM-4500. Special Topics in Main Group Chemistry**
This course provides an introduction to the chemistry of main group elements with a particular focus on the elements of the p-block. The material will highlight the similarities and differences observed between organic molecules and those from the rest of the periodic table with respect to their structural features, bonding and reactivity. (Prerequisite: CHEM-2500.) (3 lecture hours a week.)(May be repeated for credit if content changes.)

**CHEM-4510. Special Topics in Inorganic Chemistry**
Advanced topics in inorganic chemistry, bioinorganic chemistry and organometallic chemistry may include analytical and spectroscopic methods of use to the inorganic chemist, advanced topics in main group chemistry, coordination chemistry, organometallic chemistry, free radical chemistry or the chemistry of the lanthanides and actinides. (Prerequisite: CHEM-3710 or Consent of instructor.) (2 lecture hours a week.) (May be repeated for credit if content changes.)

**CHEM-4520. Free Radicals in Chemistry and Biology**
This is an advanced level course that covers the principle of radical generation and stabilization, and the foundations of Electron Paramagnetic Resonance (EPR) spectroscopy for studying and characterizing free radicals. Experimental data, such as EPR spectra, will be used to probe the electronic structure of free radicals as well as provide local information on the coordination geometry for metal complexes including metallo-enzymes. A range of free radical reaction mechanisms will be surveyed, incorporating radical recombination reactions, radical abstraction reactions, radical addition reactions, and radical rearrangements. These will cover important chemical processes as well as examples drawn from biology including lipid peroxidation and lignin synthesis. (3 lecture hours per week) (Prerequisite: (Prerequisite: CHEM-2510 and either CHEM-2310 or CHEM-2320.)

**CHEM-4528. Supramolecular Chemistry**
Supramolecular chemistry can be defined as the study of chemical systems involving aggregates of molecules or ions held together by non-covalent interactions. This course will survey the concepts,

major research areas and applications of modern supramolecular chemistry including intermolecular interactions, molecular recognition, supramolecular devices, self-assembly, supramolecular materials, molecular topology, biomimetic systems and molecular machines. (Prerequisite CHEM-2510.) (2 lecture hours a week.) (Cross listed with CHEM-8528.)

**CHEM-4535. Organometallics for Clean Energy Conversion**
This course exposes students to the use of organometallic chemistry for clean energy conversion. The content will be broken up into four major sub-sections regarding Earth's hydrogen, carbon, nitrogen, and oxygen cycles. Topics of interest will include (but are not limited to): i) assessing the energy challenge; ii) nuclear energy; iii) hydrogen as an energy carrier in fuel cells; iv) recent developments in $CO_2$ hydrogenation; v) assessing global need for ammonia formation and utilization; and vi) homogeneous water oxidation. In each of these areas, students are expected to develop a basic understanding of the factors that govern chemical reactivity in an effort to propose new catalysts from scratch. Emphasis will be placed on honing students' writing skills, mastering careful literature evaluation, and providing strong oral presentations. (Prerequisite CHEM-3500.) (3 lecture hours/week.) (Cross-listed with CHEM-8535.)

**CHEM-4599. Applications of Inorganic Spectroscopy**
The field of Inorganic Chemistry has relied on spectroscopy to gain insight into the structure and dynamics of species from small molecules to the active sites of metalloenzymes. The objective of this course is to learn different spectroscopic techniques that can be used in combination to identify and characterize inorganic compounds. This course will focus on three techniques with vastly different energies, spectroscopic timescales and resolution: NMR, EPR, and Mössbauer spectroscopy. All these spectroscopies have the influence of nuclear spin states in common, and are among the most informative available for the study of molecules. The course in aimed to be practical, with an emphasis on problem solving, so that it may aid you in your own research endeavours. (Prerequisite: CHEM-3500) (3 lecture hours a week.) (Cross-listed with CHEM-8599)

**CHEM-4600. Surface Chemistry and Analysis**
This course provides an introduction to the properties of surfaces with a focus on the formation, characterization and applications of self-assembled monolayers. Specific topics will include methods of preparation, molecular-level control of macroscopic surface properties, chemical reactions on the monolayer surface, and surface characterization techniques. The course will also cover applications of self-assembled monolayers such as their use as etch resists, as substrates for crystallization, and as model biological surfaces. (Prerequisite: CHEM-3500.) (3 lecture hours per week.)

**CHEM-4610. Polymer Chemistry**
This course provides an overview of the fundamental concepts and principles in polymer chemistry. It includes a comprehensive survey of the basic polymerization methods and characterization of polymers. In addition, development in modern polymerizations and advanced polymeric materials will be introduced. (Prerequisite: CHEM-2310.)

**CHEM-4630. Self-Organization by Molecular Design**
Self-organization is a ubiquitous phenomenon in nature (e.g., cell membranes, vesicles, and iridescent surfaces) and technology (e.g., block-copolymers, liquid crystals, and surfactants). This course will provide a basic understanding of the driving forces for self-organization and how the formation of specific self-organized structures (e.g., layers, micelles, tubes, columns, and cubic arrangements) can be programmed into molecules by rational design. The course will also provide an introduction to variable temperature polarized optical microscopy, thermal analysis (DSC and TGA), and variable temperature

powder X-ray diffraction as important characterization techniques for these materials. (Prerequisite: CHEM-2300.) (2 lecture hours/week and 1 lab/tutorial/week.)

**CHEM-4640. Organic Nanomaterials**
This course examines the fundamental concepts, preparation strategies and properties of organic/carbon-rich nanomaterials at the nanoscale, and their applications in various areas of modern chemistry (materials, electronics, pharmaceutical, medicine, etc.). A special emphasis is also put on methods and techniques utilized in materials science to characterize organic nanostructures. (Prerequisite for students in undergraduate course: CHEM-2310) (Cross-listed with CHEM-8740)

**CHEM-4641. Bio- and Sustainable Materials**
As technology makes increasing inroads into the chemical sciences, the development of new functional sustainable and biomaterials becomes increasingly important. This course focuses on the chemistry, characterization and applications of renewable and degradable polymers as well as on the chemistry of carbohydrates and amino acids, and the properties of their polymers. (Prerequisites: CHEM-2310, BIOC-2010.)

**CHEM-4660. Special Topics in Chemistry**
(2 lecture hours a week.) (May be repeated for credit if content changes.)

**CHEM-4680. Applied Analytical Laboratory**
Analytical chemistry remains a leading growth area in the chemistry-related job market. Core skills include not only the technical experience with the instrumentation and the fundamental chemistry concepts, but also good-laboratory practice policies which ensure the uniformity, reproducibility, reliability, and integrity of analysis. This two-semester course focuses on developing these skills as well as sample management, report preparation and interaction with the private sector to provide professional training as well as fundamental academic learning in analytical chemistry as related to the beverage industry in Windsor-Essex. Students will work in a simulated industrial laboratory environment and develop advanced skills and knowledge of analytical chemistry, laboratory management, sample management and policy related to analytical laboratories (Pre-requisite: CHEM-2200) (1 lecture and 6 laboratory hours per week over two terms.) (6 credit course).

**CHEM-4832. Magnetochemistry**
This course covers the requisite theory underpinning the field of magnetic materials. It provides the necessary skills set for students to interact effectively in this sub-discipline with researchers in the fields of physics, materials science and engineering. Knowledge gained from this course provides current state-of-the-art knowledge in conventional magnetic materials (‘hard’ and ‘soft’ magnets and their applications) as well as emerging fields such as low dimensional magnetic materials and single molecule magnets with applications in next-generation quantum computing. (3 lecture hours/week or 2 lecture hours and 1 lab hour per week.) (Cross-listed with CHEM-8832.) (Prerequisite: CHEM-2510 or consent of instructor.)

**CHEM-4900. Research**
Original laboratory research under the direction of a faculty member. Student must present three seminars discussing their research project. (1 lecture, 12 laboratory hours per week over two terms; 6 credit hours.) (Only open to students in Chemistry Honours, Biochemistry Honours; please consult the "Program Requirements" section above.) (Prerequisites: major average of 72% and a cumulative average of 72%.)

**CHEM-4908. Internship Work Term II**

Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The internship work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Students must be enrolled in the Bachelor of Science Honours Chemistry/Biochemistry with Internship stream). Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course cannot continue in the internship program.) (Prerequisite: CHEM-3909.)

# COMPUTER SCIENCE

## PROGRAM AND CO-OPERATIVE EDUCATION REGULATIONS

**ENGLISH PROFICIENCY**
It is highly recommended that students take English ENGL-1001 (Composition) as students in Computer Science should develop good oral and written communications skills, besides technical proficiency in the basic science.

**SELECTION OF COURSES**
In selecting courses to meet the requirements of the programs outlined below, the following general regulations also must be observed:

1) A student registering in a course without having successfully completed the prerequisite course(s) will be required to drop that course unless the consent of the Director of Computer Science (or her/his designate) is obtained.

2) If two or more courses cover essentially the same material, only one may be taken for credit.

3) The prior approval of the Director of Computer Science (or her/his designate) must be obtained in order to substitute any courses for required ones.

4) Statistics courses other than those specifically listed as being required for the degree, or ones for which the required statistics courses are themselves prerequisites, may not be taken for credit.

5) In general, Computer Science courses offered in other areas may not be taken for credit. COMP-1047, COMP-2067, COMP-2057, COMP-2077, COMP-2707, and COMP-3057 may not be used to satisfy the major requirements of any degree program in Computer Science, or in joint programs with Computer Science, unless permission is obtained from the Director of Computer Science (or her/his designate).

**CO-OPERATIVE EDUCATION**

The Co-operative Education Program is available for the following degrees:
Bachelor of Computer Science (Honours)
Bachelor of Computer Science (Honours Applied Computing)
Bachelor of Science (Honours Computer Information Systems)
Bachelor of Science (Honours Computer Science with Software Engineering Specialization)

**Introduction**
The Co-operative Education Program offers students the opportunity to combine their classroom experiences with related work experiences. Students who apply and are accepted into the Co-operative Education Program must successfully complete at least three paid work experiences interspersed throughout the four-year Honours program. The experience gained while participating in these structured and supervised work placements is viewed as an integral component of the student's educational program.

All Co-op positions must be full-time, paid, related to the degree program and approved by the University. The process of securing a co-op position is competitive. Co-op students will apply for work opportunities as advertised by the Centre for Career Education using an Internet-based software program and employers will make interview and hiring decisions. Students are also encouraged to seek co-op employment outside of the advertised postings by completing a guided job search process facilitated by the Centre for Career Education.

**Academic Regulations**

Computer Science Co-op students must maintain full-time academic status and satisfy the following:
(a) Must maintain a minimum average of 60%, and
(b) Must maintain a minimum major average of 65%,
(c) Must not have more than one grade below 50% on their transcript, and;
(d) Must maintain a minimum major average of 65% during the one semester probation period.

**General Information**

Withdrawal from the co-op program will be granted on an exception basis only as it must be determined that the student has no outstanding commitments to employers. Students who wish to withdraw must meet with a Co-op Coordinator and complete a withdrawal form. However, the only time a student may withdraw from an undergraduate co-op program without further co-op fee payment implications is by the 1st Friday of classes after their first co-op work term. Students who withdraw from Co-operative Education at any other time will be liable for paying the co-op fee for the term in which they are dropping and one additional term. This will help offset the costs of developing another student for placement.

In the interest of building solid partnerships with employers, students who have accepted a co-op employment offer (either by ranking a position in round 1 of the job competition or by accepting a position either verbally or in writing in later rounds) must honour that commitment. Therefore, once students have accepted an offer of employment for a work term, they will be considered registered in the appropriate work term course and must remain in the co-op program until they have completed their work term requirements. Failure to honour these commitments and/or to complete all work term requirements will lead to being required to withdraw from the co-op program and will result in a failing grade on his/her transcript for that work term.

**Sequence of Work and Study Terms**

| *Year of Study* | *Fall Semester* | *Winter Semester* | *Summer Semester* |
|---|---|---|---|
| Year 1 | Study | Study | Off |
| Year 2 | Study | Study | Work |
| Year 3 | Study | Work | Study |
| Year 4 | Work | Study | Work |
| Year 5 | Study | | |

# PROGRAMS

## Bachelor of Computer Science (General)

**Degree Requirements**

Total courses: thirty.

(a) COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-3150, COMP-3220, COMP-3300, COMP-3340 (or COMP-3670), plus two additional Computer Science courses (excluding COMP-XXX7).
(b) MATH-1250 (or MATH-1260), MATH-1720 (or MATH-1760), and STAT-2910;
(c) one course from Arts/Languages, and one from Social Sciences;
(d) eleven other courses from any area of study, including Computer Science.

The major average will be calculated on the basis of the grades obtained in COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-3150, COMP-3220, COMP-3300, and either COMP-3340 or COMP-3670 or both.

**Recommended Course Sequence**
First Year: ten courses, including COMP-1000, COMP-1400, COMP-1410, MATH-1250 or MATH-1260, MATH-1720 (or MATH-1760).
Second Year: ten courses, including COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-2660, and STAT-2910.
Third Year: ten courses, including COMP-3150, COMP-3220, COMP-3300, and COMP-3340 (or COMP-3670).

Note: Students who plan to complete an Honours Computer Science degree at a later date should restrict the number of Computer Science courses they take as options, in order to transfer seamlessly into a Computer Science Honours program. These students should consult a program advisor.

## Bachelor of Computer Science (Honours)

This program is available with or without Co-op). See Program and Co-operative Education Regulations above.

**Degree Requirements**

Total courses: forty.

(a) COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2140, COMP-2310, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-3110, COMP-3150, COMP-3220, COMP-3300, COMP-3540, COMP-3670, COMP-4400, COMP-4540, COMP-4960 or COMP-4990 (both 6.0 credit hour courses), plus one additional Computer Science course at the COMP-3XX0 or COMP-4XX0 level.
(b) MATH-1020, MATH-1250 (or MATH-1260), MATH-1720 (or MATH-1760), MATH-1730, MATH-3940 (or MATH-3800) and STAT-2910 (or STAT-2920);
(c) three courses from Arts, Languages or Social Sciences, with at least one from Arts/Languages and one from Social Sciences;

(d) three courses at the 2XXX-4XXX level from Mathematics/Statistics or Computer Science (excluding COMP-2057, COMP-2077, COMP-2097, COMP-2707, COMP-3057, COMP-3077);*
(e) seven other courses from any area of study, including Computer Science.

It is recommended that students pursuing a Multi-media specialization should pick 6 courses (in consultation with an academic advisor) from Visual Arts and Communication, Media and Film.

The major average will be calculated on the basis of grades obtained in COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2140, COMP-2310, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-3110, COMP-3150, COMP-3220, COMP-3300, COMP-3540, COMP-3670, COMP-4400, COMP-4540, and either COMP-4960 or COMP-4990.

***Specializations**
Students may specialize in one of the following areas. A special annotation will be made on the transcript for a specialization in one of the following areas, if the specified courses are completed:
i) Artificial Intelligence specialization: COMP-3710; (at least two of COMP-4730, or COMP-4740, or COMP-4770 (requires COMP-3770)); and COMP-4990 project course (or COMP-4960 Research Project)) on an approved topic in Artificial Intelligence.
ii) Multi-media specialization: COMP-3500; COMP-4500; at least one of COMP-3340 and COMP-3520; and COMP-4990 project course (or COMP-4960 Research Project) on an approved topic in Multi-media.
iii) Networks and Security specialization: COMP-4670; at least two of COMP-3340, COMP-3680 and COMP-4680; and COMP-4990 project course (or COMP-4960 Research Project), on an approved topic in Networks and Security.
iv) Game Development specialization: One of (COMP-3500 or COMP-3520) and COMP-3770, COMP-4770 and COMP-4990 project course (or COMP-4960 Research Project) on an approved topic in Game Development.

**Recommended Course Sequence**
First Year: ten courses, including COMP-1000, COMP-1400, COMP-1410, MATH-1020, MATH-1250 (or MATH-1260) , MATH-1720 (or MATH-1760), and MATH-1730.
Second Year: ten courses, including COMP-2120, COMP-2140, COMP-2310, COMP-2540, COMP-2560, COMP-2650, COMP-2660, and STAT-2910 (or STAT-2920).
Third Year: ten courses, including COMP-3110, COMP-3150, COMP-3220, COMP-3300, COMP-3540, COMP-3670, and MATH-3940 (or MATH-3800).
Fourth Year: ten courses, including COMP-4400, COMP-4540, COMP-4990 (a 6.0 credit hour course).

## Bachelor of Computer Science (Honours Applied Computing)

This program is available with or without Co-op. See Program and Co-operative Education Regulations above.

**Degree Requirements**

Total courses: forty.

(a) COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-3150, COMP-3220, COMP-3300, COMP-3340, COMP-3400, COMP-3670, COMP-4990 (6 credit course), COMP-4150, COMP-4200, COMP-4220, COMP-4250, and two other Computer Science courses (excluding COMP- XXX7).
(b) MATH-1250 (or MATH-1260), MATH-1720 (or MATH-1760), and STAT-2910

(c) One course from Arts/Languages, and one from Social Sciences
(d) Thirteen other courses from any area of study, including Computer Science

The major average will be calculated on the basis of grades obtained in COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-3150, COMP-3220, COMP-3400, COMP-3300, COMP-3340, COMP-3670, COMP-4150, COMP-4200, COMP-4220, COMP-4250, and COMP-4990.

**Recommended Course Sequence**
First Year: ten courses, including COMP-1000, COMP-1400, COMP-1410, MATH-1250 (or MATH-1260), MATH-1720 (or MATH-1760).
Second Year: ten courses, including COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-2660, and STAT-2910.
Third Year: ten courses, including COMP-3150, COMP-3220, COMP-3300, COMP-3340, COMP-3400, COMP-3670.
Fourth Year: ten courses, including COMP-4200, COMP-4220, COMP-4250, COMP-4990 (a 6.0 credit hour course).

## Bachelor of Science (Honours Computer Information Systems)

This program is available with or without Co-op. See Program and Co-operative Education Regulations above.

**Degree Requirements**

Total courses: forty.

(a) Computer Science: COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-3150, COMP-3220, COMP-3300, COMP-3340, COMP-3400, COMP-4990 (a 6.0 credit hour course), plus two additional Computer Science course at the COMP-3XX0 or COMP-4XX0 level.
(b) Business: ACCT-1510, ACCT-2550, FINA-2700, MKTG-1310, and STEN-1000, plus four additional Business courses, but excluding MSCI-2020, MSCI-2130, MSCI-2200 and MSCI-3200.
(c) MATH-1250 (or MATH-1260), MATH-1720 or MATH-1760), and STAT-2910;
(d) three courses from Arts, Languages or Social Sciences, with at least one from Arts/Languages and one from Social Sciences;
(e) six additional courses from any area of study excluding Business;
(f) ECON-1100, ECON-1110.

The major average will be calculated on the basis of grades obtained in COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-3150, COMP-3220, COMP-3300, COMP-3340, COMP-3400, COMP-4990, ACCT-1510, ACCT-2550, FINA-2700, MKTG-1310, and STEN-1000.

**Recommended Course Sequence**
First Year: ten courses, including ECON-1100, ECON-1110, COMP-1000, COMP-1400, COMP-1410, MATH-1250 (or MATH-1260), MATH-1720 (or MATH-1760), ACCT-1510, and STEN-1000.
Second Year: ten courses, including COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-2660, STAT-2910, and MKTG-1310, ACCT-2550 and FINA-2700;
Third Year: ten courses, including COMP-3150, COMP-3220, COMP-3300, COMP-3340, and COMP-3400.

Fourth Year: ten courses, including COMP-4990 (a 6.0 credit hour course) and two Computer Science courses at the 3XXX or the 4XXX level.

## Bachelor of Science (Honours Computer Science with Software Engineering Specialization)

This program is available with or without Co-op. See Program and Co-operative Education Regulations above.

**Degree Requirements**

Total courses: forty.

(a) COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2140, COMP-2310, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-2800, COMP-3110, COMP-3150, COMP-3220, COMP-3300, COMP-3540, COMP-3670, COMP-4110, COMP-4400, COMP-4540, COMP-4800, COMP-4960 or COMP-4990 (both 6.0 credit hour courses), plus one additional Computer Science course (excluding COMP-XXX7).
(b) MATH-1250 (or MATH-1260), MATH-1720 (or MATH-1760), MATH-1730, MATH-1020, and STAT-2920 (or STAT-2910).
(c) four courses, one from each category: (i) Dynamics and Psychology: PSYC-1150, PSYC-2180, PHIL-2280, PHIL-1290, (ii) Communication skills: CMAF-2210, DRAM-2100, ENGL-1001, (iii) Professionalism: PHIL-2210, PHIL-2240, GART-2090, ENGL-1005, and (iv) Business and Management: MKTG-1310, MGMT-2400, STEN-1000.
(d) two courses from Arts, Languages or Social Sciences, including one from Arts/Languages and one from Social Sciences;
(e) four additional courses from any area of study, including Computer Science.
(f) one course at the 2XXX-4XXX level from Mathematics/Statistics or Computer Science (excluding COMP-2057, COMP-2077, COMP-2097, COMP-2707, COMP-3057, COMP-3077).

The major average will be calculated on the basis of grades obtained in COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2140, COMP-2310, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-2800, COMP-3110, COMP-3150, COMP-3220, COMP-3300, COMP-3540, COMP-3670, COMP-4110, COMP-4400, COMP-4540, COMP-4800, and either COMP-4960 or COMP-4990.

**Recommended Course Sequence**
First Year: ten courses, including COMP-1000, COMP-1400, COMP-1410, MATH-1250 (or MATH-1260), MATH-1720 (or MATH-1760), MATH-1730 and MATH-1020.
Second Year: ten courses, including COMP-2120, COMP-2140, COMP-2310, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-2800, and STAT-2920 (or STAT-2910).
Third Year: ten courses, including COMP-3110, COMP-3150, COMP-3220, COMP-3300, COMP-3540, COMP-3670.
Fourth Year: ten courses, including COMP-4110, COMP-4400, COMP-4540, COMP-4800, and COMP-4990 (a 6.0 credit hour course).

To remove any suggestion that the word "engineering," in the context of courses or programs in Computer Science implies the meaning of "engineering" as used in the context of courses or programs in Professional Engineering, it is hereby acknowledged that Software Engineering is a collection of principles, models, methods, and techniques for the development, maintenance, evolution, and reuse

of software that meets fundamental performance and quality requirements in an economic and competitive manner.

## Honours Business Administration and Computer Science (with/without Co-op and with/without Thesis)

This is a joint offering between the School of Computer Science and the Odette School of Business. See Odette School of Business for details.

## Honours Business Administration and Computer Science with Specialization in Accounting (with/without Co-op and with/without Thesis)

This is a joint offering between the School of Computer Science and the Odette School of Business. See Odette School of Business for details.

## Honours Business Administration and Computer Science with Specialization in Human Resources (with/without Co-op and with/without Thesis)

This is a joint offering between the School of Computer Science and the Odette School of Business. See Odette School of Business for details.

## Honours Business Administration and Computer Science with Specialization in Finance (with/without Co-op and with/without Thesis)

This is a joint offering between the School of Computer Science and the Odette School of Business. See Odette School of Business for details.

## Honours Business Administration and Computer Science with Specialization in Supply Chain and Business Analytics (with/without Co-op and with/without Thesis)

This is a joint offering between the School of Computer Science and the Odette School of Business. See Odette School of Business for details.

## Honours Business Administration and Computer Science with Specialization in Marketing (with/without Co-op and with/without Thesis)

This is a joint offering between the School of Computer Science and the Odette School of Business. See Odette School of Business for details.

## Honours Business Administration and Computer Science with Specialization in Strategy and Entrepreneurship (with/without Co-op and with/without Thesis)

This is a joint offering between the School of Computer Science and the Odette School of Business. See Odette School of Business for details.

## Honours Mathematics and Computer Science

This is a joint offering between the School of Computer Science and the Department of Mathematics and Statistics. See Department of Mathematics and Statistics for details.

## Other Combined Honours Computer Science Programs

**Degree Requirements**

Total courses: forty.

(a) Computer Science: COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-3150, COMP-3220, COMP-3300, COMP-3400, and COMP-4990, plus three additional Computer Science courses at the 3XXX level or above (excluding COMP-XXX7).
(b) Course requirements - Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) MATH-1250 (or MATH-1260), MATH-1720 (or MATH-1760), and STAT-2910 (or STAT-2920);
(d) any additional courses, excluding courses used to calculate the major average as determined by the second area of study;
(e) additional courses, if necessary, from any area of study to a total of forty courses.

The major average will be calculated on the basis of grades obtained in COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-3150, COMP-3220, COMP-3300, COMP-3400, and COMP-4990 and those major courses in the other area of specialization.

Students interested in pursuing a graduate degree in Computer Science are strongly encouraged to take MATH-1020, MATH-1730, COMP-2140, COMP-2310, COMP-3540 and COMP-4540 during their undergraduate studies to increase their chance of acceptance into a graduate program in Computer Science.

# Bachelor of Computer Science (General) for University Graduates

**Admission Requirements**
University graduates with a three-year General, four-year Major or four-year Honours degree (from a discipline other than Computer Science) may apply to the BCS (General) degree for University Graduates.

**Degree Requirements**

Total Courses: 16

University graduates with a three-year General, four-year Major or four-year Honours degree (from a discipline other than Computer Science) may apply to the BCS (General) degree for University Graduates.

*12-month Full time Degree Program (with Summer Entry)**
(a) COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-3150, COMP-3220, COMP-3300, COMP-3340 or COMP-3670, plus one additional Computer Science course (excluding COMP-XXX7).
(b) MATH-1250 (or MATH-1260 or MATH-1270), MATH-1720 (or MATH-1760), and STAT-2910.

The major average will be calculated on the basis of grades obtained in COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650 (or ELEC-2710), COMP-2660 (or ELEC-3270), COMP-3150, COMP-3220, COMP-3300, COMP-3340 and/or COMP-3670.

* Completion in 12 months is possible ONLY for those starting in Intersession/Summer semester. Those starting in Fall or Winter semesters, it may take longer to finish and such students may not be able to have a full course load in every semester. Also, students who get transfer credits should not expect to have a full course load every semester.

**Recommended Program Sequence (for 12 month completion with summer entry)**

*This is a 16-course program. The normal course load is 5 courses per semester but to complete the program in 12 months, an extra course has to be taken in the last semester as per sequence given below:*

Intersession/Summer
Intersession (6 week offering starting May): COMP-1400
Summer (6 week offering starting July): COMP-1410
12-week term (starting May): COMP-1000, COMP-2650 and STAT-2910

Fall
COMP-2120, COMP-2540, COMP-2560, COMP-2660, and MATH-1250 (or MATH-1260) or MATH-1720 (or MATH-1760).

Winter
COMP-3150, COMP-3220, COMP-3300, COMP-3340 or COMP-3670, Computer Science elective, and the remaining Math course.

# Bachelor of Computer Science (Honours) for University Graduates

**Admission Requirements**

(i) Admission Requirements: A 3-year General, 4-year Major or a 4-year Honours Bachelor's degree from an accredited University in a discipline other than Computer Science and has exposure to math, statistics, computers, or science (e.g., Engineering, Science, Math, Business, Economics, etc.).
(ii) Ontario Grade 12 "U" Advanced Functions (MHF4U) or equivalent with a minimum of 70% average. Calculus and Vectors (MCV4U) or equivalent is strongly recommended.

This program is also suggested to those considering future application to the MSc Computer Science program.

**Degree Requirements**

Total courses: 27

(a) COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2140, COMP-2310, COMP-2540, COMP-2560, COMP-2650 (or ELEC-2710), COMP-2660 (or ELEC-3270), COMP-3110, COMP-3150, COMP-3220, COMP-3300, COMP-3540, COMP-3670, COMP-4400, COMP-4540, COMP-4960 or COMP-4990 (both are 6.0 credit hour courses), and one additional Computer Science COMP-3xx0/4xx0 course.
(b) MATH-1020, MATH-1250 (or MATH-1260 or MATH-1270), MATH-1720 (or MATH-1760), MATH-1730, MATH-3940 (or MATH 3800), and STAT-2910 (or STAT-2920).

Courses used to calculate the major average are: COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2140, COMP-2310, COMP-2540, COMP-2560, COMP-2650 (or ELEC-2710), COMP-2660 (or ELEC-3270), COMP-3110, COMP-3150, COMP-3220, COMP-3300, COMP-3540, COMP-3670, COMP-4400, COMP-4540, and COMP-4960 or COMP-4990.

Note: Potential credit transfer on an ad-hoc basis, while considering minimum residency and core course requirements.

**Possible Program Sequence (with recommended Intercession/Summer entry)***

*This program is intended for those who would like to further continue their studies towards a graduate degree (e.g., master and/or PhD) in Computer Science. Those starting in Fall or Winter semesters getting transfer credits may not be able to have a full course load in every semester and may not be able to finish in five semesters.

Completion in 5 semesters may be possible only if the student decides to take two courses as overload courses in two different semesters. A course overload always needs approval from the School of Computer Science and Faculty of Science depending on student's performance.

Summer/Intersession (Semester 1)
Intersession (6 week offering starting May): COMP-1400
Summer (6 week offering starting July): COMP-1410
12-week term (starting May): COMP-1000, COMP-2650 and MATH-1020

Fall (Semester 2)
12-week term: COMP-2120, COMP-2310, COMP-2540, COMP-2560, COMP-2660 (or ELEC-3270)(as an overload) and MATH-1720 (or MATH-1760).

Winter (Semester 3)

12-week: COMP-2140, COMP-3110, COMP-3150, one COMP-3xx0/4xx0 (as an overload), COMP-4990A (or COMP-4960A), and MATH-1730.

Summer/Intersession (Semester 4)
12-week: COMP-3220, COMP-3300, COMP-3670, MATH-1250 (or MATH-1260), and STAT-2910 (or STAT-2920).
Fall (Semester 5)
12-week: COMP-3540, COMP-4400, COMP-4540, COMP-4990B (or COMP-4960B) and MATH-3940.

## Bachelor of Computer Science (Honours Applied Computing) for University Graduates

**Admission Requirements**
(i) A 3-year General or a 4-year Honours Bachelor's degree from an accredited University.
(ii) Ontario Grade 12 "U" Advanced Functions and Introductory Calculus and Geometry and Discrete Mathematics or equivalent courses.

**Degree Requirements**

Total courses: 25

(a) COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650 (or ELEC-2710), COMP-2660 (or ELEC-3270), COMP-3150, COMP-3220, COMP-3300, COMP-3340, COMP-3400, COMP-3670, COMP-4150, COMP-4200, COMP-4220, COMP-4250, COMP-4990 (6 credit course), and two other Computer Science major courses (excluding COMP-XXX7).
(b) MATH-1250 (or MATH-1260, or MATH-1270), MATH-1720 (or MATH-1760), and STAT-2910.

The major average will be calculated on the basis of grades obtained in COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650 (or ELEC-2710), COMP-2660 (or ELEC-3270), COMP-3150, COMP-3400, COMP-3220, COMP-3300, COMP-3340, COMP-3670, COMP-4150, COMP-4200, COMP-4220, COMP-4250, COMP-4990 (6 credit, two-semester course).

**Possible Program Sequence (with recommended Summer entry)***

* Those starting in Fall or Winter semesters may not be able to have a full course load in every semester. Also, students who get transfer credits should not expect to have a full course load every semester.

Intersession/Summer (Semester 1)
Intersession (6 week offering starting May): COMP-1400
Summer (6 week offering starting July): COMP-1410
12-week term (starting May): COMP-1000, COMP-2650 and STAT-2910

Fall (Semester 2)
COMP-2120, COMP-2540, COMP-2560, COMP-2660, and MATH-1250 (or MATH-1260), or MATH-1720 (or MATH-1760).

Winter (Semester 3)
COMP-3150, COMP-3400, COMP-4200, COMP-4990 (Part 1), and Computer Science elective.

Summer (Semester 4)
COMP-3220, COMP-3300, COMP-3340, COMP-3670, and the remaining Math course.

Fall (Semester 5)
COMP-4150, COMP-4220, COMP-4250, Computer Science elective, and COMP-4990 (Part 2).

## Bachelor of Computer Science (General) for Graduates of Qualifying Ontario and Other College Diploma Holders

**Admission Requirements**
Most Ontario 3 year diploma graduates in a computer related program are eligible for admission under these degree pathway agreements including: St. Clair, Algonquin, Cambrian, Centennial, Conestoga, Durham, Fanshawe, George Brown, Georgian, Humber, Mohawk, Niagara, Northern, St. Lawrence, Seneca, Sheridan, and Sir Sandford Fleming. Other colleges with similar programs may also be eligible and should inquire through the Office of Enrolment Management – Recruitment or at ask.uwindsor.ca.

1. Graduates of three-year Computer Science related Diploma program from a qualifying Ontario or other college of applied Arts and Technology (CAAT) with a grade-point average of at least 3.0 out of 4.0 (or cumulative average of at least a B (73%) grade), are eligible, within 10 years of graduation, for admission to Bachelor of Computer Science (General) degree program offered by the School of Computer Science at the University of Windsor under the provisions of this agreement.
2. Graduates of CAAT program, specified above, applying to the University of Windsor for the Bachelor of Computer Science (General) Degree Program more than 10 years after completing the Diploma Program, with a grade point average of at least 3.0 out of 4.0 (or a cumulative average of at least a B (73%)), will require the approval of the Director of the School of Computer Science.
3. In addition to the appropriate three-year Diploma and grade point average, applicants to the Bachelor of Computer Science (General) Degree Pathway Program are required to have successfully completed Grade 12U Advanced Functions. The successful completion of Grade 12U Calculus and Vectors is strongly recommended.
4. Students admitted to the Bachelor of Computer Science (General) Degree Pathway Program will obtain the equivalent of 1.5 years of Advanced Standing (or awarded 15 course transfers). Additional credit for courses taken toward the CAAT Diploma will not be permitted.
5. Students are required to complete fifteen (15) courses at the University of Windsor in fulfillment of the requirements of the Bachelor of Computer Science (General) Degree Pathway Program.

**Degree Requirements**

Total courses: 15

(a) COMP-1000, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-3150, COMP-3220, COMP-3300, COMP-3340.*
(b) MATH-1250 (or MATH-1260) , MATH-1720 (or MATH-1760), and STAT-2910;
(c) one course from Arts/Languages;

No more than 7 courses can be at the 1000 level.
*Excluding courses COMP-1047, COMP-1400, COMP-2057, COMP-2707, COMP-2750, COMP-3057, COMP-3670.

The major average will be calculated on the basis of the grades obtained in COMP-1000, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-3150, COMP-3220, COMP-3300, COMP-3340.

**Possible Course Sequence**
Semester 1: COMP-1000, COMP-1410, COMP-2650, MATH-1250, one course from Arts/Languages.
Semester 2: COMP-2120, COMP-2540, COMP-2560, COMP-2660, MATH-1720 (or MATH-1760)
Semester 3: COMP-3220, COMP-3150, COMP-3300, COMP-3340, STAT-2910.

## Bachelor of Computer Science (Honours Applied Computing) (with and without Co-op) for Qualifying Ontario and Other College Diploma Holders

**Admission Requirements**
Most Ontario 3 year diploma graduates in a computer related program are eligible for admission under these degree pathway agreements including: St. Clair, Algonquin, Cambrian, Centennial, Conestoga, Durham, Fanshawe, George Brown, Georgian, Humber, Mohawk, Niagara, Northern, St. Lawrence, Seneca, Sheridan, and Sir Sandford Fleming. Other colleges with similar programs may also be eligible and should inquire through the Office of Enrolment Management – Recruitment or at ask.uwindsor.ca.

1. Graduates of three-year Computer Science related Diploma program from a qualifying Ontario or other college of applied Arts and Technology (CAAT) with a grade-point average of at least 3.0 out of 4.0 (or a cumulative average of at least a B (73%) grade), are eligible, within 10 years of graduation, for admission to Bachelor of Computer Science (Honours Applied Computing) degree program offered by the School of Computer Science at the University of Windsor under the provisions of this agreement. Degree Pathway Program for BCS (Honours Applied Computing) for both Co-op and Non Co-op options) for Qualifying Ontario and Other College Diploma Holders.
2. Graduates of CAAT program, specified above, applying to the University of Windsor for the Bachelor of Computer Science (Honours Applied Computing) Degree Program more than 10 years after completing the Diploma Program, with a grade point average of at least 3.0 out of 4.0 (or a cumulative average of at least a B (73%)), will require the approval of the Director of the School of Computer Science.
3. In addition to the appropriate three-year Diploma and grade point average, applicants to the Bachelor of Computer Science (Honours Applied Computing) Degree Pathway Program are required to have successfully completed Grade 12U Advanced Functions. The successful completion of Grade 12U Calculus and Vectors is strongly recommended.
4. Students admitted to the Bachelor of Computer Science (Honours Applied Computing) Degree Pathway Program will obtain the equivalent of 1.5 years of Advanced Standing (or awarded 15 course transfers). Additional credit for courses taken toward the CAAT Diploma will not be permitted.
5. Students are required to complete twenty five (25) courses at the University of Windsor in fulfillment of the requirements of the Bachelor of Computer Science (Honours Applied Computing) Degree Pathway Program.
6. The Bachelor of Computer Science (Honours Applied Computing) Degree Pathway Program will be reviewed and amended, if appropriate, by the School of Computer Science every three years following the approval of the program.

**Degree Requirements**

This program is available with or without Co-op. See Program and Co-operative Education Regulations above.

Total courses: 25 courses

(a) COMP-1000, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-3150, COMP-3220, COMP-3300, COMP-3340, COMP-3400, COMP-4150, COMP-4200, COMP-4220, COMP-4250 and COMP-4990 (6 credit course).*
(a) MATH-1250 (or MATH-1260), MATH-1720 (or MATH-1760), and STAT-2910
(b) One course from Arts/Languages
(c) Three other courses from any area of study, including Computer Science*

No more than 7 courses can be at the 1000 level.
*Excluding courses COMP-1047, COMP-1400, COMP-2057, COMP-2707, COMP-2750, COMP-3057, COMP-3670.

The major average will be calculated on the basis of grades obtained in COMP-1000, COMP-1410, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-2660, COMP-3150, COMP-3220, COMP-3300, COMP-3340,COMP-3400, COMP-4150, COMP-4200, COMP-4220, COMP-4250, and COMP-4990.

**Possible Course Sequence**
Semester 1: COMP-1000, COMP-1410, COMP-2650, MATH-1250, one course from Arts/Languages.
Semester 2: COMP-2120, COMP-2540, COMP-2560, COMP-2660, MATH-1720 (or MATH-1760).
Semester 3: COMP-3150, COMP-3220, COMP-3300, COMP-3340, STAT-2910.
Semester 4: COMP-3400, COMP-4150, COMP-4200, COMP-4220, COMP-4990 (part 1).
Semester 5: Three electives from any area, COMP-4250, COMP-4990 (part 2).

For Co-op stream, in addition:
The successful completion of at least three Co-op work terms.

## Bachelor of Computer Science (General) for Qualifying Ontario CAAT (or equivalent) Students with 2 Years of Study at CAAT (or equivalent) Diploma Program

**Admission Requirements**
Students who have successfully completed two years of a qualifying Ontario College of Applied Arts and Technology diploma program (or equivalent) with a cumulative average of 70% (B-) or higher may receive up to 8 courses of transfer credit toward a Bachelor of Computer Science (General) degree, provided they are within 10 years of the completion of the CAAT (or equivalent) courses, have successfully completed Grade 12U Advanced Functions, and have completed a full 2 years of study at a CAAT (or equivalent) including all recommended sequence of 20 courses as confirmed through audit or CAAT (or equivalent) diploma. Students who completed their courses more than 10 years ago may be admitted through this articulation agreement, following consultation and approval by the Director of the School of Computer Science. Students who have not successfully completed Grade 12U Advanced Functions will be required to take MATH-1280 (Access to Algebra) or its equivalent. The 8 University of Windsor courses students may receive transfer credits for consist of: COMP-3670 (Computer Networks), one other Computer Science course used to calculate the major average, COMP-1047 (Computer Concepts for End-Users), COMP-3057 (Cyber-Ethics), 4 Science courses. Contact the department for the course equivalency table used to determine transfer credit.

**Degree Requirements**

Total courses: 22 or more to be completed (subject to the number of transfer credits awarded)

(a) 13 Computer Science courses – courses to be determined based on the transfer credit awarded
(b) 9 additional courses – courses to be determined based on the transfer credit awarded

## Bachelor of Computer Science (Honours Applied Computing) (Co-op) for Qualifying Ontario CAAT (or equivalent) Students with 2 Years of Study at CAAT (or equivalent) Diploma Program

**Admission Requirements**
Students who have successfully completed two years of a qualifying Ontario College of Applied Arts and Technology diploma program (or equivalent) with a cumulative average of 70% (B-) or higher may receive up to 8 courses of transfer credit toward a Bachelor of Computer Science (Honours Applied Computing) (with or without Co-op) degree, provided they are within 10 years of the completion of the CAAT (or equivalent) courses, have successfully completed Grade 12U Advanced Functions, and have completed a full 2 years of study at a CAAT (or equivalent) including all recommended sequence of 20 courses as confirmed through audit or college diploma. Students who completed their courses more than 10 years ago may be admitted through this articulation agreement, following consultation and approval by the Director of the School of Computer Science. Students who have not successfully completed Grade 12U Advanced Functions will be required to take MATH-1280 (Access to Algebra) or its equivalent. The 8 University of Windsor courses students may receive transfer credits for consist of: COMP-3670 (Computer Networks), one other Computer Science course used to calculate the major average, COMP-1047 (Computer Concepts for End-Users), COMP-3057 (Cyber-Ethics), 4 Science courses. Contact the department for the course equivalency table used to determine transfer credit.

**Degree Requirements**

Total courses: 32 to be completed (subject to the number of transfer credits awarded)

(a) 20 Computer Science courses – courses to be determined based on the transfer credit awarded
(b) 12 additional courses – courses to be determined based on the transfer credit awarded

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Computer Science

Major Concentration: COMP-1000, COMP-2120, COMP-2540, COMP-2560, COMP-2650, COMP-3150, COMP-3220, COMP-3300, COMP-3340, COMP-3400, COMP-3670; one course at the 3XXX-level or above. (additional requirements: COMP-1400, COMP-1410, MATH-1720, MATH-1730.)

Minor Concentration: COMP-1000, COMP-2120, COMP-2540, COMP-2560; one Computer Science course at the 2XXX-level or above; and one Computer Science course at the 3XXX-level or above. (additional requirements: COMP-1400, COMP-1410, MATH-1720, MATH-1730.)

## Certificate in Applied Information Technology

**Admission Requirements**
Minimum admission requirements for undergraduate degrees.

Total courses: 8

The Certificate in Applied Information Technology consists of the following courses in which students must maintain an average of 60% or better: COMP-1047, COMP-2067 (or COMP-1400), COMP-2057, COMP-2077, COMP-2097, COMP-2707, COMP-3057, COMP-3077.

## Minor in Computer Science

The minor in Computer Science consists of the following courses in which students must maintain an average of 60% or better: COMP-1000, COMP-1400, COMP-1410, COMP-2120, and two of COMP-2540, COMP-2560, or COMP-2650.

## Minor in Applied Information Technology

The minor in Applied Information Technology consists of 6 courses in which the student must maintain an average of 60% or better: COMP-1047, COMP-2067 or COMP-1400, COMP-2057, COMP-2077, and two of COMP-2097, COMP-2707, COMP-3057 and COMP-3077.

# COMPUTER SCIENCE COURSES

Not all courses listed below will necessarily be offered every academic year.

All courses listed below are three lecture hours per week or equivalent, unless otherwise stated. In addition, laboratory/tutorial time may be scheduled as required.

Note: Most Computer Science courses require substantial time out of class in writing, correcting, and testing computer programs. Students should be prepared to devote a minimum of three to five hours a week per course to assignment work alone.

**COMP-1000. Key Concepts in Computer Science**
The objectives of this course are to excite students' interest in computer science and to give students a precise understanding of a number of difficult concepts that are fundamental to modern computer science. Topics may include: induction and recursion; algebraic characterization; syntax; semantics; formal logic; soundness, completeness, and decidability; specification, algorithm, and determinism; complexity. (Restricted to students registered in programs offered wholly or jointly by Computer Science or by Mathematics and Statistics, or with approval of Computer Science.) (3 lecture hours and 1.5 laboratory hours a week)

**COMP-1047. Computer Concepts for End-Users**
Introduction to the concepts of operation of a computer system, including hardware and software. Development of conceptual understanding of word processors, databases, spreadsheets, etc., and practical experience with their use. Networking concepts and data communication concepts will be introduced. The Internet will be introduced with students having access to internet resources. Management information systems including the systems development lifecycle will be discussed. Fundamental concepts of algorithm development and programming will be introduced. Hands-on

experience with microcomputers as well as a distributed-computing environment will be involved. In addition to lecture time, laboratory/tutorial time may be scheduled as required. (May not be used to fulfill the major requirements of any major or joint major in Computer Science.) (3 lecture hours)

**COMP-1400. Introduction to Algorithms and Programming I**
This course is the first of a two-course sequence designed to introduce students to algorithm design and programming in a high-level language such as C. The main objectives of the course are to develop the ability to identify, understand and design solutions to a wide variety of problems. Topics include: computer system overview, hardware and software, problem solving steps, concepts of variables, constants, data types, algorithmic structure, sequential logic, decisions, loops, modular programming, one-dimensional arrays, text files. If possible, problems like searching/sorting will be addressed. (3 lecture hours and 1.5 laboratory hours a week)

**COMP-1410. Introduction to Algorithms and Programming II**
This course is the continuation of COMP-1400 that introduces students to more advanced algorithm design and programming in a high level language such as C. The main objectives of the course are to develop the ability to identify, understand, and design solutions to a wide variety of problems. Topics covered include: multi-dimensional arrays, pointers, strings, advanced modular programming, records, binary files, recursion, stacks, linked lists and introduction to algorithm analysis. (Prerequisite: COMP-1000 (or MATH-1720) and COMP-1400.) (3 lecture and 1.5 laboratory hours a week).

**COMP-2057. Introduction to the Internet**
Students will be introduced to the Internet as a global information infrastructure, including fundamental concepts in protocols and services, packaging of data, and data transmission. Common tools and multimedia such as HTML, CSS, and CMS, used for the development of websites will also be introduced. Web page design, quality, accessibility and security issues will be discussed. How Web browsers and search engines work will be demonstrated. Social networks and other current Internet applications will be examined. In addition to lecture time, laboratory/ tutorial time may be scheduled as required. (Prerequisite: COMP-1047 or COMP-2067 or COMP-1400.) (May not be used to fulfill the major requirements of any major or joint major in Computer Science.) (3 lecture hours a week)

**COMP-2067. Programming for Beginners**
This course introduces fundamental computer programming principles and structured programming concepts, with an emphasis on good programming. Stages of the software development cycles are introduced: analysis, design, implementation, debugging and deployment. May not be used to fulfill the major requirements of any major or joint major in Computer Science.) (3 lecture hours).

**COMP-2077. Problem Solving and Information on the Internet**
Students will be introduced to logic and critical appraisals including reasoning skills and critical thinking in the computer age. Problem solving and heuristics will be discussed including how to solve problems by coming up with the right strategies. Searching using Boolean logic to pinpoint useful and reliable information will be introduced. Methods for being self-critical and critical of web information in order to perform evaluations will be studied. (Prerequisites COMP-1047 and COMP-2057.) (This course may not be taken to fulfill the major requirements of any major or joint major in Computer Science.) (3 lecture hours a week.)

**COMP-2097. Social Media Marketing for End Users**

This course provides review, analysis and use of social media and mobile technologies such as Instagram (tm), Facebook (tm), twitter (tm) LinkedIn (tm), texting, and using mobile devices such as laptops, ios (tm) devices, and Android devices. Topics to be covered include: a comprehensive review of available social media and mobile technology, use of social media and mobile technology for sharing of knowledge and for group interaction, security and privacy, ethical principles in social media, methods for analyzing end-user requirements for a social media application, strategies for designing, implementing, and maintaining an ethically-sound social media campaign, and measurement and assessment of social media analytics using industry standard tools and techniques. (This course may not be taken to fulfill the major requirements of any major or joint major in Computer Science.) (3 lecture hours).

**COMP-2120. Object-Oriented Programming Using Java**
Concepts of classes and objects, Java applications, frames, event handling, control structures, methods, arrays, string manipulations, object-based programming, object-oriented programming - inheritance, polymorphism, interface and abstract classes, anonymous classes, data structures in Java, exception handling, introduction to graphical user interface. (Prerequisite: COMP-1410.) (3 lecture hours and 1.5 laboratory hours a week)

**COMP-2140. Computer Languages, Grammars, and Translators**
Pragmatic and theoretical aspects of grammars, recognizers, and translators for computer languages will be discussed. The topics covered will include regular languages and context-free languages, including parsers and parser generators for such languages. Attribute grammars, syntax-directed translation, interpreters and compilers will also be discussed. (Prerequisite: COMP-1000 and COMP-2120.) (3 lecture hours and 1.5 laboratory hours a week)

**COMP-2310. Theoretical Foundations of Computer Science**
An introduction to Mathematical Logic, Set Theory, and Graph Theory. Topics include propositional logic, first order logic, proof techniques, mathematical induction, sets, operations on sets, relations, operations on relations, functions, countable and uncountable sets, graph-theoretic concepts, such as graph connectivity, graph isomorphism, trees, Euler graphs. (Restricted to students in Computer Science.) (Prerequisite: COMP-1000 and MATH-1020.) (3 lecture hours and 1.5 laboratory hours a week)

**COMP-2540. Data Structures and Algorithms**
An introduction to the programming and analysis of linear and non-linear internal (main store) data structures and associated algorithms. Topics include the formal notion of an algorithm, elementary time and space complexity; linear lists (such as stacks, queues, linked structures.); non-linear lists (trees, binary trees); recursion; sorting techniques (such as heap sort, quick sort, merge sort, shell sort.); searching techniques (such as binary search, binary search trees, red-black trees, hashing.); algorithm design paradigms (such as divide-and-conquer, dynamic programming, greedy algorithms); and applications. (Prerequisite: COMP-1000 and COMP-1410. Restricted to Computer Science students or permission of the School of Computer Science.) (3 lecture hours and 1.5 laboratory hours a week.)

**COMP-2560. Systems Programming**
This course introduces students to advanced software development techniques in system programming using the C language in the UNIX environment. Topics include introduction to modern operating systems, system calls, managing processes, the use of fork and exec, signals, file processing, filters, pipes, scripting languages, introduction to concurrency (e.g. synchronization), network programming (e.g. using sockets), client-server problems. (Prerequisite: COMP-1410.)(3 lecture hours and 1.5 laboratory hours a week)

**COMP-2650. Computer Architecture I: Digital Design**
This course covers fundamental concepts of digital design and CPU architecture. Topics covered include number systems, switching algebra, logic gates, circuit minimization combinational circuit, read-only memory, random-access memory, programmable logic, synchronous and asynchronous sequential circuits, latches, flip-flops, registers, counters, register transfer language. and CPU architecture overview. (Prerequisite: COMP-1400) (3 lecture hours and 1.5 laboratory hours a week)

**COMP-2660. Computer Architecture II: Microprocessor Programming**
This course uses microprocessor programming to explore the structure of a CPU and related components. Topics include data representation, central processing unit, arithmetic logic unit, control unit, assembly language concepts, memory segmentation, programming a typical microprocessor (e.g. Intel processors), instruction set architecture-addressing modes and formats, register set, runtime stack, floating point processor. (Prerequisite: COMP-2650). (3 lecture hours and 1.5 laboratory hours a week)

**COMP-2707. Advanced Web Design, Construction, and Deployment**
This course is intended to teach the student about advanced website creation and to give an understanding of some of the technology behind websites, as well as an understanding of emerging web-related technologies. Topics covered will include JavaScript, Style Sheets, Dynamic HTML, XML, XHTML, Web Browser compatibility issues, and how web servers work. (Prerequisite: COMP-2057.) (This course may not be taken to fulfill the major requirements of any major or joint major in Computer Science.) (3 lecture hours a week)

**COMP-2750. Selected Topics**
Topics may differ from year to year. (Prerequisite: COMP-1000 or MATH-1720, and COMP-1410.) (May be repeated for credit if content changes.) (3 lecture hours or equivalent.)

**COMP-2800. Software Development**
This is a software development course to advance students' programming skills and to introduce basic software engineering concepts and techniques through practice. Topics for advancing programming skills to be covered include event-driven programming and advanced GUI design, concurrent programming techniques, reflection and inter-process communication. Basic software engineering topics include requirements analysis and design, medium sized project management, and automated software engineering tool development. (Prerequisite: COMP-2120.) (3 lecture hours and 1.5 laboratory hours a week.)

**COMP-2980. Co-op Work Term I**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course cannot continue in the co-op program.)

**COMP-3057. Cyber-Ethics**
A number of key concerns about social welfare in our cyber age will be explored. Law, morality, public policy, and how these both influence and are influenced by the Internet will be examined. This course will critically appraise issues surrounding, but not limited to, free speech, property rights (especially intellectual property), privacy, security, and artificial intelligence. Issues raised by ethical theorists, policy makers, legal experts, and computer scientists will be analyzed in this course. (Prerequisites:

COMP-1047 and COMP-2057.) (This course may not be taken to fulfill the major requirements of any major or joint major in Computer Science.)(3 lecture hours a week)

**COMP-3077. Web-Based Data Management**
This non-major course is intended to teach students how to design and build interactive data-driven Web sites, by extending their knowledge of relevant programming concepts and techniques introduced in COMP-2707, and introducing new tools and techniques. Students will learn advanced use of PHP and MySQL to build objects and "glue" them together using protocols such as JSON, code libraries such as AJAX and jQuery, and learn how to incorporate API's from Web service providers such as Google Maps. (Prerequisite: COMP-2707). (This course may not be taken to fulfill the major requirements of any major or joint major in Computer Science.) (3 lecture hours a week.)

**COMP-3110. Introduction to Software Engineering**
This course introduces the fundamental concepts, common principles, and general techniques of software engineering. It discusses the main issues involved in the development life-cycle of nontrivial software systems, including process models, feasibility studies, requirements elicitation and definition, rapid prototyping, design methodologies, verification and validation, and software evolution. Students taking this course are required to work on projects, which are designed to go through the major phases of large-scale software system development. (Prerequisite: COMP-2120 and COMP-2540.)(3 lecture hours a week)

**COMP-3150. Database Management Systems**
This course will acquaint students with the Basic concepts of Database Systems. The topics covered will include 3-level architecture, introduction to file structures: B-trees, B+ Trees and Hashed files, relational model, relational algebra and calculus, SQL, and database design with Normalization Theory. (Prerequisite: COMP-2540 and COMP-2560 or COMP-2650.) (3 lecture hours a week)

**COMP-3220. Object-Oriented Software Analysis and Design**
This course builds on the knowledge of object-oriented programming, data structures, systems programming. Students are introduced to object-oriented software analysis and design concepts (such as cohesion and coupling), and design practices currently used in industry , (such as design patterns and refactoring). These concepts and practices will be discussed through case studies and programming exercises. (Prerequisite: COMP-2120 and COMP-2540)(3 lecture hours a week)

**COMP-3300. Operating Systems Fundamentals**
Operating system services, introduction to primary components of multi-programming operating systems, CPU scheduling, concurrent processes, process synchronization and interprocess communication, deadlocks, memory management, file systems, virtual memory, disk scheduling. (Prerequisite: COMP-2120, COMP-2540, COMP-2560, and COMP-2650 or COMP-2660.)(3 lecture hours a week)

**COMP-3340. World Wide Web Information Systems Development**
This course is designed for people who want to make their data available to others over the Internet. Topics will include WWW authoring, WWW site planning, executable programs that create dynamic documents, the client-server model, multi-tier WWW software architecture, and security aspects. (Prerequisite: COMP-2120 and COMP-2540.) (3 lecture hours a week)

**COMP-3400. Advanced Object Oriented System Design Using C++**
The main objective of this course is to explore advanced topics of the object oriented paradigm through the use of the C++ programming language. Topics covered include: advanced object oriented design, the

use of abstraction to manage complexity, objects and classes, inheritance and class hierarchies, multiple inheritance, operator and method overloading, namespaces and visibility, templates, dynamic binding and virtual functions, exception handling, multi-threading and C++ standard library. In addition, the course will include a practical project, solving a real-life problem, implemented in C++, involving the client/server methodology, and an interface to a database using a graphics toolkit. (Prerequisites: COMP-2120, COMP-2560.) (3 lecture hours a week)

**COMP-3500. Introduction to Multimedia Systems**
This course provides the student with basic concepts and techniques used in multimedia systems. Topics include: components of multimedia systems (text, audio, and video), media formats and standards, data compression techniques, hypermedia techniques, and authoring tools. (Prerequisite: COMP-2540 and COMP-2650.) (3 lecture hours a week)

**COMP-3520. Introduction to Computer Graphics**
An introduction to computer graphics hardware and software, interfaces, standards, programming libraries, fundamental algorithms, rendering techniques, and algorithms for 2D and 3D applications. Substantial programming work is vital to this course. (Prerequisite: COMP-2540 and MATH-1250.) (3 lecture hours a week)

**COMP-3540. Theory of Computation**
Finite Automata, regular expressions and languages; properties of regular languages; context-free grammars and languages; pushdown automata; properties of context-free languages. Introduction to Turing machines; recursive functions; undecidability. (Prerequisites: COMP-2140, COMP-2310 and COMP-2540.) (3 lecture hours a week)

**COMP-3670. Computer Networks**
This course is an introduction to computer networks and their protocols. Topics include: network architectures, transport, routing, and data link protocols, addressing, local area networks, flow and congestion control, and network security. Examples will be drawn primarily from the Internet (e.g. TCP, UDP, IP) protocol suite. (Prerequisite: COMP-2120, COMP-2540, COMP-2560 and COMP-2650. Recommended corequisite: COMP-3300.)

**COMP-3680. Network Practicum**
This course will acquaint the students with practical details of network software and hardware. Topics will include design, setup, configuration and implementation of various network functions. (Prerequisite: COMP-3300 and COMP-3670.) (3 lecture hours and 1.5 lab hours a week.)

**COMP-3710. Artificial Intelligence Concepts**
This course covers fundamental concepts in Artificial Intelligence. Topics include informed and uninformed search, problem solving using propositional and first-order logics, knowledge representation and reasoning, plausible and uncertain reasoning, machine learning, ethical implications. An overview of some applied Artificial Intelligence such as natural language processing, planning and agent systems will be included. (Prerequisites:COMP-2540 and (STAT-2910 or STAT-2920) (3 lecture hours a week)

**COMP-3750. Selected Topics**

Topics may differ from year to year. (Prerequisite: COMP-2120, COMP-2540, and COMP-2560. Additional courses may be required depending upon the subject.) (May be repeated for credit if content changes.)(3 lecture hours or equivalent a week)

**COMP-3760. Selected Topics**
Topics may differ from year to year. (Prerequisite: COMP-2120, COMP-2540, and COMP-2560. Additional courses may be required depending upon the subject.) (May be repeated for credit if content changes.)(3 lecture hours or equivalent a week)

**COMP-3770. Game Design, Development and Tools**
This course introduces professional game design and development tools. Students will become proficient in the use of a commercial grade game engine (e.g., Unity3D) and associated scripting/programming languages (e.g., C#) through programming intensive hands-on assignments. Topics may include game design and development concepts such as game objects and game components, game physics and collision handling, basic artificial intelligence, 2D and 3D graphics, textures and shaders, sprite animation, 3D animation, and audio. (Prerequisites: COMP-2120 and COMP-2540.) (3 lecture hours a week)

**COMP-3980. Co-op Work Term II**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course cannot continue in the co-op program.)

**COMP-4110. Software Verification and Testing**
This course covers fundamental concepts and techniques for software verification and testing. The students will learn through practice the testing process, automated software testing tools, and various test models together with the related test coverage criteria. (Prerequisites: COMP-3110 and COMP-3300.) (3 lecture hours a week)

**COMP-4150. Advanced and Practical Database Systems**
This course covers both advanced theoretical database materials as well as specific database application development tools needed in the industry. The course completes database design and theory initiated in COMP-3150 and then adds database application development languages. Students will be exposed to the running environments (e.g., their compilers) and applying these on the database theory and design of the first part to develop full application. (Prerequisites: COMP-3150 and COMP-3300.) (3 lecture hours a week)

**COMP-4200. Mobile Application Development**
Students taking this course will learn how to create a mobile application for the Android platform. The topics covered will include: use of the mobile application development environment, specification of the requirements for a mobile application, design and implementation of the end-user interface, managing data in a mobile application environment, interfacing with data and programs residing on remote servers, creation of object-oriented programs to implement the mobile application, use of libraries and third-party software resources, deployment of a mobile application so that it is available to the public, and documentation, including creation of end-user instructions, and design/program documentation. Students will work individually, and will develop a mobile application that has been approved by the instructor of the course. (Prerequisites: COMP-3150, COMP-3220.) (3 lecture hours a week.)

**COMP-4220. Agile Software Development**
This project-oriented course is designed to give students experience in developing projects using Agile software development process. The course will discuss principles of Agile methods for software development, with a concentration on the eXtreme Programming methodology, and will teach concepts related to its practices. Topics will include software and user interface design, build and development tools, data persistence, and proper software testing. Projects will involve the creation of industry-oriented software (e.g. in Java), and will expose participants to tools commonly used in industry. (Prerequisite: COMP-3220.)(3 lecture hours a week.)

**COMP-4250. Big Data Analytics and Database Design**
This course introduces topics in data mining and data analytics with emphasis on Big Data. Students will gain knowledge on the practical design principles as well as theoretical foundations of Big Data processing systems. Topics covered will include: data storage design and processing of big data systems such as NOSQL databases, MapReduce and Hadoop; introduction to data mining concepts such as frequent itemset and association rule mining, finding similar items, clustering, classification, link analysis, and mining data streams. (Prerequisite: COMP-3150.) (3 lecture hours a week.)

**COMP-4400. Principles of Programming Languages**
Basic concepts of programming languages. Comparative study of the major programming paradigms, including imperative, object-oriented, functional, logic, and concurrent programming. Principles of programming language design and evaluation. Syntax, semantics and implementation techniques of programming languages. (Prerequisite: COMP-2140, COMP-2310 and COMP-2540.) (Restricted to Computer Science students.) (3 lecture hours a week.)

**COMP-4500. 3D Multimedia System Development**
The aim of this course is to discuss and learn technologies for the development of multimedia application, modeling and development of standalone and/or, networked multimedia systems, and computer generated 3D animation. (Prerequisite: Year 3/4 standing in Computer Science or Communication, Media, and Film or Visual Art and consent of instructor.) (3 lecture hours a week.)

**COMP-4540. Design and Analysis of Computer Algorithms**
The intent of this course is to introduce the fundamental techniques in the design and analysis of computer algorithms. Topics include: asymptotic bounds, advanced data structures, searching, sorting, order statistics, oracle arguments, divide-and-conquer, greedy algorithms, dynamic programming, graph algorithms, NP completeness, and approximation algorithms. (Prerequisite: COMP-2310, COMP-2540 and COMP-3540.) (Restricted to students in any Honours Computer Science program or consent of instructor.) (3 lecture hours a week.)

**COMP-4670. Network Security**
This course will introduce students to advanced topics in network security. Topics will include encryption and authentication techniques, detection and analysis of intrusions, and the security of electronic mail and web access. (Restricted to Computer Science students) (Prerequisites: COMP-3670.) (3 lecture hours a week.)

**COMP-4680. Advanced Networking**

The course will introduce students to advanced topics in networking. (Restricted to Computer Science Students) (Prerequisites: COMP-3670 and COMP-3680.)

**COMP-4700. Project Using Selected Tools**
Students will complete a project using an advanced computing tool, such as a database package, simulation software, speech-recognition hardware module, etc. Students are required to submit a report describing the project and demonstrating mastery of the tool. Tools and the project are chosen by the student with the approval of the instructor. (Restricted to Computer Science Students ) (Prerequisite: COMP-3150, COMP-3220, and COMP-3300.) (3 lecture hours or equivalent a week)

**COMP-4730. Advanced Topics in Artificial Intelligence I**
The course will introduce students to advanced topics in Artificial Intelligence. (Restricted to Honours Computer Science students) (Prerequisite: COMP-3710.) (3 lecture hours a week)

**COMP-4740. Advanced Topics in Artificial Intelligence II**
The course will introduce students to advanced topics in Artificial Intelligence. (Restricted to Honours Computer Science students.) (Prerequisite: COMP-3710.) (3 lecture hours a week)

**COMP-4750. Selected Topics**
In many cases the topics will coincide with a graduate course offering in a given year, and students will be required to complete the lecture component of that graduate course. Topics may include: advanced database management, graphics, artificial intelligence, information retrieval, theory of computation, functional programming, knowledge base systems, and foundations of programming languages. (Restricted to Semester 7 and Semester 8 students in Computer Science with permission of the instructor.) (May be repeated for credit if content changes.) (3 lecture hours or equivalent a week)

**COMP-4760. Selected Topics**
In many cases the topics will coincide with a graduate course offering in a given year, and students will be required to complete the lecture component of that graduate course. Topics may include: advanced database management, graphics, artificial intelligence, information retrieval, theory of computation, functional programming, knowledge base systems, and foundations of programming languages. (Restricted to Semester 7 and Semester 8 students in Computer Science with permission of the instructor.) (May be repeated for credit if content changes.) (3 lecture hours or equivalent a week)

**COMP-4770. Artificial Intelligence for Games**
This course provides students with an opportunity to explore theoretical and practical aspects of Artificial Intelligence for computer games. Topics may include agents, sensory systems, steering behaviours, pathfinding, decision making, planning, goal-oriented behaviour, multi-agents (groups, crowds) and learning. (Prerequisite: COMP-3770.)(Restricted to students in any Honours Computer Science program.) (3 lecture hours a week.)

**COMP-4800. Selected Topics in Software Engineering**
This course intends to connect emerging technologies with the student's theoretical background in Computer Science related to Software Engineering concepts and techniques. Selected application domains include protocol security, web systems and distributed object systems and the theories involved include graph theory, set theory, automata and compiler theory. (Prerequisite: COMP-3110, COMP-3220 and COMP-3300.) (Restricted to Computer Science Students). (3 lecture hours a week)

**COMP-4960. Research Project**

This course consists of two components: a) development of research skills, and b) development of technical writing and project presentation skills. This course requires students to complete a research project in some area of Computer Science under the supervision of a faculty member. The course will typically involve the development of some software or the design and/or implementation of some algorithm. Each student will be required to submit a project report and give one or more seminars on the research project. (a 6 credit course restricted to Semester 7 or Semester 8 students in BCS (Honours) or B.Sc. (Honours Computer Science with Software Engineering Specialization) with a major average of 72% or better.) (Anti-requisite COMP-4990.) (3 lecture hours or equivalent a week, for two terms.)

**COMP-4970. Co-op Work Term III**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course cannot continue in the co-op program.)

**COMP-4980. Co-op Work Term IV**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course cannot continue in the co-op program.)

**COMP-4990. Project Management: Techniques and Tools**
This course requires students to complete an application development project in some area of Computer Science under the supervision of a faculty member. The course will typically involve the development of some software or the design and/or implementation of some algorithm. Students will be required to submit project reports and give presentations on the technical components of the project. (a 6 credit course restricted to Semester 7 or Semester 8 students in Computer Science.) (Antirequisite: COMP-4960.) (3 lecture hours or equivalent a week, for two terms.)

# ECONOMICS

## PROGRAMS

### General Bachelor of Arts in Economics

**Degree Requirements**

Total courses: thirty.

(a) ECON-1100, ECON-1110, ECON-2120, ECON-2210, and ECON-2310; and six 2XXX, 3XXX or 4XXX level courses. (With the approval of a program advisor, equivalent statistics courses may be substituted for ECON-2120.)
(b) STAT-2920, or STAT-2910;
(c) eight courses from outside Social Sciences with at least two from Arts/Languages and two from Sciences;
(d) four courses from any area of study including Economics;
(e) six courses from any area of study excluding Economics.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Recommended Course Sequencing**

Year 1*
Fall: ECON-1100, plus four courses
Winter: ECON-1110, plus four courses

Year 2
Fall: ECON-2210*, ECON-2310, STAT-2920 (or STAT-2910)*, two courses
Winter: ECON-2120, two economics courses, two other courses

Year 3
Fall: two economics courses, three other courses
Winter: two economics courses, three other courses

Notes: STAT-2920 is recommended. If STAT-2920 is chosen instead of STAT-2910, MATH-1730 is required and should be taken in Year 1. A student who had successfully completed ECON-1100 could take ECON-2210 in the Winter of Year 1, rather than in Winter of Year 2.

# Honours Bachelor of Arts in Economics

**Degree Requirements**

Total courses: forty.

(a) ECON-1100, ECON-1110, ECON-2120 (or STAT-2950), ECON-2210, ECON-2220, ECON-2310, ECON-2320, ECON-3060, ECON-3130, ECON-4140, ECON-4230, ECON-4330, ECON-4070 and seven additional courses, at least five of which have to be at the 3XXX or 4XXX level.
(b) MATH-1250 (or MATH-1260), MATH-1720 (or MATH-1760), and either STAT-2910 or STAT-2920 (if taking STAT-2920, the student must take MATH-1730 as a prerequisite for STAT-2920).
(c) seventeen courses from any area of study, of which a maximum of two may be from Economics.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Recommended Course Sequencing**

Year 1*
Fall: ECON-1100, MATH-1720 (or MATH-1760), MATH-1250 (or MATH-1260), plus two courses
Winter: ECON-1110, MATH-1730* (or other course), plus three courses

Year 2
Fall: ECON-2210*, ECON-2310, STAT-2920 (or STAT-2910)*, plus two courses
Winter: ECON-2220, ECON-2320, ECON-2120 (or STAT-2950), plus two courses

Year 3
Fall: ECON-3060, two economics courses, two other courses
Winter: two economics courses, three other courses

Year 4
Fall: ECON-3130, ECON-4230, ECON-4330, one economics course, one other course
Winter: ECON-4140, ECON-4070, two economics courses, one other course

Notes: STAT-2920 is recommended. If STAT-2920 is chosen instead of STAT-2910, MATH-1730 is required and should be taken in Year 1. A student who had successfully completed ECON-1100 could take ECON-2210 in the Winter of Year 1, rather than in Winter of Year 2. Also, conditional on satisfying the prerequisites, a student could move ECON-3130 and ECON-4140 from the fourth year to the third year.

# Honours Bachelor of Arts in Economics (Applied Economics and Policy Stream)

**Admission Requirements**

<u>Pathway 1: Computer Science-related CAAT programs:</u>

1) Graduates of a two-year Ontario College Diploma from a computer science-related program from a qualifying Ontario or equivalent College of Applied Arts and Technology (CAAT), with a cumulative

average of a least a B (73%) grade), are eligible for admission to Honours Bachelor of Arts in Economics - Applied Economics and Policy Stream degree program offered by the Department of Economics at the University of Windsor under the provisions of this agreement. The Dean of Science or their designate has the authority to admit students from qualifying colleges in equivalent diploma programs within Canada pending that they meet all other admission requirements.

2) In addition to the appropriate two-year Diploma and grade point average, applicants to the Honours Bachelor of Arts in Economics - Applied Economics and Policy Stream are required to have successfully completed MHF4U or the equivalent course. Students who have not completed this course or its equivalents will be required to complete the equivalent course within the Foundations of Science Preparation Program.

3) Students admitted to the Honours Bachelor of Arts in Economics - Applied Economics and Policy Stream will obtain the equivalent of 2 years of Advanced Standing (or awarded up to 17 course transfers).

4) Students are required to complete twenty-three (23) courses at the University of Windsor in fulfillment of the requirements of the Honours Bachelor of Arts in Economics - Applied Economics and Policy Stream.

Recognized two-year computer programs include:

- Computer programming (MCU 50503)
- Computer Programmer (no program standards)
- Computer Engineering Technician (MCU 50509),
- Software Engineering Technician (MTU 50504)
- Any computer science-related program from a qualifying Ontario CAAT or other Canadian College deemed equivalent by the Dean of Science or their designate.

**Notes:** Three-year diplomas programs in computer science will be analyzed for additional potential credit transfer on an ad-hoc basis, while considering minimum residency and core course requirements.

We are exploring opportunities for pathways from other college programs (e.g., environmental technician, forestry technician, horticulture, and health-based programs) that have relevance to economic policy. Students from these programs would complete Pathway 1 while considering potential course equivalencies.

<u>Pathway 2: Business CAAT program:</u>

1) Graduates of a two-year Ontario College Diploma from a business-related program from a qualifying Ontario or equivalent College of Applied Arts and Technology (CAAT), with a cumulative average of a least a B (73%) grade), are eligible for admission to Honours Bachelor of Arts in Economics - Applied Economics and Policy Stream degree program offered by the Department of Economics at the University of Windsor under the provisions of this agreement. The Dean of Science or their designate has the authority to admit students from qualifying colleges in equivalent diploma programs within Canada pending that they meet all other admission requirements.

2) In addition to the appropriate two-year Diploma and grade point average, applicants to the Honours Bachelor of Arts in Economics - Applied Economics and Policy Stream are required to have successfully completed MHF4U or the equivalent course. Students who have not completed this course or its

equivalents will be required to complete the equivalent course within the Foundations of Science Preparation Program.

3) Students admitted to the Honours Bachelor of Arts in Economics - Applied Economics and Policy Stream will obtain the equivalent of 2 years of Advanced Standing (or awarded up to 19 course transfers).

4) Students are required to complete twenty-one (21) courses at the University of Windsor in fulfillment of the requirements of the Honours Bachelor of Arts in Economics - Applied Economics and Policy Stream.

Recognized two-year Business programs include:
- Business (MCU code 50200)
- Any business-related program from a qualifying Ontario CAAT or other Canadian College deemed equivalent by the Dean of Science or their designate.

**Note:** Three-year diplomas programs in business will be analyzed for additional potential credit transfer on an ad-hoc basis, while considering minimum residency and core course requirements.

**Degree Requirements**

Pathway 1: Computer Science-related CAAT Programs

Total courses: 23

(a) ECON-1100, ECON-1110, ECON-2120 (or STAT-2950), ECON-2210, ECON-2220, ECON-2310, ECON-2320, ECON-3060, ECON-3130, ECON-4140, ECON-4230, ECON-4330, ECON-4070 and seven additional courses, at least five of which have to be at the 3XXX or 4XXX level.
(b) MATH-1260 (or MATH-1250), MATH-1760 (or MATH-1720), and either STAT-2910 or STAT-2920 (if taking STAT-2920, the student must take MATH-1730 as a prerequisite for STAT-2920).

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

Pathway 2: Business CAAT Program

Total courses: 21*

(a) ECON-2120 (or STAT-2950), ECON-2210, ECON-2220, ECON-2310, ECON-2320, ECON-3060, ECON-3130, ECON-4140, ECON-4230, ECON-4330, ECON-4070 and seven additional courses, at least five of which have to be at the 3XXX or 4XXX level.
(b) MATH-1260 (or MATH-1250), MATH-1760 (or MATH-1720), and either STAT-2910 or STAT-2920 (if taking STAT-2920, the student must take MATH-1730 as a prerequisite for STAT-2920).

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

Notes:
- *We anticipate 21 required courses for the first cohort of students but with advising and consultation with colleges we believe the required number of courses in the future will be 20. The

Faculty of Science will be collaborating with colleges to provide course offerings that will reduce student degree requirements to 20 courses. Colleges will also help advise students on the appropriate electives to complete.

**Recommended Course Sequencing**

Pathway 1: Computer Science-related CAAT Programs

Year 1:
Summer: ECON-1100, ECON-1110
Fall: ECON-2210, ECON-2310, MATH-1250 (or MATH-1260), MATH 1720 (or MATH-1760), STAT-2910 (or STAT 2920)
Winter: ECON-2120 (or STAT-2950), ECON-2220, ECON-2320, ECON-3060, ECON-XXXX, ECON-XXXX*

*Can be taken as overload or within summer/intersession.

Year 2:
Fall: ECON-3130, ECON-4230, ECON-4330, ECON-3XXX/4XXX, ECON-3XXX/4XXXX
Winter: ECON-4070, ECON-4140, ECON-3XXX/4XXX, ECON-3XXX/4XXXX, ECON-3XXX/4XXXX

Pathway 2: Business CAAT Program

Year 1:
Fall: ECON-2210, ECON-2310, MATH-1250 (or MATH-1260), MATH 1720 (or MATH-1760), STAT-2910 (or STAT 2920)
Winter: ECON-2120 (or STAT-2950), ECON-2220, ECON-2320, ECON-3060, ECON-XXXX, ECON-XXXX*

*Can be taken as overload or within summer/intersession.

Year 2:
Fall: ECON-3130, ECON-4230, ECON-4330, ECON-3XXX/4XXX, ECON-3XXX/4XXXX
Winter: ECON-4070, ECON-4140, ECON-3XXX/4XXX, ECON-3XXX/4XXXX, ECON-3XXX/4XXXX

## Honours Bachelor of Science in Economics

**Degree Requirements**

Total courses: forty.

(a) ECON-1100, ECON-1110, ECON-2120 (or STAT-2950), ECON-2210, ECON-2220, ECON-2310, ECON-2320, ECON-3060, ECON-3130, ECON-4140, ECON-4230, ECON-4330, ECON-4060, ECON-4240, ECON-4340, and five Economics elective courses at the 3XXX or 4XXX level.
(b) COMP-1047, MATH-1250 (or MATH-1260), MATH-1720 (or MATH-1760), MATH-1730, MATH-1020, STAT-2920, plus one additional course (2XXX-level or higher) from the Department of Mathematics and Statistics.
(c) An additional 13 courses, a maximum of which two may be Economics courses.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

**Recommended Course Sequencing**

Year 1*
Fall: ECON-1100, MATH-1720 (or MATH-1760), MATH-1250 (or MATH-1260), COMP-1047 (or other course), plus one course
Winter: ECON-1110, MATH-1730, MATH-1020, COMP-1047 (or other course), plus one course

Year 2
Fall: ECON-2210*, ECON-2310, STAT-2920, plus two courses
Winter: ECON-2220, ECON-2320, ECON-2120 (or STAT-2950), plus two courses

Year 3
Fall: two economics courses, one MATH, STAT or ACSCs course, two other courses
Winter: ECON-3060, two economics courses, two other courses

Year 4
Fall: ECON-3130, ECON-4230, ECON-4330, ECON-4060, one other course
Winter: ECON-4140, ECON-4240, ECON-4340, one economics course, one other course

Notes: A student who had successfully completed ECON-1100 could take ECON-2210 in the Winter of Year 1, rather than in Winter of Year 2. Also, conditional on satisfying the prerequisites, a student could move ECON-3130 and ECON-4140 from the fourth year to the third year.

## Combined Honours Bachelor of Arts in Economics Programs

**Degree Requirements**

Total courses: forty.

(a) Economics: ECON-1100, ECON-1110, ECON-2120 or (STAT-2950), ECON-2210, ECON-2220, ECON-2310, ECON-2320 and six additional in Economics, at least four of which have to be at the 3XXX or 4XXX level.
(b) Course requirements-Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) STAT-2910 (or STAT-2920)
(d) additional options to a total of forty.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

The critical requirement for the four-year Economics Honours is the inclusion of Economics ECON-1100 and ECON-1110 in the first year of the program. Similarly Economics ECON-2210, ECON-2220, ECON-2310, and ECON-2320 should be included in the second year of the program.
Students intending to specialize in Economics in a four-year Honours program should satisfy the Mathematics requirements as early as possible in the program.

# Combined Honours Bachelor of Science in Economics Programs

Bachelor of Science honours programs combining Economics with a second Honours area of study will consist of:

**Degree Requirements**

Total courses: forty.

(a) Economics: ECON-1100, ECON-1110, ECON-2120 or STAT-2950*, ECON-2210, ECON-2220, ECON-2310, ECON-2320, ECON-3060, ECON-3130, ECON-4060, ECON-4140, ECON-4230, ECON-4240, ECON-4330 and ECON-4340.
(b) Course requirements-Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) MATH-1250 or MATH-1260, MATH-1760 or MATH-1720, MATH-1730, MATH-1020, STAT-2920 and one additional course* from the Department of Mathematics & Statistics (MATH, STAT or ACSC) at the 2XXX-level or higher.
(d) additional courses, if necessary, from any area of study to a total of forty courses.

* STAT-2950 is required if Mathematics and Statistics is the other subject. Also, STAT-2950 may be the 'additional course' in (c) above.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

# Honours Business Administration and Economics (with/without Thesis)

This is a joint offering between the Department of Economics and the Odette School of Business. See Odette School of Business for details.

# Honours Business Administration and Economics with Specialization in Accounting (with/without Thesis)

This is a joint offering between the Department of Economics and the Odette School of Business. See Odette School of Business for details.

# Honours Business Administration and Economics with Specialization in Human Resources (with/without Thesis)

This is a joint offering between the Department of Economics and the Odette School of Business. See Odette School of Business for details.

## Honours Business Administration and Economics with Specialization in Finance (with/without Thesis)

This is a joint offering between the Department of Economics and the Odette School of Business. See Odette School of Business for details.

## Honours Business Administration and Economics with Specialization in Supply Chain and Business Analytics (with/without Thesis)

This is a joint offering between the Department of Economics and the Odette School of Business. See Odette School of Business for details.

## Honours Business Administration and Economics with Specialization in Marketing (with/without Thesis)

This is a joint offering between the Department of Economics and the Odette School of Business. See Odette School of Business for details.

## Honours Business Administration and Economics with Specialization in Strategy and Entrepreneurship (with/without Thesis)

This is a joint offering between the Department of Economics and the Odette School of Business. See Odette School of Business for details.

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Economics

Major Concentration: ECON-2120, ECON-2210, ECON-2220, ECON-2310, ECON-2320, ECON-3130, ECON-4140, ECON-4230, ECON-4330; three additional courses at the 3XXX-level or above. (If General Science Major ECON-4240 and ECON-4340 are required.) (additional requirements: ECON-1100, ECON-1110, STAT-2910.)

*(Note: If a student is considering graduate studies in Economics they should take MATH-1720 (BIAS core), MATH-1730 (BIAS core), STAT-2920 (replaces core STAT-2910) and STAT-2950 (replaces ECON-2120) and ECON-4240 and ECON-4340 (replaces two of the three additional 3000 level or above), and one additional Economic course at the 3000 level or above.

Minor Concentration: ECON-2120, ECON-2210, ECON-2220, ECON-2310, ECON-2320; one 3000-level or above course.

Other requirements: ECON-1100, ECON-1110, STAT-2910.

# Certificate in Economic Analysis and Policy

**Admission Requirements**
Open only to students currently enrolled in a degree program and in good academic standing in their program.

**Degree requirements**

Total courses: 8

Required courses: (4 courses)
ECON-1100 Introduction to Economics I
ECON-2210 Intermediate Microeconomics
ECON-3100 Environmental and Resource Economics
ECON-4600 Cost Benefit Analysis

Take 4 Additional Courses:
ECON-2900. Health Economics
ECON-3850. Public Sector Economics: Expenditure
ECON-3730. International Economics: Trade Theory and Policy
ECON-4160. Urban and Regional Economics
ECON-4860. Public Sector Economics: Finance (prerequisite is 2220)
ECON-3310. The Economics of Legal Procedures, Crime and Punishment
ECON-4300. Economic Analysis of Law
ECON-3530. Labour Institutions
POLS-3540. Political Problems of Economic Development
POLS-3550. Political Economy of International Trade
POLS-2120. Environmental Policy and Politics

While this certificate program is designed for economics students, it is available to any student with an interest in economic analysis for public policy who has available electives. However, students in degree programs outside of economics will likely be required to take additional courses beyond what is included in their degree program.

# Certificate in Quantitative Economics

**Admission Requirements**
Open only to students currently enrolled in a degree program and in good academic standing in their program.

**Degree requirements**

Total courses: 8

Required courses: (5 courses)
ECON-1100 Introduction to Economics I
ECON-2120 Intermediate Statistical Methods (or STAT-2950 Introduction to Statistics)
ECON-3060 Mathematical Economics I
ECON-3130 Introduction to Econometric Methods I
ECON-4600 Cost-Benefit Analysis/Excel application in Economics

Take 3 Additional Courses:
ECON-3850 Public Sector Economics: Expenditure
ECON-4860 Public Sector Economics: Finance
ECON-3730 International Economics: Trade Theory and Policy
ECON-3740 International Economics: Exchange Rates and Balance of Payments
ECON-4140 Introduction to Econometric Method II
MSCI-1000. Introduction to Business Data Analysis
MKTG-3370. Quantitative Analysis for Marketing Decisions
FINA-2700. Business Finance I
COMP-2067 Programming for Beginners
COMP-1400 Introduction to Algorithms and Programming I
COMP-1410 Introduction to Algorithms and Programming II
COMP-1400 is a prerequisite and thus should be taken before enrolling in COMP-1410

While this certificate program is designed for economics students, it is available to any student with an interest in quantitative economics who has available electives (particularly mathematics, computer science, and business students). However, students in degree programs outside of science will likely be required to take additional courses beyond what is included in their degree program.

## Minor in Economics

A minor shall consist of ECON-1100, ECON-1110, ECON-2210, ECON-2310, and two additional Economics courses. A minimum average of 60% or better is required in all six courses.

# ECONOMICS COURSES

All courses listed will not necessarily be offered each year. All courses are one-term courses and are offered three hours a week unless otherwise indicated.

**ECON-1100. Introduction to Economics I**
An introduction to microeconomics intended to provide students with the tools necessary to begin to understand and evaluate how resources are allocated in a market economy. Specific topics include how markets function, theories of the business firm, of consumer behaviour and of income distribution. The economic roles of labour unions and government are also covered. The theories are applied to contemporary Canadian economic problems.

**ECON-1110. Introduction to Economics II**
This course is an introduction to macroeconomics. The emphasis is upon measuring and explaining what determines economic aggregates such as the total national product (GDP) and the level of prices and employment. The role of money and financial institutions, the impact of international trade and the policy options available to governments for coping with inflation and unemployment are discussed in detail.

**ECON-2000. Life Choices and Economics**
The course is designed for Arts and Social Sciences students. It will introduce them to key concepts and methods in Microeconomics. The application and understanding of economic analysis as applied to individual decision-making and public policy will be emphasized. The course provides a non-technical and intuitive way for students to master an understanding of real world problems. (May not be taken

for credit in any program within the School of Business, or Faculty of Engineering. Science students may take the course only as a Social Sciences option.) (Antirequisite: ECON-1100.)

**ECON-2010. Life Choices and Economics II**
The course is designed for Arts and Social Sciences students. It will introduce them to key concepts and methods in Macroeconomics. Key Macroeconomic concepts, such as unemployment, inflation, international trade, and investment will be examined. The course will be a non-technical look at the Canadian and world economies. (May not be taken for credit in any program within the School of Business, or Faculty of Engineering. Science students may take the course only as a Social Sciences option.) (Antirequisite: ECON-1110.)

**ECON-2100. Games and Behaviour**
The course is designed for Arts, Social Science and Business students. It is intended to introduce them to key concepts and methods in game theory. The application and understanding of behavioral analysis as applied to individual decision making and public policy will be emphasized. The course provides a non-technical and intuitive way for students to master an understanding of real world problems and decision making. Students will learn about strategies for conflict resolutions, co-operation, social interaction, voting strategies, individual and business behaviour. (May not be taken for credit in Economics or joint programs with Economics, Science or the Faculty of Engineering.)

**ECON-2120. Intermediate Statistical Methods**
An application of statistical methods to economic theory. (Prerequisite: one of SOSC-2500, STAT-2920, STAT-2910, or MSCI-2020.) (Credit will not be given for more than one of ECON-2120, STAT-2950, or any equivalent intermediate statistics course from another area.)

**ECON-2210. Intermediate Microeconomics I**
The theory of markets, the theory of consumer behaviour and demand; the firm, production, cost, and supply. (Prerequisite: ECON-1100.)

**ECON-2220. Intermediate Microeconomics II**
Extensions of the theory of consumer and firm behaviour; pricing under different market structures; distribution; general equilibrium and economic welfare. (Prerequisite: ECON-2210.)

**ECON-2310. Intermediate Macroeconomics I**
A theoretical and policy oriented treatment of the determination of employment, output, interest rates, and the price level; stabilization policies and their effectiveness. (Prerequisites: ECON-1110.)

**ECON-2320. Intermediate Macroeconomics II**
Effectiveness of stabilization policies in open economies; causes and cures of inflation; simple growth models. (Prerequisite: ECON-2310.)

**ECON-2410. Microeconomics for the Real World**
This course will focus on the application of techniques of economics to the analysis of practical problems in a variety of fields (public health, natural resources, political science, industrial relations, business administration, and others). The course will emphasize more applied, as opposed to theoretical, aspects of microeconomics. (May not be taken for credit in Economics programs or Combined Major Programs with Economics.) (Prerequisites: ECON-1100 or ECON-2000) (Antirequisite: ECON-2210)

**ECON-2510. Macroeconomics for the Real World**
This course will focus on the application of techniques of economics to the analysis of practical problems in areas of current interest like globalization, inequality, protectionism and government spending and taxes. The course will emphasize more policy, as opposed to theoretical, aspects of macroeconomics. (May not be taken for credit in Economics or combined major programs with Economics). (Prerequisite ECON-1110 or ECON-2010) (Anti-requisite: ECON-2310).

**ECON-2660. Selected Issues in Economics**
(Prerequisites: ECON-1100 and ECON-1110.)

**ECON-2900. Health Economics**
This course will explore the unique economic features of health care with emphasis on international models of delivery, determinants of the demand and supply of health services, and public versus private health care systems. The Canadian experience will be considered with a focus on demographic patterns and legislation. (Pre-requisites: ECON-1100, ECON-1110; plus any university-level course in statistics.)

**ECON-3060. Mathematical Economics I**
Economic applications of differential calculus and linear algebra, with an emphasis on problem solving and employing software used widely by economists. Topics include input-output analysis, optimization of linear microeconomic models, computer methods for comparative static exercises to analyze closed- and open-economy macroeconomic models, and unconstrained and constrained optimization of non-linear microeconomic models.(Prerequisites: MATH-1720 (or MATH-1760), MATH-1250 (or MATH-1260 or MATH-1270), ECON-2210,and ECON-2310.)

**ECON-3100. Environmental and Resource Economics**
An examination of economic behaviour in renewable and non-renewable resource markets and an economic treatment of policy issues related to environmental quality and common property resources. (Prerequisite: ECON-2210, or the combination of ECON-1100 and one of MATH-1300, MATH-1760 or MATH-1720.)

**ECON-3130. Introduction to Econometric Methods I**
Development of the classical regression model and problems associated with this model such as multicollinearity, heteroscedasticity, and autocorrelation. (Some familiarity with linear algebra and calculus will be beneficial.) (Prerequisites: (a) ECON-2120 or STAT-2950; (b) one of MATH-1300, MATH-1760 or MATH-1720; and, (c) one of MATH-1250, MATH-1260 or MATH-1270.)

**ECON-3310. The Economics of Legal Procedures, Crime, and Punishment**
The application of microeconomic principles in the analysis of legal procedures, crime, and punishment. Economic models of filing suit, bargaining, and going to trial will be discussed. Traditional and economic models of criminal activity will be compared and contrasted, along with the economics of civil and criminal punishment. Additional topics from other areas of law may be included. (Prerequisite: ECON-2210.)

**ECON-3350. Money and Banking**
The banking system and other financial institutions; money demand and money supply; money and the level of economic activity; money and inflation; issues in monetary policy. (Prerequisite: ECON-2310.)

**ECON-3410. Economic Growth and Development Theory**

Modern theories of growth and development with emphasis upon less developed countries. (Prerequisites: ECON-2210 and ECON-2310, or consent of instructor.)

**ECON-3500. Labour Theory**
Wage theories, wage structure, unemployment, labour supply and related topics. (Prerequisite: ECON-2210.)

**ECON-3530. Labour Institutions**
Canadian and American labour movements, collective bargaining, union philosophy and labour legislation in Canada and the United States. (Prerequisite: ECON-2210 or consent of instructor.)

**ECON-3730. International Economics: Trade Theory and Policy**
A survey of traditional and contemporary theories of international trade and trade policy. (Prerequisite: ECON-2210.)

**ECON-3740. International Economics: Exchange Rates and Balance of Payments**
Theory of exchange rate determination and balance of payments adjustment; macroeconomic policy in an open economy; current problems of the international monetary system. (Prerequisite: ECON-2310.)

**ECON-3800. Game Theory**
The study of strategic interactions among decision makers. Equilibrium concepts, such as Nash equilibrium, sub-game perfect equilibrium, etc, will be introduced and their applications to economic, political and biological decision making will be discussed. (Prerequisite: ECON-2210 or the combination of ECON-1100 and one of MATH-1760 or MATH-1720.)

**ECON-3850. Public Sector Economics: Expenditure**
Theory of the role of government in the economy; public expenditure theories and practice; public choice and government decision-making; government grants. (Prerequisites: ECON-2210.)

**ECON-4060. Mathematical Economics II**
Topics will include general equilibrium theory, dynamic analysis, oligopoly, behaviour under uncertainty, and growth theory. (Prerequisites: ECON-2220, ECON-2320, ECON-3060, and MATH-1730.)

**ECON-4070. Senior Research Workshop**
This course is intended to develop independent research and presentation skills. Students will be assigned a topic (or topics). Students will be expected to conduct a literature survey, collect data, present data in a descriptive format, formulate and carry out formal econometric tests. Students will be assessed on the basis of classroom presentations classroom discussion and written assignments. (Prerequisites: ECON-3130, ECON-4230 and ECON-4330.) (This course is open to students who are enrolled in an Honours Economics program.)

**ECON-4140. Introduction to Econometric Methods II**
A continuation of ECON-3130. (Prerequisite: ECON-3130.)

**ECON-4160. Urban and Regional Economics**
Economics of cities and urban problems; effects on production and trade; urban problems such as poverty, congestion, pollution and crime.

**ECON-4230. Advanced Microeconomics I**

The use of mathematical techniques and economic analysis with special emphasis on consumer theory, producer theory, and theory of markets. (Prerequisites: ECON-2210, ECON-2220, ECON-3060, or consent of instructor.)

**ECON-4240. Advanced Microeconomics II**
Selected topics in microeconomic theory. (Prerequisite: ECON-4230.)

**ECON-4300. Economics Analysis of Law**
The application of microeconomic principles to the study of property, contract, and tort law. The economic principles underlying property rights, torts, and contracts are surveyed. Selected problems in property, tort, and contract law are considered. Additional topics from other areas of law may be included. (Prerequisite: ECON-2210.)

**ECON-4330. Advanced Macroeconomics I**
Modern interpretations of macroeconomics, including inflation, unemployment, and policy implications. (Prerequisites: ECON-2320 and ECON-3060)

**ECON-4340. Advanced Macroeconomics II**
Selected topics in macroeconomic theory. (Prerequisite: ECON-4330.)

**ECON-4600. Cost-Benefit Analysis**
The techniques and application of cost-benefit analysis to public sector policies and projects. Topics include the welfare foundations or cost-benefit analysis, investment decision rules, the choice of a social discount rate, risk and uncertainty, shadow pricing of inputs and outputs, public sector pricing and the assessment of the value of intangibles such as time, life and noise. (Prerequisite: ECON-2210, or the combination of ECON-1100 and one of MATH-1300 or MATH-1720.)

**ECON-4860. Public Sector Economics: Finance**
Government taxation, user charges, borrowing, and the public debt in theory and practice; use of taxation as fiscal policy; and intergovernmental tax relations. (Prerequisites: ECON-2220.)

**ECON-4950. Economics Internship**
The economics internship course provides an opportunity for Economics students to combine their university education with career-related experience in their field of study. The course will increase the student's skills and knowledge while working on practical tasks and projects. Students are placed with companies that provide training, a structured work environment and professional supervision of their work. The students are expected to accept and complete a minimum of 96 hours working on assignments at the host organization during one full semester. The students will attend an orientation class at the beginning and a class for course evaluation at the end of the semester.

**ECON-4990. Selected Topics in Economics**
(May be repeated for credit with consent of an advisor in Economics.) (Prerequisite: consent of the instructor.)

# SCHOOL OF THE ENVIRONMENT

## PROGRAMS

Minor in Earth Science
Minor in Environmental Science
Minor in Geography

CERTIFICATE
Certificate in Geographic Information Science (GISc)

## BSc Honours Environmental Science

**Degree Requirements**

Total courses: forty

(a) BIOL-2101, ESCI-1100, ESCI-1151, ESCI-2131, ESCI-2141, ESCI-2210, ESCI-2421, and ESCI-3735 or ESCI-3755.
(b) twelve courses from: BIOL-2111, BIOL-3250, BIOL-3281, BIOL-4232, BIOL-4241, BIOL-4270, BIOL-4280, BIOL-4864, ESCI-1141, ESCI-2101, ESCI-2721, ESCI-2401, ESCI-2705, ESCI-3301, ESCI-3310, ESCI-3400, ESCI-3610, ESCI-3701, ESCI-3711, ESCI-3721, ESCI-3751, ESCI-4301, ESCI-4500, ESCI-4600, ESCI-4710, ESCI-4721.
(c) BIOL-1111 or BIOL-1013 (with School of the Environmental approval), CHEM-1100, CHEM-1110, MATH-1720 (or MATH-1760), STAT-2910, ESCI-1111, ESCI-3801.
(d) Thirteen additional courses. Minimum of five courses from the Faculty of Science and a minimum of two courses from any area of study other than Science.

Courses used to calculate the major average are: courses listed under requirement (a) and (b), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
First Year: ten courses, including BIOL-1111, BIOL-1101, CHEM-1100, CHEM-1110, MATH-1720 (or MATH-1760), STAT-2910, ESCI-1111, ESCI-1100
Second Year: ten courses, including BIOL-2101, ESCI-1151, ESCI-2210, ESCI-2131, ESCI-2141, ESCI-2421
Third and Fourth Years: twenty courses, including ESCI-3801, ESCI-3735 or ESCI-3755, and eleven additional courses from BIOL-2111, BIOL-3250, BIOL-3281, BIOL-4232, BIOL-4241, BIOL-4270, BIOL-4280, BIOL-4864, ESCI-1141, ESCI-2101, ESCI-2721, ESCI-2400, ESCI-2705, ESCI-3301, ESCI-3310, ESCI-3400, ESCI-3610, ESCI-3701, ESCI-3711, ESCI-3721, ESCI-3751, ESCI-4301, ESCI-4500, ESCI-4600, ESCI-4710, and ESCI-4721.

# BSc Honours Environmental Science (with Thesis)

**Degree Requirements**

Total courses: forty

(a) BIOL-2101, ESCI-1100, ESCI-1151, ESCI-2131, ESCI-2141, ESCI-2210, ESCI-2421, ESCI-3735 or ESCI-3755, and ESCI-4900.
(b) ten courses from: BIOL-2111, BIOL-3250, BIOL-3281, BIOL-4232, BIOL-4241, BIOL-4270, BIOL-4280, BIOL-4864, ESCI-1141, ESCI-2101, ESCI-2721, ESCI-2401, ESCI-2705, ESCI-3301, ESCI-3310, ESCI-3400, ESCI-3610, ESCI-3701, ESCI-3711, ESCI-3721, ESCI-3751, ESCI-4301, ESCI-4500, ESCI-4600, ESCI-4710, ESCI-4721.
(c) BIOL-1111 or BIOL-1013 (with School of the Environmental approval), CHEM-1100, CHEM-1110, MATH-1720 (or MATH-1760), STAT-2910, ESCI-1111, ESCI-3801.
(d) Thirteen additional courses. Minimum of five courses from the Faculty of Science and a minimum of two courses from any area of study other than Science.

Courses used to calculate the major average are: courses listed under requirement (a) and (b), and any courses taken in the major area(s) of study.

**Recommended Course Sequence**
First Year: ten courses, including BIOL-1111, BIOL-1101, CHEM-1100, CHEM-1110, MATH-1720 (or MATH-1760), STAT-2910, ESCI-1111, ESCI-1100
Second Year: ten courses, including BIOL-2101, ESCI-1151, ESCI-2210, ESCI-2131, ESCI-2141, ESCI-2421
Third and Fourth Years: twenty courses, including ESCI-3801, ESCI-3735 or ESCI-3755, ESCI-4900 and nine additional courses from BIOL-2111, BIOL-3250, BIOL-3281, BIOL-4232, BIOL-4241, BIOL-4270, BIOL-4280, BIOL-4864, ESCI-1141, ESCI-2101, ESCI-2721, ESCI-2400, ESCI-2705, ESCI-3301, ESCI-3310, ESCI-3400, ESCI-3610, ESCI-3701, ESCI-3711, ESCI-3721, ESCI-3751, ESCI-4301, ESCI-4500, ESCI-4600, ESCI-4710, and ESCI-4721.

# BSc Honours Environmental Science (Applied Environmental Science Stream)

**Admission Requirements**

1) Graduates of a two-year Ontario College Diploma from an environmental-related program from a qualifying Ontario or equivalent College of Applied Arts and Technology (CAAT), with a cumulative average of a least a B (73%) grade), are eligible for admission to Bachelor of Science Honours Environmental Science-Applied Environmental Science Stream degree program offered by the School of the Environment at the University of Windsor under the provisions of this agreement. The Dean of Science or their designate has the authority to admit students from qualifying colleges in equivalent diploma programs within Canada pending that they meet all other admission requirements.

2) In addition to the appropriate two-year Diploma and grade point average, applicants to the Bachelor of Science Honours Environmental Science-Applied Environmental Science Stream are required to have successfully completed MHF4U, SCH4U, and SBI4U or their equivalent courses. Students who have not completed these courses or their equivalents will be required to complete the equivalent courses within the Foundations of Science Preparation Program.

3) Students admitted to the Bachelor of Science Honours Environmental Science-Applied Environmental Science Stream will obtain the equivalent of 2 years of Advanced Standing (or awarded 20 course transfers).

4) Students are normally required to complete twenty (20) courses at the University of Windsor in fulfillment of the requirements of the Bachelor of Science Honours Environmental Science-Applied Environmental Science Stream.

Recognized environmental-related programs include:
- Environmental Technician (MCU code 52700)
- Forestry Technician (MCU 54203)
- Any environmental-related program from a qualifying Ontario CAAT or other Canadian College deemed equivalent by the Dean of Science or their designate.

**Note:** Three-year diploma programs in relevant environmental fields will be analyzed for additional potential credit transfer on an *ad hoc* basis, while considering minimum residency and core course requirements.

**Degree Requirements**

Pathway 1: Environmental Technician

Total courses: 20

(a) BIOL-1111 or BIOL-1013, CHEM-1100, CHEM-1110, MATH-1760 or MATH 1720, STAT 2910, BIOL-2101, ESCI-1111, ESCI-2131, ESCI-2210, ESCI-2421
(b) BIOL-3250, BIOL-4241, BIOL-4280, ESCI-2141, ESCI-2705, ESCI-1141, ESCI-2721, ESCI-2400, ESCI-3301, ESCI-3310, ESCI-3400, ESCI-3610, ESCI-3711, ESCI-3751, ESCI-4500, ESCI-4710, ESCI-4721

Courses used to calculate the major average are:
BIOL-2101, ESCI-1111, ESCI-2131, ESCI-2210, ESCI-2421, BIOL-3250, BIOL-4241, BIOL-4280, ESCI-2141, ESCI-2705, ESCI-1141, ESCI-2721, ESCI-2400, ESCI-3301, ESCI-3310, ESCI-3400, ESCI-3610, ESCI-3711, ESCI-3751, ESCI-4500, ESCI-4710, ESCI-4721

Pathway 2: Forestry Technician

Total courses: 20

(a) CHEM-1100, CHEM-1110, MATH-1760 or MATH 1720, BIOL-2101, ESCI-1100, ESCI-1111, ESCI-2131, ESCI-2210, ESCI-2141, STAT-2910

(b) BIOL-3250, BIOL-4241, BIOL-4280, ESCI-2421, ESCI-2705, ESCI-1141, ESCI-2721, ESCI-2400, ESCI-3301, ESCI-3310, ESCI-3400, ESCI-3610, ESCI-3711, ESCI-3751, ESCI-4500, ESCI-4710, ESCI-4721

Courses used to calculate the major average are: BIOL-2101, ESCI-1100, ESCI-1111, ESCI-2131, ESCI-2210, ESCI-2141, BIOL-3250, BIOL-4241, BIOL-4280, ESCI-2421, ESCI-2705, ESCI-1141, ESCI-2721, ESCI-2400, ESCI-3301, ESCI-3310, ESCI-3400, ESCI-3610, ESCI-3711, ESCI-3751, ESCI-4500, ESCI-4710, ESCI-4721

**Recommended Course Sequencing**

Pathway 1: Environmental Technician

Year 1:
Summer: BIOL-1013
Fall: BIOL-2101, CHEM-1100, MATH-1760 or MATH-1720, ESCI-2210, STAT-2910
Winter: ESCI-1111, CHEM-1110, ESCI-2421, 1 elective

Year 2:
Fall: ESCI 2131, 4 Electives
Winter: 5 Electives

Pathway 2: Forestry Technician

Year 1:
Fall: BIOL-2101, CHEM-1100, MATH-1760 or MATH-1720, ESCI-1100, STAT-2910
Winter: ESCI-1111, CHEM-1110, ESCI-2141, 2 Electives

Year 2:
Fall: ESCI-2131, ESCI-2210, 3 Electives
Winter: 5 Electives

# Honours Bachelor of Environmental Studies (BES)

This program is truly interdisciplinary in approach and will introduce students to the social, cultural, economic, political, legal, and ethical factors affecting human interaction with the environment while at the same time ensuring they acquire a basic literacy in the physical and biological sciences. Graduates will understand the human dimensions of environmental issues and will be knowledgeable, skilled individuals capable of analyzing complex human-environmental situations and formulating effective political and social strategies to address human impact.

**Degree Requirements**

Total Courses: forty.

(a) PHIL-2270 or PHIL-2280, PHIL-3230 or SACR-2270, POLS-2120, SACR-3400 or POLS-2490, BIOL-1013 or BIOL-1111, ESTU-1100, ESTU-2100, ESCI-1100, ESCI-1120, ESCI-1130, ESCI-2010, ESCI-1141, ESCI-1151, ESCI-2600, ESCI-2610, ESCI-3601, ESCI-3610, LAWS-2180
(b) eight courses from one of the following areas of concentration: Resource Management or Environmental Values and Policy.
(c) SOSC-2500, POLS-2300, SACR-1100, SACR-3080
(d) ten courses from any area of study, including either Area of Concentration.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

**Area of Concentration: Resource Management**

At least 3 of the following must be taken: ESCI-2201, ESCI-2141, ESCI-2400, ESCI-3701, ESCI-3745.

BIOL-1101. Cell Biology
BIOL-2080. Plants and Society
CHEM-2003. Chemistry in the Marketplace
ESCI-1111. Introduction to Earth Science
ESCI-2000. Science, Technology and Society
ESCI-2141. Hydrology
ESCI-2201. Climatology
ESCI-2210. Introduction to Climate Change
ESCI-2300. Introduction to Oceanography
ESCI-2400. Geomorphology
ESCI-2620. Environmental Auditing in Mineral Resource Development
ESCI-2630. Geology and International Development
ESCI-3701. Environmental Modelling and Decision Analysis
ESCI-3745. Field Methods for Environmental Studies
ESTU-4808. Special Topics in Environmental Studies
ESTU-4900. Environmental Studies Research Project
ESTU-4910. Environmental Research/Leadership Experience
PHIL-3290. Animals and Ethics
PHYS-2060. Physics and Society –The Present
POLS-2490. Political Economy of Agriculture and Food
POLS-3350. Political Geography
SACR-3400. Food and Global Sustainability
STEN-1000. Introduction to Business
VSAR-3850. Green Corridor

**Area of Concentration: Environmental Values and Policy**

ESCI-3745. Field Methods for Environmental Studies
ESTU-4808. Special Topics in Environmental Studies
ESTU-4910. Environmental Research/Leadership Experience
ESTU-4900. Environmental Studies Research Project
PHIL-2270. Environmental Ethics
PHIL-2280. Technology, Human Values and the Environment
PHIL-3230. Human Rights and Global Justice
PHIL-3290. Animals and Ethics
PHIL-3300. Environmental Philosophy
POLS-1600. Introduction to International Relations
POLS-2130. Public Opinion, Mass Media and Canadian Democracy
POLS-2140. Legal Process in Canada
POLS-2200. Introduction to Public Administration
POLS-2210. Canadian Public Administration and Policy
POLS-2490. Political Economy of Agriculture and Food
POLS-2680. International Organization
POLS-2750. Introduction to Research Methods
POLS-3260. Local Government
POLS-3350. Political Geography

POLS-3600. International Conflict and its Resolution
POLS-3630. Principles of International Law
SACR-2270. Globalization, Development, and Social Change
SACR-3270. Social Movements
SACR-3400. Food and Global Sustainability
SACR-3520. Citizenship, Rights, and Social Justice
STEN-1000. Introduction to Business
VSAR-3850. Green Corridor
WGST-3530. Women, Power, and Environments (also offered as SACR-3530)

Students may take courses from both Areas of Concentration, but at least eight courses must be taken in one of the Areas of Concentration.

If both PHIL-2270 and PHIL-2280 are taken, one course fulfills requirement (a) and the other course contributes to the Environmental Values and Policy Area of Concentration.
If both PHIL-3230 and SACR-2270 are taken, one course fulfills requirement (a) and the other course contributes to the Environmental Values and Policy Area of Concentration.
If both POLS-2490 and SACR-3400 are taken, one course fulfills requirement (a) and the other course contributes to either the Resource Management or the Environmental Values and Policy Area of Concentration.

## Certificate in Geographic Information Science (GISc)

**Admission Requirements**
Open only to students currently enrolled in a degree program and in good academic standing in their program.

**Certificate Requirements**

Total courses: Nine

ESCI-1141 Cartography and Digital Mapping
ESCI-1151 Fundamentals of Geographic Information Systems
ESCI-2721 Introduction to Image Processing & Remote Sensing
ESCI-2701 Geospatial Data Collection & Database Design
ESCI-2711 Scripting & Programming in GIS
ESCI-3701 Spatial Modelling in GIS
ESCI-3761 Geostatistical Analysis in GIS
ESCI-3771 GeoWeb and Geoportal Development
ESCI-4911 GIS Capstone Research Project

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - School of the Environment

Major Concentration: ESCI-1111, ESCI-1100, and ten additional ESCI-XXXX courses, except for ESCI-1000, ESCI-1010, ESCI-2000, ESCI-2300, or ESCI-2010. A minimum of three ESCI-2XXX, two ESCI-3XXX and one ESCI-4XXX courses is required.

Minor Concentration: ESCI-1111, ESCI-1100, and four additional ESCI-XXXX courses, except for ESCI-1000, ESCI-1010, ESCI-2000, ESCI-2300, or ESCI-2010.

## Minor in Earth Science

A minor in Earth Science consists of a total of six courses as follows:
(a) ESCI-1111
(b) ESCI-1100 (if not enrolled in a program that includes ESCI-1100 as a course used to calculate the major average)
(c) courses chosen from the following list to make up a total of six courses for the minor: ESCI-1020, ESCI-1120, ESCI-2101, ESCI-1141, ESCI-1151, ESCI-2131, ESCI-2141, ESCI-2400, ESCI-2411, ESCI-2421, ESCI-3301, ESCI-3400, ESCI-3411.
A minimum average of 60% must be attained for all courses counted toward the minor.

## Minor in Environmental Science

A minor in Environmental Science consists of a total of six courses as follows:
(a) ESCI-1100
(b) BIOL-1111 (if not enrolled in a program that includes BIOL-1111 as a course used to calculate the major average);
(c) courses chosen from the following list to make up a total of six courses for the minor: ESCI-1120, ESCI-1130, ESCI-2101, ESCI-1151, ESCI-2131, ESCI-2141, ESCI-2210, ESCI-2300, ESCI-2400, ESCI-2421, ESCI-3301, ESCI-3400, ESCI-3701, ESCI-3711, ESCI-3721, ESCI-3735, ESCI-3751, ESCI-4301, ESCI-4500, ESCI-4600, ESCI-4710, ESCI-4721.
A minimum average of 60% must be attained for all courses counted toward the minor.

## Minor in Geography

(Administered by the School of the Environment)

A minor in Geography consists of six courses selected from the following list: (a) POLS-2300, POLS-2490, POLS-3350, POLS-4400, ESTU-1000 or ESTU-1100, ESTU-2100, ESCI-1120, ESCI-1130, ESCI-1141, ESCI-1151, ESCI-2141, ESCI-2201, ESCI-2210, ESCI-2400, ESCI-2600, ESCI-3601, ESCI-3610, ESCI-3701, ESCI-3745.

Restrictions:
At least one course must be taken from POLS-2490, POLS-3350, ESTU-1000 or ESTU-1100, and ESTU-2100. Only two courses can be taken from ESCI-1130, ESCI-2201 and ESCI-2210.
A minimum average of 60% must be attained for all courses counted toward the minor.

# SCHOOL OF THE ENVIRONMENT COURSES

## ENVIRONMENTAL SCIENCE COURSES

**ESCI-1000. Natural Hazards and Disasters**
The Earth's component systems and their interrelationships. Earth hazards and the Earth's interior processes: volcanism and earthquakes. Hazards and surface processes: landslides and floods. Atmospheric hazards: storms, hurricanes and tornadoes. (May be taken by Science students for credit,

but does not count as a Science option towards the fulfillment of the specified requirements for a Science degree). (2 lecture hours per week)

**ESCI-1010. Our Changing Earth**
Origin of the universe and solar system; focus on the Earth and moon; earliest life forms. Measurement of geological time. Global climatic change in geological history; drifting continents; deserts, floods and ice sheets. Fossils and evolution; extinctions and probable causes. Human evolution and migrations; early technologies. (May be taken by Science students for credit, but does not count as a Science option towards the fulfillment of the specified requirements for a Science degree). (2 lecture hours a week)

**ESCI-1020. Introduction to Planetary Science**
An introduction to the origin of the Universe and Solar System. Topics include: the Big Bang theory; origin and organization of matter; and formation of galaxies, nebulae, stars, and planetary systems. The focus is on the geological features of planets, moons, asteroids, and comets. Coverage includes historical perspectives and current theory on astronomy, measurement of the ages of the Universe and Solar System, space exploration, Moon and Mars missions, analyses of NASA satellite images, the origin and evolution of life in the Solar System, and the search for possible extra-terrestrial life and intelligence in the Universe. (May be taken by Science students for credit, but does not count as a Science option towards the fulfillment of the specified requirements for a Science degree.) (3 lecture hours a week.)

**ESCI-1100. Environmental Systems - An Introduction to Environmental Science**
An introduction to the components of Earth's environment (geosphere, biosphere, atmosphere, and hydrosphere) and the principles and processes defining and influencing environmental systems (energy and matter cycles). Human interactions with, and influences on, the environment will be examined (resource and land use, waste and pollution, development, conservation and sustainability). This course is designed for Science majors. (3 lecture hours a week, optional field trips).

**ESCI-1111. Introduction to Earth Science**
An introduction to Earth's physical character and the processes that shape our planet. The focus is on the geosphere: Earth materials, weathering, sedimentation, magmatism and volcanism, metamorphism, deformation, earthquakes, mountain building, and Earth's internal structure. These will be examined in the context of the origin of Earth, geologic time, and plate tectonics. The nature of mineral and energy resources will also be examined. This course is designed for Science majors. (3 lecture, 2.5 laboratory or tutorial hours a week).

**ESCI-1120. Introduction to Geomorphology**
The landscapes of the earth, with particular reference to the glaciers, coastlines, rivers, and northern permafrost regions of Canada. (3 lecture hours a week.)

**ESCI-1130. Atmosphere and Climate**
An introduction to the atmosphere and the basic principles of meteorology and climatology. Topics include weather systems, atmospheric pollution and inadvertent climate modification, climate change and relationships between climate and living organisms. (3 lecture hours a week.)

**ESCI-1141. Cartography and Digital Mapping**
This introductory course focuses on the key elements of map design, representation of spatial data and map interpretation. Topics will include projections, datums and coordinate reference systems, scale properties and unit calculations, map symbology and map accuracy. Different mapping approaches, such as choropleth, isoline and dot mapping will be utilized throughout the course. Web-based mapping

will be introduced. Maps will be designed, generated, and interpreted using paper-based media and modern cartographic software in a laboratory setting. (2 lecture, 2 laboratory hours a week.)

**ESCI-1151. Fundamentals of Geographic Information Systems and Science**
This introductory course focuses on the basic principles, techniques, applications, and impacts of geographic information systems. Vector and raster data structures will be introduced, as well as methods for acquiring, storing, manipulating, and analyzing spatial and non-spatial data. Spatial data conversion, data reformatting, and basic database development techniques will also be explained. Geographic layers will be created and different overlay and spatial query procedures to address various real-world problems will be presented using proprietary and open source GIS software in a laboratory setting. (It is recommended that students take ESCI-1141 before taking this course.) (2 lecture, 2 laboratory hours a week.)

**ESCI-2000. Science, Technology, and Society**
This course is designed to explore the complex inter-relationships between science, technology, and society. The nature of science and scientific method and selected current issues in science and technology will be discussed. Topics may include chemicals in society, biotechnology and related issues, nuclear energy, and the impact of these technologies on society. Technology, as it relates to human values and public awareness, will also be considered. (Not open to Semester 1 and 2 students.) (May not be taken for credit towards a B.Sc. Degree in Environmental Science.) (3 lecture hours a week.)

**ESCI-2010. Geology and the Environment**
Effect of geological factors on the environment; pollution of groundwater, ground subsidence, nuclear waste disposal, subsurface disposal of liquid wastes, earthquake prediction and control. This course is designed specifically for the non-scientist. (May not be taken for credit towards a B.Sc. Degree in Environmental Science.) (2 lecture hours a week or equivalent.)

**ESCI-2020. Discovering Dinosaurs**
The origin, evolution, behaviour, ecology, and extinction of dinosaurs, and how these aspects of dinosaur science are understood through the study of their fossils. How the public perception and scientific interpretation of dinosaurs have changed over time as a result of new discoveries. (3 lecture hours per week)

**ESCI-2101. Earth Materials**
An introduction to the fundamental properties and characteristics of Earth materials. Topics include the nature of minerals (the principal components of sediments, soils and rocks), and the general chemical, mineralogical and physical characteristics of Earth materials. Coverage includes how geochemical and geophysical methods are used to determine the properties of Earth materials. (2 lecture and 3 laboratory hours/week.)(Prerequisites: ESCI-1111 or ESCI-1100 or consent of instructor.)

**ESCI-2131. Introduction to Geochemistry**
Introduction to the application of chemical principles to the natural environment. Fundamental concepts in thermodynamics, acid-base equilibria, solubility, reduction-oxidation, organic chemistry, environmental mineralogy, and isotope geochemistry will be discussed in the context of the chemical character of environmental material, and environmental problems. (Prerequisites: CHEM-1100, CHEM-1110.) (3 lecture and/or tutorial hours per week.)

**ESCI-2141. Hydrology**
Fundamental processes in physical hydrology that control movement and storage of water within a watershed or catchment basin. Components of the water balance (precipitation, interception,

infiltration, evapotranspiration, runoff, storage) and their variations in space and time. Theoretical and practical approaches to measurement and forecasting of components and their linkages. Special consideration of snowmelt, streamflow, wetlands, and human impacts. (Prerequisites: one of ESCI-1120, ESCI-1130 or ESCI-1100; and one of SOSC-2500, STAT-2910, or other University-level mathematics or statistics course; or consent of instructor.) ( 3 lecture, 2 laboratory hours a week.)

**ESCI-2201. Climatology**
A study of the major climatic elements, with special emphasis on the radiation budget, energy systems, and the hydrological cycle of Earth and the human environment. Climate classification, climatic change, climatological techniques, and aspects of applied climatology also will be examined. (Prerequisites: ESCI-1130.) (2 lecture, 2 laboratory hours a week.)

**ESCI-2210. Introduction to Climate Change**
A study of the drivers of past, present, and future climate change. Topics include paleoclimate records, future climate projections (both global and regional), and the impact of these changes on the environment. The influence of politics and the media upon climate change are also explored (Prerequisite: ESCI-1100 or ESTU-1100) (3 lecture hours a week.)

**ESCI-2300. Introduction to Oceanography**
Examination of the physical, chemical, geological and biological aspects of the oceans. Topics will include the interconnectedness of global climate, ocean currents, waves and tides, anthropogenic stressors, and their influence on marine biodiversity and ecosystems. (3 lecture hours a week.)

**ESCI-2400. Geomorphology**
The geological processes operating on or near Earth's surface and the development and evolution of erosional and depositional landforms as a result of glacial ice, permafrost, wind, running water, gravity, waves and tides, and exposure to the atmosphere. (3 lecture hours a week.)

**ESCI-2411. Introduction to Petrology**
Petrography, textures, composition and classification of igneous and metamorphic rocks. Evolution of magmatic systems. Nature and causes of metamorphism. Relationship between global tectonics and magmatic and metamorphic processes. (Prerequisite: ESCI-2101 or consent of instructor.) (2 lecture, 3 laboratory hours a week.)

**ESCI-2421. Soils and Sediments**
An introduction to the properties and characteristics of soils and sediments, the materials that cover much of Earth's surface and underlie surface water bodies. Topics include the formation and structure of soils and sediments, and how they are described, classified, and analyzed. Coverage includes the geographic distribution of soils and their importance as an environmental resource. (3 lecture and 2 laboratory hours per week.)(Prerequisites: ESCI-1111 or ESCI-1100).

**ESCI-2600. Principles of Resource Management**
Systems analysis methodologies, scientific theories, ecological approaches, and sustainable resource management principles will be presented to examine the interrelationships governing the availability and cumulative impacts of utilizing both renewable and non-renewable resources. Resource management auditing methods and techniques will be applied for the assessment of several indicators, including carrying capacity, ecological footprints, demographic transition, energy flows, agrosystems, land degradation, air and water quality, deforestation, biodiversity and successional changes. Discussions will also focus on integrative and adaptive resource management techniques and best management practices. (3 lecture hours a week.)

**ESCI-2610. Environmental Decision Analysis**
Earth systems, including climatic extremes, the industrialized ecosystem; decisions under uncertainty in mineral-resource exploration and development; rational approach to decision making, alternatives to decision analysis; environmental impact assessment and risk management, expert systems approach to environmental problem solving, applications in less developed countries. (3 lecture hours a week.)

**ESCI-2620. Environmental Auditing in Mineral Resource Development**
Cyclical flow of energy and matter in nature, human interaction with environmental processes, elements of policy analysis; environmental management systems and environmental impact assessment; environmental audit processes, steps in design and delivery; mineral resource development and the audit protocols; from audit to action plan, auditing the audit. (3 lecture hours a week.)

**ESCI-2630. Geology and International Development**
Aid, international development, and Earth processes; integration of water-resource management, soil conservation and agroforestry; geological hazards in a tropical setting; small-scale mining and conservation of mineral resources; engineering an improved quality of life in developing nations. (May not be taken for credit towards a B.Sc. Degree in in Environmental Science.) (2 lecture hours a week or equivalent.)

**ESCI-2701. Geospatial Data Collection and Database Design**
Geospatial data are continuously being collected in real-time and in large quantities, at different scales and for different purposes. This course will explore fundamental database concepts in non-spatial contexts (entity-relationship model, object-oriented database design) and introduce spatial considerations (geometric objects, topology, connectivity) when creating geodatabases. Methods for building effective relational and spatial databases using modern geospatial and non-geospatial software, as well as query-based languages such as SQL. Data capture equipment and tools, such as UAVs (drones), total survey stations, GPS, and online spatial catalogues (including census, climate, and municipal) will be utilized to collect and import spatial and aspatial data into geodatabases. Data quality and assurance, database management systems and geodatabase enterprise solutions, mining of big spatial data, implications of data sharing, and construction of metadatabases will also be discussed. (Prerequisite: ESCI-1151.) (2 lecture, 2 laboratory hours per week.)

**ESCI 2705. Applied Geophysics**
Fundamental physical properties and parameters of matter, including density, conductivity, radioactivity, magnetism, dielectric constant and seismic velocity. Theory and principles of geophysical techniques used to assess and monitor near-surface variations in physical properties, including resistivity imaging, electromagnetic mapping, magnetometry, ground penetrating radar, and seismic imaging. Applications will focus on environmental problems, but may include geological, forensic, and archaeological studies. May be offered as a full-time two-week course during Inter/Summer session, or as a lecture and laboratory course during the Fall semester. (Prerequisite: ESCI 1111.) (MATH 1720/1760 and PHYS 1310/1410 recommended.)

**ESCI-2711. Scripting and Programming in GIS**
Knowledge and competence in programming are an essential skill set and a critical requirement for most geospatial job opportunities. This course will introduce the basics of constructing scripts (lists, loops, syntax, classes, objects) and programming them into a GIS framework for the purpose of automating workflows, visualizing geospatial data, building and running tools from GUIs and APIs. Other topics will include: methods to enhance functionalities within current geospatial software and web-based systems, the utilization of geospatial libraries, and the construction of effective tools for spatial

analysis purposes using Python and other programming languages. (2 lecture, 2 laboratory hours per week.)

**ESCI-2721. Introduction to Image Processing and Remote Sensing**
This course will introduce how changes to the Earth's surface can be examined by utilizing aerial photography and satellite imagery and the key elements of image interpretation. Discuss how different satellite sensors and platforms (LANDSAT, RADARSAT, SPOT, MODIS), and how electromagnetic radiation, in conjunction with remote sensing software, can be used to identify key spectral signatures of the Earth's diverse environments (water, vegetation, urban). Emphasis will be placed on how remote sensing constrains and permits the derivation of useful attributes of the Earth's surface, and how imagery is processed, classified, and interpreted. This course will involve completing application-based assignments using specialized remote sensing software. (Prerequisites: ESCI-1151.) (2 lecture, 2 laboratory hours per week)

**ESCI-3301. Hydrogeology**
Fundamental physics and properties of groundwater flow in porous geologic material, develops an intuitive, problem-solving approach to hydrogeologic problems. Topics include: groundwater flow equations, flow nets, aquifer pumping, contaminant transport processes, two-phase flow, and dense non-aqueous phase liquids. Computer application will be emphasized. (Prerequisites: ESCI-1100, MATH-1720 (or MATH-1760) or consent of instructor.) (ESCI-2141 is recommended) (2 lecture, 3 laboratory hours a week.)

**ESCI-3310. Global Water Crisis**
Examination of the threats to global freshwater resources due to projected human population growth to 2050 and the potential impacts of this growth on water quantity and water quality. Application of the concept of the water, food, energy nexus to demonstrate how water consumption and virtual water transport through international trade of food and energy impact water availability and contribute to water stress to humans and to freshwater ecosystems. The course also examines interactions between water availability, climate change, water pollution, and trends in global consumer demands to address questions about the sustainability of our freshwater resources in the coming decades. (Prerequisite: ESCI-1100.) (3 lecture hours per week.)

**ESCI-3400. Environmental Sedimentology**
Description and analysis of depositional and diagenetic processes, facies, environments and sequences. The impact of natural processes and anthropogenic activities on the nature, production, and accumulation of sediments. Effects of changes in hydrologic reservoirs and fluxes. (3 lecture hours per week, field trips). (Prerequisite: ESCI-2421 or consent of the instructor.)

**ESCI-3411. Structural Geology**
Rock deformation; primary and secondary structures; analysis and classification of folds and faults; interpretation of geologic maps; solution of structural problems. (Prerequisite: ESCI-2411 or consent of instructor.) (3 lecture, 3 laboratory hours a week.)

**ESCI-3601. Issues in Resource and Environmental Systems**
The complexities and nonlinear feedback mechanisms influencing the dynamic interactions between the allocation and utilization of biotic and abiotic resources in the spatial and temporal domains will be addressed within the conceptual framework of resource management paradigms, theories, and analytical methodologies. Contemporary problems and issues in resource and environmental systems will then be critically assessed, and best management practices will be appraised. (Prerequisites: ESCI-2600 or consent of instructor.) (3 lecture and/or tutorial hours per week.)

**ESCI-3610. Environmental Impact Assessment**
History, theories, and principles of environmental impact assessment (EIA) are examined and various methodologies for EIA preparation are evaluated. Relevant environmental ethics, laws, administrative requirements, and case studies for EIAs in Canada are examined. These principles and methods are applied to preparation of an EIA major project (2 lecture hours and 1 tutorial hour per week) (Prerequisites: ESCI-2141 and ESCI-2421)

**ESCI-3701. Spatial Modelling in GIS**
This course will explore several types of advanced spatial models (conceptual, mathematical-statistical, process, and spatial) and how these models are used for decision making in various real-world applications. The modelling approaches that may be explored include: multi-criteria decision analysis, fuzzy logic, network models (routing vs. hydrologic), 3-D and terrain assessment, agent-based modelling and artificial intelligence. These approaches will be applied to both vector and raster formats within a GIS framework. Other topics that will be examined include: model selection, calibration, uncertainty and error identification, sensitivity analysis, and validation procedures. (3 lecture and 2 laboratory hours per week). (Prerequisite: ESCI-2701 and 2711).

**ESCI-3711. Principles of Instrumental Analysis**
The fundamental principles of operation and practical application of modern chemical analytical instrumentation are presented. This course will focus on the acquisition and assessment of qualitative and quantitative chemical data from synthetic, biochemical, and natural materials using instruments and methods that describe the elemental, isotopic, and molecular composition and structure of matter. Topics covered in this course may include atomic and molecular absorption and emission (photoluminescence) spectroscopy, atomic and molecular mass spectroscopy, X-ray spectroscopy, vibrational spectroscopy, and separation methods such as gas and liquid chromatography. (Prerequisite: CHEM-2200 or consent of instructor; Prerequisite for School of the Environmental Majors: ESCI-2131 or consent of instructor.) (3 lecture and 3 laboratory hours per week.) (Cross-listed with CHEM-3210.)

**ESCI-3721. Environmental Geophysics**
An introduction to the use of seismic, electrical, electromagnetic and other geophysical methods used in near-surface environmental assessment studies. (Prerequisite: ESCI-2101 or consent of instructor) (2 lecture, 3 laboratory hours a week.)

**ESCI-3735. Field Methods for Environmental Science**
Introduction to field sampling and measurement techniques for environmental science. Includes physical and chemical characterization of soil/sediment, water, air, and biological samples, and the measurement, evaluation, visualization, and reporting of spatial and temporal data. Designed for Environmental Science students. (Prerequisites: ESCI-1100 and ESCI-2131 or consent of instructor.) Requires student participation in field work or lab work of up to 2 weeks in duration. Course schedule and location may vary with term).

**ESCI-3745. Field Methods for Environmental Studies**
An introduction to field and mapping methods with particular emphasis on vegetation, water, and soil/sediment sampling and analysis. Landform identification. Interpretation of topographic maps, use of compass and GPS units. Observation and assessment of sustainable land use practices. (Prerequisites: ESCI-1120, and ESTU-1100 or consent of instructor.) Requires student participation in field work or lab work of up to 2 weeks in duration. Course schedule and location may vary with term).

**ESCI-3751. Environmental Geochemistry**
Processes such as element and nutrient cycling, and contaminant mobility in near-surface geologic settings. Topics covered will build knowledge of environmental systems by expanding on concepts of chemical phase equilibria, chemical kinetics, and redox reactions in natural systems. The transformation of both natural and anthropogenic chemical compounds will be discussed. Interactions between terrestrial, freshwater, and marine systems will be covered and will include legacy and emerging contaminants (e.g., acid mine drainage). (Prerequisite: CHEM-2400 or ESCI-2131) (3 lecture and/or tutorial hours per week.)

**ESCI-3755. Methods in Great Lakes Geomicrobiology**
Field methods used to sample, study and quantify biogeochemical processes across sediment-water environments (wetlands, lakes, and the sediment /water interface) will be emphasised. Attention will focus on microbial field-based water and sediment measurements, as well as sample collection for laboratory determination of fluxes for metals and nutrients. Comparison between stream sediments and suspended particulates will be examined. The course will include an introduction to the ecology of microbially driven redox reactions common in these systems. This course will normally run over two weeks during the summer semester. (Prerequisites: ESCI-1100, ESCI-2131, or consent of instructor.)

**ESCI-3761. Geostatistical Analysis in GIS**
This course will provide comprehensive examination of geostatistical approaches and how they can be incorporated into a spatial and statistical framework to determine how and why spatial distributions and patterns occur between and amongst humans and their environments. The specific geostatistical approaches that will be covered include methods that analyze patterns (spatial autocorrelation, nearest neighbour), map clusters (hot-spot, groupings and outliers), measure geographic distributions, and model spatial relationships (weighted/land use regressions, correlation matrices). (Prerequisites: ESCI-2711 and STATS-2910 or SOSC-2500 (2 lecture, 2 laboratory hours per week)

**ESCI-3771. Geo-Web and Geoportal Development**
Internet mapping has become a conventional approach used by the public (citizen science) and various organizations (government, health, utilities) to store, manage and share spatial data. Knowing how to design, construct and administer these online systems has become a necessary skill in the workplace. This course will explore the history of internet mapping, what software is available (proprietary vs. open source) to map spatial data online and how to design interfaces, construct tools and visualize spatial data within geoweb based GUIs and APIs. Process, storage and querying mechanisms for online geodatabases will also be covered. (Prerequisites: ESCI-2711.) (2 lecture, 2 laboratory hours per week.)

**ESCI-3801. Scientific Writing and Data Management**
Effective communication is fundamental to society and is particularly important in scientific endeavours. The ability to collect, process, analyze, and interpret data, and then communicate the significance of data to others, is fundamental to the scientific researcher and consultant. Students will develop skills in the written and oral communication of scientific thought through exercises in specific grammatical, writing, data processing, and management techniques. (2 lecture, 1 tutorial and 2 laboratory hours per week.) (Prerequisites: ESCI-1100, STAT-2910 or consent of instructor.)

**ESCI-3806. School of the Environment: Global Perspectives in Science**
This course comprises a trip in Canada or abroad that provide students with global perspectives on earth and environmental science and studies that are inherent to the destination. There will typically be a significant field component to the course in which students will be exposed to various aspects of

environmental and earth science. Ancillary fees will apply. Prerequisites will vary depending on the content of a particular section. Trip duration is typically two weeks.

**ESCI-4301. Contaminant Hydrogeology**
Application of elements of geology, geochemistry, physical chemistry, toxicology, biogeochemistry, and physical hydrogeology toward understanding and quantifying the movement, fate and toxicity of organic and inorganic substances (i.e., contaminants) in environmental systems. Selected topics include site characterization, physicochemical properties of contaminants, human and environmental toxicology, risk assessment, remediation technologies and feasibility, and contaminant transport and attenuation modeling. (2 lecture and 2.5 laboratory/tutorial hours per week.)(Prerequisites: ESCI-2131 and ESCI-3301 or consent of instructor.) (ESCI-3751 is recommended.)

**ESCI-4500. Ecosystem Health**
The fundamental mechanisms and processes that structure ecosystems, anthropogenic activities that can alter them, and the policy and management used to protect them. Through class discussions and case studies, students develop a practical, problem-solving approach to issues associated with ecosystem health. Topics include food web and ecosystem ecology, ecosystem models, anthropogenic stressors, management methods and models, and national and international policies. (3 lecture hours per week.)(Prerequisites: BIOL-2101 and ESCI-1100 or consent of instructor.)

**ESCI-4600. Resource Development and Environmental Impact**
Geochemical processes and environmental impact that may result from the development of natural resources (minerals, hydrocarbons), with special emphasis on the approaches used to extract and develop raw materials, and sustainable strategies to protect the environment. Topics include acid mine drainage, tailings disposal, oil sands development, groundwater contamination, metal toxicity, and an integrative assessment of the role of metals and their influence on biota. (3 lecture hours per week.)(Prerequisites: ESCI-2101, ESCI-2131 and ESCI-3751 or consent of instructor.)

**ESCI-4710. Environmental Site Assessment**
An examination of environmental site assessment (ESA) methods and procedures as applied to greenfield and brownfield properties. Includes: major phases of site characterization and assessment (e.g., Phase I and II ESA, risk assessment, feasibility study, corrective action); applicable North American standards and regulations; and critical examination of ESA case studies. (2 lecture hours and 1 tutorial hours per week.) (Prerequisites: ESCI-2101 and ESCI-2131, ESCI-3751 is recommended.)

**ESCI-4721. Biogeochemistry**
An investigation of global change focusing on the chemical, physical, and biological processes that cycle elements through Earth's systems. Topics covered in this course will include: the role of bacteria in mediating element cycles, the conundrum of the origin of life, microbial impacts on global element cycles, microbe-water-rock interactions (including sorption, oxidation-reduction, methylation of metals, biological degradation of organic molecules). Introduction to molecular biology and isotope techniques to solve environmental problems). (Prerequisites: ESCI-2131) (3 lecture and/or tutorial hours per week.)

**ESCI-4808. Special Topics in Earth and Environmental Sciences**
Selected topics of current interest. (Prerequisite: consent of instructor and a program advisor.) (3 lecture or project hours a week.) (May be repeated for credit if content changes.)

**ESCI-4900. Thesis Research in Environmental Science**
Each student will be required to carry out an original research project in Environmental Science and write a report under the supervision of one or more faculty members. The results of the research will

also be presented in a public seminar. Students must consult with an Environmental Science counselor prior to enrolling in this course. (A 6.00 credit, two-semester course.) (Restricted to semester 7 and 8 students with a major average of 70% higher.)

**ESCI-4911. GIS Capstone Research Project**
This course will involve designing, managing, and completing a research project that emphasizes the use of a geographic information system (GIS) for a specific application, either individually or in groups of 3 to 4, based on the scope and complexity of the project. Each group or individual will select a suitable spatial problem, with guidance from the instructor, and try to solve the problem by acquiring, organizing, and analyzing data within a GIS by using the necessary theories, tools, programs, etc. that they learned throughout the certificate. Projects must include an extensive analytical component where GIS is central to the methods used. The course will also cover conducting literature reviews, project methodology and organizational design, proper reporting of results and overall project management. Projects may also be undertaken in participation and collaboration with outside community partners, GIS organizations and/or GIS professionals. (Prerequisites: ESCI-3701, ESCI-3761, and ESCI-3771.) (2 lecture hours per week and project work.)

## ENVIRONMENTAL STUDIES COURSES

**ESTU-1100. Humans and the Environment - An Introduction to Environmental Studies**
Humans use energy and resources from our natural surroundings to live, and to develop our societies and cultures. This use has an impact on other animals and plants, and on the air, water, and land. Our impact is now so great that we are in danger of depleting or destroying many of the natural systems on which we depend. This course will examine our relationship with, and impact on, the environment:, with reference to the physical, cultural, economic, political, and ethical elements. Sustainable practices will also be discussed. Topics may include: human sustainability and population growth, aquatic and terrestrial sustainability, food and agriculture, water resources, energy production, and climate change. (Can be taken as a Social Science option.) (Three lecture hours per week.)

**ESTU-2100. Canadian Regional Environments**
Canada is a complex and varied nation. The environmental issues that concern each region of the country are also complex and varied. This course surveys the dominant environmental issues and impacts in each region of Canada, and explores the reasons for the regional variation through a variety of lenses: its physical landscape, its resource opportunities and challenges, its historical settlement patterns and economic development, and its social, cultural, and demographic structure. This context is used to develop an understanding of current environmental news and events across the country. (Can be taken as a Social Science option.) (Three lecture hours per week.)

**ESTU-2500. Concepts for Ecosystem Management**
An introduction to ecosystem management and how ecological information is used in Canadian environmental policy and programs. This course will examine the current biodiversity crisis, how it relates to ecosystem services and human well-being and common measurement techniques used to characterize and monitor ecosystems, their function and health. Topics will include an overview of ecosystem monitoring techniques including land and aquatic-based survey tools, quantifying ecosystem production, species presence, species diversity and habitat classification. Topics and case studies of ecosystem management related to environmental impact assessment, ecosystem restoration, conservation, non-native species, pest management, and species re-introductions will be introduced. Case studies will be placed in the context of major Canadian and Ontario environmental legislation that utilizes ecological concepts to demonstrate how environmental programs adopt measurements and

metrics reviewed in the course. (3 lecture hours per week). (Prerequisites: ESTU-1100 or ESCI-1100; or BIOL-1013 or BIOL-1111).

**ESTU-3310. Great Lakes Water Quality Agreement**
An overview of the 1909 Boundary Water Treaty (BWT) and Great Lakes Water Quality Agreement (GLWQA) governing the binational strategy for managing water diversions and water quality of the Laurentian Great Lakes. The course will provide an overview of the history of the agreement and its evolution over various amendments, evaluate major policies and environment programs adopted in Ontario and Canada developed to implement the agreement and demonstrate how the agreement has influenced environmental policy and programs outside of the Great Lakes Basin. The course will also examine the roles of public involvement through various environmental stakeholders and how science shaped the agreement. Case studies documenting historical and recent challenges to the BWT involving diversions of waters outside the Great Lakes, implementation of Remedial Action Plans, Lakewide Management Plans and indicator selection and evaluation will be discussed. (Prerequisite: ESCI-1100 or ESTU-1100 and Semester 3 or above standing, or permission of the instructor.)(3 lecture hours a week.)

**ESTU-3500. The Living Earth: Biogeography and the Biosphere**
Biogeography is the study of the spatial distribution of both plants and animals. This course will examine the nature of populations and communities influenced by geological, geographical, and biological processes and the factors leading to their distribution past and present (Prerequisites: ESTU-1100 or consent of instructor).

**ESTU-4808. Special Topics in Environmental Studies**
Students will examine selected environmental topics of current interest, to meet a demonstrated academic need that cannot be satisfied by regular course offerings. This course may be given as a seminar course, or as a directed, self-study course. (Prerequisite: consent of instructor and program counselor.)(Students may repeat the course for credit if the content changes.)

**ESTU-4900. Research Project in Environmental Studies**
Each student will be required to carry out an original research project in environmental studies and write a report under the supervision of one of more faculty members. The research topic can be in an area relevant to Environmental Studies (e.g., physical geography, sociology, philosophy, political science, etc.) or be interdisciplinary. (Prerequisite: Restricted to students in the BES program with semester 7 or 8 standing, and with a minimum major average of 73%. Students must consult with an Environmental Studies Coordinator and an appropriate faculty supervisor prior to enrolling in the course.) (6.0 credit hour course which counts as two courses, 2 semester course.)

**ESTU-4910. Environmental Research/Leadership Experience**
Students will participate in research and/or leadership training in a field or applied regional, national or international setting, focused on environmental, conservation, and/or sustainability issues. (Prerequisite: permission of program counselor.) (May be repeated for credit if host program or content changes.) Several regional, national, and international programs invite students to participate in environmental research or leadership training in environmental settings around the world. Academic credits are granted through a host University, and may be transferred to the University of Windsor via a Letter of Permission, arranged before the program begins. Because enrolment in these programs may be limited, and visa or other immigration documents may be necessary for international programs, students should apply as early as possible. For further information, contact the program counsellor.

# INTEGRATIVE BIOLOGY

## PROGRAM INFORMATION AND REGULATIONS

**Placement**
Students without Grade 12"U" Biology or equivalent and who were admitted to other University programs may be allowed to substitute Biology BIOM-1003 and BIOL-1013 as prerequisites for Biology BIOL-1101 and BIOL-1111 provided that a combined average of at least 70% is obtained in those courses. However, they will not receive credit towards a BSc degree in Biological Sciences for BIOM-1003 and BIOL-1013.

**Areas of Study in Biological Sciences**
The BSc in Biological Sciences provides entry to a broad range of teaching, research, and biomedical careers. Most require formal, post-graduate training, and it is the student's responsibility to determine, as early as possible, the specific requirements of programs to which he or she wishes to proceed.

Programs in Biological Sciences provide a solidly based background ensuring that the general requirements of post-graduate programs will be fulfilled. The array of courses offered is such that students may emphasize areas of particular interest or aptitude. Advice on career paths and on course selection is available to students through a student advising program. Pursuit of the Honours with thesis degree is strongly recommended for professional advancement in science.

Note:
1. ECON-XXXX courses will be counted as Social Science course in all programs in Biological Sciences.
2. Only students who have maintained a major average of 70% and a cumulative average of 60% will be permitted to enroll in BIOL-4904.

**Preparation for Graduate and Professional Schools**
Courses are available to permit the student to become fully prepared for entry into medical, dental, pharmacy, and other professional schools, as well as graduate programs in the biological sciences. Pre-professional advising is available in the Faculty of Science Office, Essex Hall. Students should seek advice on course selection early in their program.

# PROGRAMS

## Honours Biological Sciences

Undergraduate students may be allowed, with the consent of the instructor, to take one graduate course for credit.

**Degree Requirements**

Total courses: forty.

(a) twenty courses, including the "Core" courses BIOL-1101, BIOL-1111, BIOL-2101, BIOL-2111, BIOM-2131, and BIOL-3142; and fourteen other Biology (BIOL-and BIOM-) courses. At least nine courses must be at the 300 level or above. (Recommended: BIOL-2071 and BIOL-3022.)
(b) eight Science courses, including CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010, STAT-2910, MATH-1720 (or MATH-1760)*, and at least one pair of both ESCI-1100 and ESCI-1111, or both PHYS-1300 and PHYS-1310, or both PHYS-1400 and PHYS-1410 (or PHYS-1310), or both COMP-1047 or COMP-2067 and COMP-2057, or both COMP-1400 and COMP-1410, or both ESCI-1130 and ESCI-2400;
(c) six additional Science courses excluding *ECON-XXXX and including additional courses in Biology. At least two of these courses must be at the 3000 level or above;
(d) four courses from Arts/Languages or Social Sciences, with at least one from each;
(e) two courses from any area of study.

*ECON-XXXX courses will be counted as Social Science courses.

Courses used to calculate the major average are: courses listed under requirement (a), and any other BIOL and BIOM courses taken.

## Honours Biological Sciences with Thesis

Undergraduate students may be allowed, with the consent of the instructor, to take one graduate course for credit.

**Degree Requirements**

Total courses: forty.

(a) twenty courses, including the "Core" courses BIOL-1101, BIOL-1111, BIOL-2101, BIOL-2111, BIOM-2131, and BIOL-3142; and fourteen other Biology (BIOL-and BIOM-) courses including BIOL-4904 or BIOM-4904*. At least nine courses must be at the 300 level or above. (Recommended: BIOL-2071 and BIOL-3022.)
(b) eight Science courses, including CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010, STAT-2910, and MATH-1720 (or MATH-1760)**, and at least one pair of both ESCI-1100 and ESCI-1111, or both PHYS-1300 and PHYS-1310, or both PHYS-1400 and PHYS-1410 (or PHYS-1310), or both COMP-1047 or COMP-2067 and COMP-2057, or both COMP-1400 and COMP-1410, or both ESCI-1130 and ESCI-2400;
(c) six additional Science courses, excluding **ECON-XXXX and including additional courses in Biology. At least two of these courses must be at the 3000 level or above;

(d) four courses from Arts/Languages or Social Sciences, with at least one from each;
(e) two courses from any area of study.

*Only students who have maintained a major average of 70% and a cumulative average of 60% will be considered for enrolment permitted to enroll in BIOL-4904 or BIOM-4904. Registration in BIOL-4904 and BIOM-4904 is competitive and requires the consent of the Course Instructor.
**ECON-XXXX courses will be counted as Social Science courses

Courses used to calculate the major average are: courses listed under requirement (a), and any other BIOL or BIOM courses taken.

## BSc Honours in Behaviour, Cognition and Neuroscience (with Thesis)

This is a joint offering with the Department of Psychology.

Neuroscience is a strong and growing field that strives to understand brain function at the molecular, behavioural and cognitive levels. This interdisciplinary program comprises required courses primarily from the departments of Biological Sciences and Psychology. Students also participate in bi-weekly research colloquia. In their final year, students prepare a research-based thesis in behaviour, cognition or neuroscience. Students must maintain an average of 70% or higher in Biology and Psychology courses. Entry to the fourth-year thesis course, PSYC-4960, requires a psychology average of 80% of higher for Behaviour, Cognition and Neuroscience majors. Only students who have maintained a major average of 70% and a cumulative average of 60% will be considered for enrolment in BIOL-4904. Registration in BIOL-4904 is competitive and requires the consent of the Head of Department.

**Degree Requirements**

Total courses: forty.

(a) Biological Sciences: BIOL-1101, BIOL-1111, BIOL-2040, BIOL-2101, BIOL-2111, BIOM-2131, BIOL-2480, BIOL-3142, BIOL-4450, and BIOL-4481; plus one additional biology (BIOL-and BIOM-) course.
(b) Psychology: PSYC-1150, PSYC-1160, PSYC-2230, PSYC-2560, PSYC-3130, PSYC-3220 (or PSYC-3230), PSYC-3350, PSYC-3530, PSYC-3580 and one of PSYC-3370, PSYC-4230, or PSYC-4570.
(c) Biological Sciences or Psychology: BIOL-3230 or PSYC-3550; BIOL-3022 (or PSYC-2300); and an honours thesis in the area of behavioural or cognitive neuroscience chosen from BIOL-4904, or BIOM-4909 or PSYC-4960 and PSYC-4970, or CHEM-4900, or KINE-4780.
(d) STAT-2910 or SOSC-2500;
(e) one pair of both PHYS-1300 and PHYS-1310, or both PHYS-1400 and PHYS-1410 (or PHYS-1310), or both COMP-1047 (or COMP-2067) and COMP-2057, or both ESCI-1100 and ESCI-1111, or both ESCI-1130 and ESCI-2400;
(f) CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010;
(g) two courses from Arts and Social Sciences excluding Psychology;
(h) four courses at 3000-level or above in Biology, Chemistry, Psychology, or Kinesiology;
(i) two courses from any area of study MATH-1720 (or MATH-1760) is recommended).

Non-credit course: Colloquia and Seminars in Current Behaviour, Cognitive and Neuroscience Research: bi-weekly presentations of recent research by investigators within the university and from other

universities and research institutions. Attendance by key faculty members and all students is expected. A notation will be added to the student's transcript upon successful completion of the course.

**Recommended Course Sequence**
First Year: ten courses, including BIOL-1101, BIOL-1111, CHEM-1100, CHEM-1110, PSYC-1150, PSYC-1160, SOSC-2500 or STAT-2910; at least one pair of both PHYS-1300 and PHYS-1310, or both PHYS-1400 and PHYS-1410 (or PHYS-1310) or both COMP-1047 (COMP-2067) and COMP-2057, or both ESCI-1100 and ESCI-1111, or both ESCI-1120 and ESCI-1130, and one additional course (MATH-1720 (or MATH-1760) recommended).
Second Year: ten courses, including BIOL-2040, BIOL-2101, BIOL-2111, BIOM-2131, BIOL-2480, PSYC-2230, PSYC-2300, CHEM-2300 and BIOC-2010.
Third Year: ten courses, including PSYC-2560, BIOL-3142, BIOL-3230 or PSYC-3550*, PSYC-3130, PSYC-3530, and PSYC-3580
Fourth Year: ten courses: including PSYC-3220 (or PSYC-3230), PSYC-3350, BIOL-4481, one of PSYC-3370, PSYC-4230, or PSYC-4570, BIOL-4904 (or BIOM-4904 or PSYC-4960 and PSYC-4970, or CHEM-4900, or KINE-4780), and BIOL-4450.

*BIOL-3230 or PSYC-3550 should be taken in third or fourth year.

Courses used to calculate the major average are: courses listed under requirements (a) to (c), and any other BIOL, BIOM, or PSYC courses taken.

## BSc Honours in Behaviour, Cognition and Neuroscience (without Thesis)

This is a joint offering with the Department of Psychology.

Neuroscience is a strong and growing field that strives to understand brain function at the molecular, behavioural and cognitive levels. This interdisciplinary program comprises required courses primarily from the departments of Biological Sciences and Psychology. Students also participate in bi-weekly research colloquia.

**Degree Requirements**

Total courses: forty.

(a) Biological Sciences: BIOL-1101, BIOL-1111, BIOL-2040, BIOL-2101, BIOL-2111, BIOM-2131, BIOL-2480, BIOL-3142, BIOL-4450, and BIOL-4481; plus one additional biology (BIOL-and BIOM-) course.
(b) Psychology: PSYC-1150, PSYC-1160, PSYC-2230, PSYC-2560, PSYC-3130, PSYC-3220 (or PSYC-3230), PSYC-3350, PSYC-3530, PSYC-3580 and one of PSYC-3370, PSYC-4230, or PSYC-4570.
(c) Biological Sciences or Psychology: BIOL-3230 or PSYC-3550; BIOL-3022 (or PSYC-2300);
(d) STAT-2910 or SOSC-2500;
(e) one pair of both PHYS-1300 and PHYS-1310, or both PHYS-1400 and PHYS-1410 (or PHYS-1310), or both COMP-1047 (or COMP-2067) and COMP-2057, or both ESCI-1100 and ESCI-1111, or both ESCI-1130 and ESCI-2400;
(f) CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010;
(g) two courses from Arts and Social Sciences excluding Psychology;
(h) six courses at 3000-level or above in Biology, Chemistry, Psychology, or Kinesiology;

(i) two courses from any area of study MATH-1720 (or MATH-1760) is recommended).

Non-credit course: Colloquia and Seminars in Current Behaviour, Cognitive and Neuroscience Research: bi-weekly presentations of recent research by investigators within the university and from other universities and research institutions. Attendance by key faculty members and all students is expected. A notation will be added to the student's transcript upon successful completion of the course.

**Recommended Course Sequence**
First Year: ten courses, including BIOL-1101, BIOL-1111, CHEM-1100, CHEM-1110, PSYC-1150, PSYC-1160, SOSC-2500 or STAT-2910; at least one pair of both PHYS-1300 and PHYS-1310, or both PHYS-1400 and PHYS-1410 (or PHYS-1310) or both COMP-1047 (COMP-2067) and COMP-2057, or both ESCI-1100 and ESCI-1111, or both ESCI-1120 and ESCI-1130, and one additional course (MATH-1720 (or MATH-1760) recommended).
Second Year: ten courses, including BIOL-2040, BIOL-2101, BIOL-2111, BIOM-2131, BIOL-2480, PSYC-2230, PSYC-2300, CHEM-2300 and BIOC-2010.
Third Year: ten courses, including PSYC-2560, BIOL-3142, BIOL-3230 or PSYC-3550*, PSYC-3130, PSYC-3530, and PSYC-3580
Fourth Year: ten courses: including PSYC-3220 (or PSYC-3230), PSYC-3350, BIOL-4481, one of PSYC-3370, PSYC-4230, or PSYC-4570.

*BIOL-3230 or PSYC-3550 should be taken in third or fourth year.

Courses used to calculate the major average are: courses listed under requirements (a) to (c), and any other BIOL, BIOM, or PSYC courses taken.

## Combined Honours Biological Sciences Programs

**Degree Requirements**

Total courses: forty.

(a) Biological Sciences: fourteen (BIOL-and BIOM-) courses, including the "Core" courses of BIOL-1101, BIOL-1111, BIOL-2101, BIOL-2111, BIOM-2131, and BIOL-3142. In addition to BIOL-3142, at least five courses must be at the 300 level or above.
(b) Course requirements-Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010, MATH-1720 (or MATH-1760), STAT-2910, and one pair of both COMP-1047 or COMP-2067 and COMP-2057, or both COMP-1400 and COMP-1410, or both ESCI-1100 and ESCI-1111, or both PHYS-1300 and PHYS-1310, or both PHYS-1400 and PHYS-1410, or both ESCI-1120 and ESCI-1130
(d) additional courses from any area of study to a total of forty.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Biological Sciences

Major Concentration: BIOL-2101; BIOL-2111; BIOM-2131; BIOL-3142; CHEM-2300; BIOC-2010; one additional 2000-level course; two 200 or 3000-level courses; three 3000-level or above courses. (Additional requirements: BIOL-1101, BIOL-1111, CHEM-1100, CHEM-1110.)

Minor Concentration: BIOL-2101; BIOL-2111; BIOM-2131; BIOL-3142; one other 2000-level course; one 3000-level or above courses. (Additional requirements: BIOL-1101, BIOL-1111, CHEM-1100, CHEM-1110.)

## Minor in Biological Sciences

The minor in Biological Sciences consists of six courses including BIOL-1101, BIOL-1111, plus four BIOL- or BIOM- courses at the 2000 level or above, one of which must be at the 3XXX level or above. Courses that cannot count toward the Biological Sciences minor are BIOL-1013, BIOM-1073, and BIOM-2093. A minimum grade of 60% must be received in each course.

# INTEGRATIVE BIOLOGY COURSES

Students must normally have completed the prerequisites indicated, but under special circumstances may be permitted to take a particular course with the consent of the instructor.
Not all courses listed will necessarily be taught each year. Where enrollment limits are placed on specific courses, students who require these courses as part of their program will be given preference.

**BIOL-1013. Organisms and the Environment**
Organisms interacting with other organisms and with their physical environment. Ecological impacts of human activity. This course is offered on-campus and as a distance course. (Intended for non-majors and students requiring preparation for BIOL-1111 and BIOL-1101.)(Not counted for credit in any Faculty of Science program.) (2 lecture hours a week.)

**BIOL-1101. Cell Biology**
Examination of the principles governing living systems, with emphasis on the molecular and cellular basis of life, molecular genetics, energetics, differentiation, and development. (Grade 12 “U” Biology or equivalent, or BIOM-1003 and BIOL-1013 are strongly recommended) (3 lecture, 3 laboratory hours a week.)

**BIOL-1111. Biological Diversity**
Principles governing living systems; the origins and diversity of life; evolution, reproduction, and heredity; the structure and function of viruses through plants and animals; basic principles of ecology. (Grade 12“U” Biology or equivalent, or BIOM-1003 and BIOL-1013 are strongly recommended) (3 lecture, 3 laboratory hours a week.)

**BIOL-2040. Human Physiology I**
Introduction to human physiology: a systems approach. Topics include homeostasis and feedback control, enzymes and energy, membrane transport, metabolism, and the nervous, skeletal muscle, and cardiovascular systems. This course is offered on-campus and a distance course. (Prerequisites: any two first year biology courses.) (3 lecture hours a week.)

**BIOL-2050. Human Physiology II**

Introduction to human physiology: a systems approach. Topics include respiratory, endocrine, digestive and renal systems, and control of metabolism. (Prerequisite: BIOL-2040 or consent of instructor.) (3 lecture hours a week.)

**BIOL-2070. Introductory Microbiology**
Growth, genetics, structure, physiology, and diversity of microbes and viruses. This course is offered on-campus and as a distance course. (Prerequisites: any two first year biology courses; Antirequisite: BIOL-2071.) (3 lecture hours a week.)

**BIOL-2071. Introductory Microbiology and Techniques**
Growth, genetics, structure, physiology, and diversity of microbes and viruses. (Antirequisites: BIOL-2070; prerequisites: BIOL-1111 and BIOL-1101.) (3 lecture, 3 laboratory hours a week including follow-up visits outside scheduled times)

**BIOL-2080. Economic Botany**
Earth's biosphere is the product of plant activity and animal life and is ultimately dependent on plants. This course provides basic plant biology as a background to a discussion of the relationship between humans and plants, particularly economically important plants and their products. Plants used for food, flavours, drugs, stimulants, fuel and/or industrial raw materials will be explored. (Prerequisite: BIOL-1111 and BIOL-1101 or permission of the instructor.) (3 lecture hours.)

**BIOL-2101. Ecology**
Introduction to the fundamental concepts of ecology including factors affecting species distribution, reproductive strategies, population growth and regulation, species interactions, and community level organization and energetics. (Prerequisites: BIOL-1111, or BIOL-1013 with instructor approval) (3 lecture, 3 laboratory/discussion hours a week.)

**BIOL-2111. Genetics**
The course reviews transmission genetics and principles of inheritance. The material also includes non-nuclear inheritance and gene linkage, gene expression and regulation, mechanisms and phenotypic effects of DNA mutation and repair, and the principles and applications of population and quantitative genetics. Students will be exposed to molecular genetic techniques such as PCR and DNA sequencing. (Antirequisite: BIOM-2093; Prerequisite: BIOL-1111 and BIOL-1101.) (3 lecture, 3 laboratory hours a week.)

**BIOL-2480. Principles of Neuroscience**
This course is meant to serve as a survey course that will provide familiarity with and an understanding of the basic principles of Neuroscience. The main emphasis will be on the morphology of neural systems, processes of neural signalling and communication, and how such basics relate to sensory processes and behaviour. The main purposes of the course are to provide a background for students interested in, and those taking higher level courses related to the neurosciences. (Prerequisites: BIOL-1111, BIOL-1101, and BIOL-2040 (or KINE-1050 or KINE-2600), or permission of instructor.) (3 lecture hours.)

**BIOL-3022. Research Principles and Study Design in Biological Sciences**
Introduction to the logic and principles used to develop sound and efficient studies in the biological sciences: generating, testing, and discriminating among hypotheses; dealing with unwanted sources of variation; ; selecting and executing statistical analyses and evaluating their assumptions and appropriate choice of statistical analysis. Instruction in the use of selected network and personal

computer software for data analysis and presentation. (Prerequisites: BIOL-2101, BIOL-2111, BIOM-2131, and STAT-2910, or consent of instructor.) (3 lecture, 2 laboratory/tutorial hours a week.)

**BIOL-3142. Evolution**
Topics include the interaction of gene mutation, selection, and population characteristics in the process of evolution, mechanisms of speciation, and current problems in evolution. (Prerequisite: BIOL-2111.) (3 lecture hours and 1 tutorial hour a week.)

**BIOL-3201. Applied Entomology**
Students will become familiar with insect taxonomy, anatomy, physiology, behaviour and ecology and apply this knowledge in studying the utility of insects within the applications of pest management, disease transmission and legal investigations. The course will cover the detection, collection, identification and analysis of insect evidence, as well as the current state of knowledge in the use of insect evidence. (Prerequisites: BIOL-2101 and semester 5 standing or above) (Cross-listed with FRSC-3201)

**BIOL-3212. Environmental Physiology**
This course is designed to introduce students to the diversity of adaptations possessed by organisms (including humans) enabling them to successfully interact with and survive in their abiotic/biotic environments. Topics will include overviews of the mechanisms organisms use to balance energetics, homeostasis and metabolism in environments varying in temperature, water availability, resources and oxygen. Descriptions of these systems will be supplemented frequently with the current methods that medical-, field- and laboratory-based researchers use to investigate these physiological adaptations to the environment. (Prerequisite: BIOL-2101 or consent of instructor) (3 lecture hours, 1 tutorial hour a week)

**BIOL-3230. Animal Behaviour**
This course will emphasize the link between organisms and their environment. The thrust of the course will be to understand why different species behave in different ways and why within species there may be individual differences in behaviour. The aim of the course is to derive a basic understanding of how animals have evolved behaviours that aid in survival and reproduction. Students will gain experience by participating in activities throughout the term. (Prerequisites: BIOL-2101, BIOL-2111, and BIOM-2131, or permission of instructor.) (3 lecture hours a week.)

**BIOL-3241. Fishes and Fisheries**
The fishes are the most diverse, the oldest, and the most abundant group of vertebrates on earth. This course surveys their evolution, their phylogenetic relationships, and their morphological, physiological, behavioural, and ecological adaptations to life in virtually every aquatic environment on earth. The laboratory includes units on gross anatomy of a typical actinopterygian fish, identification of local fauna, study of age and growth, and other selected topics. (Prerequisites: BIOL-2101, BIOL-2111, BIOM-2131.) (3 lecture, 3 laboratory hours a week)

**BIOL-3250. Population and Community Ecology**
This course will examine the ecology of individual populations and the interactions of species within communities. Topics of population ecology will investigate ecological patterns and dynamics, as well as population growth and regulation, linking to processes occurring at lower (individual and within-individual) and higher (species interactions, communities, and ecosystems) levels of biological organization. Topics of community ecology will build upon these same ideas, but by examining the dynamics of assemblages of populations of two or more species co-occurring in the same geographic area. (Prerequisite: BIOL-2101.) (3 lecture hours a week.)

**BIOL-3261. Ornithology**
This course gives students a thorough understanding of the biology of birds, with an emphasis on avian ecology, evolution, and behaviour. This course complements Ecology, Evolution, Physiology, Animal Behaviour, and Conservation. Classroom lectures are integrated with laboratory exercises which provides students with hands-on exposure to the topics covered. Students will learn to identify the common birds in the Windsor area. All students are required to participate in a full-day laboratory at Point Pelee and Holiday Beach on a weekend in late September or early October. (Prerequisite: BIOL-2101.) (3 lecture, 3 laboratory hours a week.)

**BIOL-3281. Plant Ecology**
Evolutionary and community aspects of plant interactions with other organisms and the physical environment. The course deals with plant demography at different levels: individual, population, community, and ecosystem. (Prerequisite: BIOL-2101.) (3 lecture, 3 laboratory hours a week.)

**BIOL-3291. Invertebrate Biology**
Survey of major classes of the invertebrates from an evolutionary, phylogenic, and ecological perspective. Emphasis on the morphological, physiological, and behavioural adaptations that permit animals to exploit the full range of earth's habitats, including the living bodies of other organisms (parasitism). (Prerequisites: BIOL-2101, BIOL-2111, and BIOM-2131.) (3 lecture, 3 laboratory hours a week.)

**BIOL-3571. Animal Cells and Tissues**
The structure and organization of animal systems at the tissue, cellular, and subcellular levels. Contemporary techniques, including electron microscopy, immunocytochemistry, and in situ hybridization are discussed. (Prerequisites: BIOL-2111 and BIOM-2131.) (2 lecture, 3 laboratory hours a week.)

**BIOL-4008, BIOL-4208, BIOL-4408, BIOL-4508. Special Topics in Biology**
Selected topics of current interest which may vary from year to year.(May be repeated for credit if content changes.)
The University of Windsor is a member of the Ontario Summer Field Courses Program. Students may select and receive credit for one or more of over thirty field courses under the "Special Topics" designation. Courses are normally advertised in January. Because enrolment is limited, students should apply as early as possible. For further information, contact the Department.
Note: Special Topics in Biology: Epigenetics requires prerequisite: BIOM-3500 or BIOM-3530.

**BIOL-4212. Speciation**
The course will present an overview of current knowledge, controversy and research directions into the origin of species and will include topics such as species concepts, methods of studying speciation, tempo and modes of speciation, isolation mechanisms, reinforcement, and macroevolution. Background in basic Mendelian genetics, population genetics, evolution, ecology and biological diversity is required. (Prerequisite: BIOL-3142) (2 lecture hours, 1 tutorial hour a week)

**BIOL-4220. Science Communication: A Biological Approach**
The purpose of this course is to have students learn the theories and best practices of science communication to the non-scientist, with an emphasis on biological problems and perspectives. Students will learn about different venues and types of scientific communication and will use hands-on examples to develop standards of best practice. Students will participate in weekly discussions and

readings, culminating in a final presentation of their work. (Prerequisites: BIOL-2101 and BIOL-3142, or permission of the instructor.) (3 lecture hours.)

**BIOL-4232. Pollution Ecology**
The transport, fate and effects of pollutants in aquatic ecosystems; food web modelling in the context of pollutant fate; risk assessment. Topics will include toxicokinetics, toxicity testing, and measurements of pollutant stress. (Prerequisites: BIOL-2101 and BIOM-2131.) (3 lecture hours a week, 1 hour week tutorial.)

**BIOL-4241. Stream Ecology**
Physical properties and biotic responses in rivers, including morphometry, energy processing, behavioural adaptations of organisms, and interactions among organisms. (Prerequisite: BIOL-2101.) (3 lecture, 3 laboratory hours a week, and a field trip.)

**BIOL-4252. Evolutionary Endocrinology**
This course will examine the molecular, cellular and organismal processes underlying the functioning of the major vertebrate endocrine systems. Topics will include overviews of the major vertebrate endocrine systems (e.g., reproductive, stress, metabolic, developmental etc.) by integrating recent medical-, field- and laboratory-based experimental research to explore the role of endocrine systems in our lives. The evolutionary role of hormones will be emphasized throughout as a means for medical health practitioners and environmental biologists to appreciate how and why complex endocrine systems are impacted by human-induced changes in the environment. (Prerequisite: BIOL-2101 or consent of instructor) (3 lecture hours, 1 tutorial hour a week)

**BIOL-4262. Animal Communication**
This course will cover mechanistic and evolutionary aspects of communication in vertebrates and invertebrates across four signaling modalities: visual, acoustic, chemical, and electrical. The first part of the course will review mechanisms of signal production, transmission through the environment, and perception by signal receivers for each signaling modality. The second part of the course will examine how natural and sexual selection shape the evolution of communication strategies in animals. The approach will be explicitly evolutionary, and will draw from a broad range of disciplines including physics, chemistry, ecology, psychology, and behavioural ecology. (Prerequisite: BIOL-2101.) (3 lecture hours per week. 2 tutorial hours every other week.)

**BIOL-4270. Conservation Biology**
Principles of conservation biology emphasizing population and biogeographic attributes, including genetics, habitat fragmentation, and island processes, which characterize endangered species and habitats. Case studies of management of threatened species and habitats will be addressed. (Prerequisites: BIOL-2101 and BIOL-2111, or consent of instructor.) (3 lecture hours a week.)

**BIOL-4280. Limnology**
Selected aspects of the ecology of large water masses - large lakes and estuaries. Emphasis on physical properties and chemical dynamics of aquatic systems, and on life history requirements in such systems. (Prerequisite: BIOL-2101 or BIOL-4864.) (3 lecture hours a week.)

**BIOL-4450. Behavioural Neurobiology**
This course will cover the structural, physiological, and biochemical mechanisms in the nervous system that are important for animal natural behaviours. In-depth case studies will be conducted to examine how animals have developed neural mechanisms for solving behavioural problems encountered in their environmental niches. Topics will be related to sensory processing, motor control, and learning and

memory. Research methods used in the study of neural mechanisms of behaviour will also be discussed. (Prerequisite: BIOL-2480) (3 lecture hours a week)

**BIOL-4481. Excitable Cells**
A systemic view of regulation in the nervous system. Physiological control mechanisms at the levels of molecules through cells, neural circuits and neural muscular regulation are discussed and investigated. (Prerequisites: BIOM-2131 and BIOL-2480.) (2 lecture, 3 laboratory hours a week.)

**BIOL-4570. Plant Molecular Biology and Physiology**
Plant development and its coordination by means of hormones and other molecular signals. Molecular approaches applied to the analysis and modification of plant development will be discussed. (Prerequisite: BIOM-2131.) (2 lecture hours, 1 seminar hour a week.)

**BIOL-4864. Great Lakes Field Biology**
The physical, chemical, and biological properties of the Great Lakes system; measures of transport and fate of contaminants in aquatic systems and food webs; changes in species abundance, composition, and distributions. Field work stresses sampling techniques and measurements of temporal and spatial variation. Students are required to complete a project and present a seminar. (Prerequisites: BIOL-2101 and STAT-2910, or consent of instructor.) (2 weeks, Intersession; 26 hours lecture, 52 hours field/laboratory work, 8 hours seminar.)

**BIOL-4874. Field Course in Tropical Ecology**
This two-week field course is a hands-on exploration of the flora and fauna of the tropics with an emphasis on ecology, behaviour, evolutionary adaptations, and community relationships. The course is normally held in Costa Rica but may occasionally be offered at other sites in the Neotropics. Field research will include identifying birds, mammals, reptiles, amphibians, insects, and plants; studying the ecology of neotropical animals in multiple ecosystems; capturing and banding birds; monitoring the social behaviour of monkeys; observing army ants, leaf-cutter ants, termites, ant/acacia mutualisms; and assessing different conservation practices. The course consists of field excursions, lectures, and data collection for independent projects. Project reports are submitted within one month of the completion of the course field component. The course will usually take place during the Winter Study Week and one week before or after. (Pre-requisite: BIOL-2101 and permission of instructor)

**BIOL-4904. Undergraduate Research in Biology**
Completion of an undergraduate research project, including an oral presentation at an annual colloquium and submission of written final report. (10 laboratory hours a week; offered over two terms.) (A 6.00 credit hour research project which counts as two courses.) (Registration and selection of a supervisor requires the consent of the Department Head) (Prerequisites: major average of 70% and a cumulative average of 60%.)

**BIOL-4914. Undergraduate Research in Biology**
Completion of an undergraduate research project, including an oral presentation at an annual colloquium and submission of written final report. (Registration and selection of supervisor will be completed with consent of the Department Head.) (Restricted to students who have completed BIOL-4904.) (10 laboratory hours a week; offered over two terms.) (A 6.00 credit hour research project which counts as two courses.)

# MATHEMATICS AND STATISTICS

## PROGRAM REGULATIONS

All programs in Mathematics are subject to the general University and Faculty of Science regulations as outlined in the relevant sections of this calendar. Additionally, Mathematics majors must obtain a 60% or better in each Mathematics or Statistics course which is explicitly required in their program of registration. Students registered in the combined Mathematics and Computer Science Honours program also must obtain at least 60% in all required Computer Science courses.

**SUGGESTED COURSES FOR MATHEMATICS SPECIALIZATIONS**
Pure Mathematics: COMP-2310, MATH-3270, MATH-4220, MATH-4230, MATH-4580
Statistics: COMP-2310, STAT-3920, STAT-3950, and MATH-4580.
Applied Mathematics: COMP-2310, MATH-3550, MATH-3960, PHYS-1400, PHYS-1410, PHYS-1500, PHYS-2200, PHYS-2500, PHYS-3500, PHYS-4200, PHYS-4100, and STAT-3960.
Actuarial: MATH-3960, ACSC-3980, ACSC-4980, ACSC-4981, STAT-3920, STAT-3950, STAT-3960, STAT-4980, STAT-4981, ACCT-1510, ACCT-2550, FINA-2710, and FINA-4740.

## PROGRAMS

### General Mathematics

**Degree Requirements**

Total courses: thirty.

(a) MATH-1020, MATH-1250 or MATH-1260, MATH-1720 or MATH-1760, MATH-1730, MATH-2780, MATH-2790, MATH-3590, STAT-2920 and STAT-2950; plus four other MATH, STAT or ACSC courses at the 2XXX level or above.
(b) COMP-1400 and COMP-1410;
(c) four courses from the Faculty of Arts, Humanities and Social Sciences;
(d) three courses from any area of study, including Mathematics and Statistics;
(e) eight courses from any area of study, excluding Mathematics and Statistics.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken with the MATH, STAT, or ACSC prefix.

# Honours Mathematics

**Degree Requirements**

Total courses: forty.

(a) MATH-1020, MATH-1250 or MATH-1260, MATH-1720 or MATH-1760, MATH-1730, MATH-2250, MATH-2251, MATH-2780, MATH-2790, MATH-3200, MATH-3580, MATH-3581, MATH-3590, STAT-2920, STAT-2950; plus eight more MATH, STAT or ACSC courses at the 3XXX level or above.
(b) COMP-1400 and COMP-1410;
(c) four courses from Faculty of Arts, Humanities and Social Sciences;
(d) twelve courses from any area of study.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken with the MATH, STAT, or ACSC prefix.

# Honours Mathematics and Statistics

**Degree Requirements**

Total courses: forty.

(a) MATH-1020, MATH-1250 or MATH-1260, MATH-1720 or MATH-1760, MATH-1730, MATH-2250, MATH-2251, MATH-2780, MATH-2790, MATH-3200, MATH-3580, MATH-3581, MATH-3590, STAT-2920, STAT-2950, STAT-3920, STAT-3950; plus two additional Statistics courses (STAT) at the 3XXX-level or above; plus eight more MATH, STAT or ACSC courses at the 3XXX level or above.
(b) COMP-1400 and COMP-1410;
(c) four courses from Faculty of Arts, Humanities and Social Sciences;
(d) eight courses from any area of study.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken with the MATH, STAT, or ACSC prefix.

# Honours Mathematics and Computer Science

This is a joint offering between the School of Computer Science and the Department of Mathematics and Statistics.

**Degree Requirements**

Total courses: forty.

(a) Mathematics and Statistics: MATH-1020, MATH-1250 or MATH-1260, MATH-1720 or MATH-1760, MATH-1730, MATH-2250, MATH-2251, MATH-2780, MATH-2790, MATH-3200, MATH-3580, MATH-3581, MATH-3590, STAT-2920, STAT-2950; plus two MATH, STAT or ACSC courses numbered 3XXX or higher.
(b) Computer Science: COMP-1000, COMP-1400, COMP-1410, COMP-2120, COMP-2140, COMP-2310, COMP-2540, COMP-2560, COMP-2650, and COMP-3150; plus three additional COMP courses at the 3XXX level or above.

(c) four Mathematics, Statistics, or Computer Science courses at the 2000 level or above, excluding COMP-2057, COMP-2067, COMP-2077, COMP-3057 and STAT-2910.
(d) seven courses from any area of study.

Courses used to calculate the major average are: courses listed under requirements (a) to (c), and any courses taken with the MATH, STAT, or ACSC prefix.

## Honours Mathematics with Finance Concentration

This is a joint offering between the Department of Mathematics and Statistics and the Odette School of Business.

**Degree requirements**

Total courses: Forty

(a) MATH-1020, MATH-1250 or MATH-1260, MATH-1720 or MATH-1760, MATH-1730, MATH-2250, MATH-2251, MATH-2780, MATH-2790, MATH-3580, MATH-3581, MATH-3590, MATH-4960, STAT-2920, STAT-2950, STAT-3920, STAT-3950, STAT-3960, ACCT-1510, ACCT-2510, FINA-2700, FINA-2710, FINA-3710, FINA-3720, FINA-3790, FINA-4720, FINA-4770
(b) ECON-1100, ECON-1110, ECON-3130, ECON-4140, COMP-1400, COMP-1410, COMP-2120, PHIL-2240
(c) Six courses from any area of study excluding Business and Mathematics and Statistics.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken with the MATH, STAT, or ACSC prefix.

## Honours Actuarial Science

**Degree requirements**

Total courses: 40

(a) MATH-1020 Mathematical Foundations, MATH-1250 Linear Algebra I, MATH-1720 Differential Calculus, MATH-1730 Integral Calculus, MATH-2250 Linear Algebra II, MATH-2251 Linear Algebra III, MATH-2780 Vector Calculus, MATH-2790 Differential Equations, MATH-3200 Abstract Algebra, MATH-3580 Introduction to Analysis I, MATH-3581 Introduction to Analysis II, MATH-3590 Complex Variables, MATH-3960 Linear Optimization, ACSC-3980 Theory of Interest, ACSC-4980 Life Contingencies I, ACSC-4981 Life Contingencies II, STAT-2920 Introduction to Probability, STAT-2950 Introduction to Statistics, STAT-3920 Probability, STAT-3950 Statistics, STAT-3960 Stochastic Operations Research, STAT-4550 Regression Analysis, ACSC-4030 Derivative Markets I, three courses from MATH, STAT or ACSC at the third year level or higher.
(b) COMP-1400 Introduction to Algorithms and Programming I, COMP-1410 Introduction to Algorithms and Programming II, ECON-1100 Introduction to Economics I, ECON-1110 Introduction to Economics II, ACCT-1510 Principles of Financial Accounting, FINA-2700 Business Finance I
(c) Two courses from the Faculty of Arts, Humanities and Social Sciences
(d) Six courses from any area of study

Courses used to calculate the major average are all courses taken with the MATH, STAT, or ACSC prefix.

# Combined Honours Mathematics Programs

**Degree Requirements**

Honours programs combining Mathematics with a second Honours area of study (other than Computer Science) will consist of:

Total courses: forty.

(a) Mathematics and Statistics: MATH-1020, MATH-1250 or MATH-1260, MATH-1720 or MATH-1760, MATH-1730, MATH-2250, MATH-2251, MATH-2780, MATH-2790, MATH-3200, MATH-3580, MATH-3581, MATH-3590, STAT-2920, STAT-2950; plus two additional MATH, STAT or ACSC courses at the 3XXX level or above.
(b) Course requirements-Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) COMP-1400 and COMP-1410;
(d) any additional courses as determined by the second area of study;
(e) additional courses, if necessary, from any area of study to a total of forty courses.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken with the MATH, STAT, or ACSC prefix.

# Concurrent Bachelor of Mathematics (General)/Bachelor of Education

Admission is to first-year only with a minimum of 80%.

This is a joint offering between the Department of Mathematics and Statistics and the Faculty of Education. See Faculty of Education for details.

# Honours Business Administration and Mathematics (with/without thesis)

This is a joint offering between the Department of Mathematics and Statistics and the Odette School of Business. See Odette School of Business for details.

# Honours Business Administration and Mathematics with Specialization in Supply Chain and Business Analytics (with/without Thesis)

This is a joint offering between the Department of Mathematics and Statistics and the Odette School of Business. See Odette School of Business for details.

## Honours Business Administration and Mathematics with Specialization in Finance (with/without thesis)

This is a joint offering between the Department of Mathematics and Statistics and the Odette School of Business. See Odette School of Business for details.

## Certificate in Statistical Consulting

Open only to students currently enrolled in a degree program, are in good academic standing in their program, and meet the admission requirements for a program in Mathematics and Statistics.

Total courses: 9

(a) SCIE-1000
(b) MATH-1730, MATH-2250, STAT-2950, STAT-4980, STAT-4981, STAT-4460, STAT 4550,
(c) STAT-4600

The necessary suite of prerequisite courses outside of the certificate are MATH-1020, 1720, 1250 AND 1730 and STAT-2920.

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Mathematics and Statistics

Major Concentration: MATH-1020, MATH-1250, MATH-2250, MATH-2251, MATH-2780, MATH-2790, STAT-2920, STAT-2950; four of MATH-3160, MATH-3200, MATH-3270, MATH-3580, MATH-3581, MATH-3590, STAT-3960. (additional requirements: MATH-1720, MATH-1730.)

Minor Concentration: MATH-1020, MATH-1250, MATH-2780, MATH-2790, MATH-3590, STAT-2920. (additional requirements: MATH-1720, MATH-1730.)

## Minor in Mathematics

A minor in Mathematics can be obtained upon completion of six courses from the following list, with a minimum grade of 60% in each course: MATH-1020, MATH-1250 or MATH-1260 or MATH-1270, MATH-1720 or MATH-1760, MATH-1730, MATH-2250, MATH-2251, MATH-2780, MATH-2790, MATH-3XXX, MATH-4XXX, and STAT-2910 or STAT-2920.

## Minor in Statistics

A minor in Statistics can be obtained upon completion of: (a) MATH-1250 or MATH-1260 or MATH-1270, (b) MATH-1720 or MATH-1760, (c) MATH-1730, (d) STAT-2920, (e) STAT-2950, and (f) any 3XXX or 4XXX STAT course.  A grade of at least 60% must be obtained in all of the courses taken.

# MATHEMATICS AND STATISTICS COURSES

Students are reminded that, as indicated in the course descriptions, certain Mathematics and Statistics courses may not be available for credit in some or all of the degree programs.
All courses listed will not necessarily be offered each year.

## ACTUARIAL SCIENCE COURSES

**ACSC-3980. Theory of Interest**
This course will cover measurement of interest, elementary and general annuities, amortization schedules and sinking funds, bonds, depreciation, depletion and capitalized cost. (Prerequisite: MATH-1730 or consent of instructor.) (3 lecture hours per week.)

**ACSC-4030. Derivative Markets I**
Topics include financial derivatives, short selling, European and American options, hedging, arbitrage, forwards, futures, swaps, bond price models, binomial model. (Prerequisite: ACSC-3980, STAT-3920, STAT-3950) (3 lecture hours per week.)

**ACSC-4980. Life Contingencies I**
This course will cover life contingencies, survival distributions and life tables, life insurance, life annuities, net premiums and net premium reserves. (Prerequisites: MATH-2780, MATH-2790, ACSC-3980, and STAT-2950, or consent of instructor.) (3 lecture hours per week.)

**ACSC-4981. Life Contingencies II**
This course will cover advanced life contingencies, risk theory, survival models, and construction and graduation of mortality tables. (Prerequisite: ACSC-4980 or consent of instructor.) (3 lecture hours per week.)

## MATHEMATICS COURSES

**MATH-1020. Mathematical Foundations**
This course will cover mathematical logic, proof methods and development of proof techniques, mathematical induction, sets, equivalence relations, partial ordering relations and functions. (Prerequisite: One of COMP-1000, MATH-1250, MATH-1260 or MATH-1270.) (2 lecture hours, 2 tutorial hours per week.)

**MATH-1250. Linear Algebra I**
This course will cover linear systems, matrix algebra, determinants, n-dimensional vectors, dot product, cross product, orthogonalization, eigenvalues, eigenvectors, diagonalization and vector spaces. (Prerequisites: Both Ontario Grade 12 Advanced Functions (MHF4U) and Calculus and Vectors (MCV4U) or MATH-1280.) (Antirequisites: MATH-1260, MATH-1270.) (3 lecture hours, 2 tutorial hours per week.)

**MATH-1260. Vectors and Linear Algebra**
This course is for students without Ontario Grade 12 Calculus and Vectors (MCV4U). The course MATH-1250 is for students with MCV4U. This course will cover vectors, three-dimensional geometry, linear systems, matrix algebra, determinants, n- dimensional vectors, dot product, cross product, orthogonalization, eigenvalues, eigenvectors, diagonalization and vector spaces. The course is equivalent to MATH-1250 for all prerequisite purposes. (Prerequisite: Ontario Grade 12 Advanced

Functions (MHF4U).) (Antirequisites: MATH-1250, MATH-1270.) (4 lecture hours, 2 tutorial hours per week.)

**MATH-1270. Linear Algebra (Engineering) (Engineering)**
This course will cover linear systems, linear transformations, matrix algebra, determinants, vectors in Rn, dot product, orthogonalization, diagonalization, eigenvectors and eigenvalues, in the context of and with an emphasis on a broad range of applications in Science and Engineering. (Prerequisite: MATH-1280 or both Ontario Grade 12 Advanced Functions (MHF4U) and Calculus and Vectors (MCV4U)) (Antirequisite: MATH-1250, or MATH-1260.) (3 lectures hours, 1 tutorial hour per week.)

**MATH-1280. Access to Linear Algebra**
This course will cover matrix algebra, linear systems, vectors, lines and planes in three- dimensional space, equations and inequalities in one variable and linear relations. This course serves as the prerequisite for MATH-1250 and MATH-1270. Majors in Science and majors in Engineering will not be given credit for this course. (3 lecture hours, 1 tutorial hour per week.)

**MATH-1720. Differential Calculus**
This course will cover trigonometric functions and identities, inverse trigonometric functions, limits and continuity, derivatives and applications, mean value theorem, indeterminate forms and l'Hôpital's rule, antiderivatives and an introduction to definite integrals. This course is for students who have taken both Ontario Grade 12 Advanced Functions (MHF4U) and Ontario Grade 12 Calculus and Vectors (MCV4U). Students who do not have credit for MCV4U should take MATH-1760. (Prerequisites: Ontario Grade 12 Advanced Functions (MHF4U) and Ontario Grade 12 Calculus and Vectors (MCV4U) or MATH-1780.) (Antirequisite: MATH-1760.) (3 lecture hours, 1 tutorial hour per week.)

**MATH-1730. Integral Calculus**
This course will cover antiderivatives, the definite integral and the fundamental theorem of calculus, techniques of integration, applications, improper integrals, sequences and series, convergence tests, power series, Taylor and Maclaurin series, and polar and parametric coordinates. (Prerequisite: MATH-1760 or MATH-1720.) (3 lecture hours, 1 tutorial hour per week.)

**MATH-1760. Functions and Differential Calculus**
This course will cover a review of functions, trigonometric functions and identities, transcendental functions, inverse trigonometric functions, introduction to limits, continuity, derivatives and applications, mean value theorem, indeterminate forms and l'Hôpital's rule, antiderivatives and an introduction to definite integrals. This course is for students who have taken Ontario Grade 12 Advanced Functions (MHF4U), but have not taken Ontario Grade 12 Calculus and Vectors (MCV4U). Students who have credit for MCV4U should take MATH-1720. The course is equivalent to MATH-1720 for all prerequisite purposes. (Prerequisite: Ontario Grade 12Advanced Functions (MHF4U).) (Antirequisite: MATH-1720.) (4 lecture hours, 1 tutorial hour per week.)

**MATH-1780. Access to Differential Calculus**
The course will cover straight lines, relations and functions, trigonometric functions, limits, derivatives, curve sketching, equations and inequalities, transformations, symmetry, exponential and logarithmic functions. This course serves as the prerequisite for MATH-1720 and MATH-1760. Majors in Science, majors in Engineering and students with at least 70% in Ontario Grade 12 Advanced Functions (MHF4U) will not be given credit for this course. (Antirequisites: MATH-1760, or MATH-1720) (3 lecture hours, 1 tutorial hour per week.)

**MATH-1980. Mathematics for Business**

An introduction to concepts and techniques of mathematics useful in business situations. Topics include mathematical modeling of qualitative scenarios, linear simultaneous equations, inequalities, exponential and logarithmic functions, graphical linear programming, and probability.This course is intended for students in Business Administration. May not be taken for credit in any program within the Faculty of Science or the Faculty of Engineering. (Prerequisite: Any grade 12 “U” math course, or MATH-1780.) (3 lecture hours, 1 tutorial hour per week.)

**MATH-2250. Linear Algebra II**
This course is a rigorous and proof-based study of linear systems, vector spaces, linear transformations, projections, pseudo-inverses, determinants, inner product spaces and applications. (Prerequisites: MATH-1020 and one of MATH-1250, MATH-1260 or MATH-1270.) (3 lecture hours, 1 tutorial hour per week.)

**MATH-2251. Linear Algebra III**
This course is a rigorous and proof-based study of eigenvalues and eigenvectors, diagonalization, similarity problem, canonical form for real and complex matrices, positive definite matrices, computational methods for approximating solutions to systems of linear equations and eigenvalues. (Prerequisite: MATH-2250.) (3 lecture hours, 1 tutorial hour per week.)

**MATH-2780. Vector Calculus**
This course will cover quadric surfaces, vector differential calculus, functions of several variables, maximum and minimum problems, multiple integrals, vector differential operators, line and surface integrals, Green’s theorem, Stokes’ theorem and Gauss’ theorem. (Prerequisites: MATH-1730, and one of MATH-1250, MATH-1260 or MATH-1270.) (3 lecture hours, 1 tutorial hour per week.)

**MATH-2790. Differential Equations**
This course will cover first-order ordinary differential equations (ODEs), higher-order ODEs with constant coefficients, Cauchy-Euler equations, systems of linear ODEs, Laplace transforms, and applications to science and engineering. (Prerequisites: MATH-1730, and one of MATH-1250, MATH-1260 or MATH-1270.) (3 lecture hours, 1 tutorial hour per week.)

**MATH-3150. Introduction to Graph Theory**
This course will cover paths and cycles, bipartite graphs, graph isomorphisms, connectivity, Eulerian graphs, Hamiltonian graphs, trees, properties of trees, planarity, Euler’s formula, dual graphs, coloring graphs, Brooks’ theorem, coloring maps, chromatic polynomials, digraphs, matchings, Menger’s theorem, Hall’s theorem, and Tutte’s theorem. (Prerequisites: MATH-2250 or COMP-2310.) (3 lecture hours per week.)

**MATH-3160. Combinatorics**
This course will cover finite combinatorics, in particular, the pigeonhole principle, permutations and combinations, binomial coefficients, the inclusion-exclusion principle, recurrence relations and generating functions, special counting sequences, Polya counting. (Prerequisites: MATH-1730 and MATH-1020.) (3 lecture hours per week.)

**MATH-3200. Abstract Algebra**
This course will cover an introduction to groups, rings and fields. (Prerequisite: MATH-2250 or MATH-3270.) (3 lecture hours per week.)

**MATH-3270. Number Theory**
This course will cover divisibility, primes, fundamental theorem of arithmetic, greatest common divisor, Euclidean algorithm, least common multiple, linear Diophantine equations, congruency, residue classes, Chinese remainder theorem, number theoretic functions, theorems of Euler, Fermat, Wilson, theory of primes, and quadratic residues. (Prerequisites: one of MATH-1250, MATH-1260 or MATH-1270, and MATH-1020.) (3 lecture hours per week.)

**MATH-3550. Introduction to Fourier Series and Special Functions**
This course will cover Fourier series, Sturm- Liouville problems, heat and wave equations, Laplace equation, weighted L2 -spaces and orthogonal bases, Gamma function, Bessel functions, Legendre polynomials and hypergeometric functions. (Prerequisite: MATH-2780 and MATH-2790.) (3 lecture hours per week.)

**MATH-3580. Introduction to Analysis I**
This course is a rigorous and proof-based study of supremum and infimum, the real number system, countable and uncountable sets, metric spaces, compact sets, connected sets, Cauchy sequences, completeness, limits and continuity, maximum and minimum on compact sets, intermediate value theorem, differentiation and the mean value theorem. (Prerequisites: MATH-1730, MATH-1020 and one of MATH-1250, MATH-1260 or MATH-1270.) (3 lecture hours, 1 tutorial hour per week.)

**MATH-3581. Introduction to Analysis II**
This course is a rigorous and proof-based study of Riemann-Stieltjes integral, sequences and series of functions, uniform and absolute convergence, equicontinuity, Arzela-Ascoli theorem, Stone- Weierstrass theorem, power series, and functions of several variables. (Prerequisite: MATH-3580.) (3 lecture hours, 1 tutorial hour per week.)

**MATH-3590. Complex Variables**
This course will cover complex numbers, analytic functions, exponential and logarithm functions, contour integration, Cauchy's integral formula, series, Taylor and Laurent expansions, residue theory, applications to real integrals. (Prerequisite: MATH-2780; Corequisite: MATH-2790.) (3 lecture hours, 1 tutorial hour per week.)

**MATH-3800. Numerical Methods**
This course will cover iterative solution methods for nonlinear equations in one variable, Lagrange interpolation, cubic splines, Bezier curves, numerical differentiation and integration (quadrature), initial value problems, linear algebraic systems (direct methods) and Newton's method for nonlinear systems. (Prerequisites: MATH-2780, MATH-2790, and one of MATH-1250, MATH-1260 or MATH-1270.) (3 lecture hours per week.)

**MATH-3940. Numerical Analysis for Computer Scientists**
This course is an introduction to the applications of numerical methods using computer-oriented algorithms such as finding roots, solving systems of equations, differentiation, integration and optimization. (Restricted to students in Computer Science.) (Prerequisites: COMP-1410, MATH-1730 and one of MATH-1250, MATH-1260 or MATH-1270.) (3 lecture hours per week)

**MATH-3960. Linear Optimization**
This course will cover the graphical solution of two variable linear programs, the tableau simplex algorithm, the revised simplex algorithm, linear programming theory, sensitivity analysis, the

transportation problem, the assignment problem and integer programming. (Prerequisite: MATH-2250 or consent of instructor.) (Antirequisite: INDE-3120.) (3 lecture hours per week.)

**MATH-4000. Topics in Mathematics**
This course will cover advanced topics not covered in other courses. (May be repeated for credit when the topic is different.) (Prerequisite: consent of instructor.) (3 lecture hours per week.)

**MATH-4210. Ring Theory and Modules**
This course is designed to introduce students to the structure and theory of general rings and their modules. It will provide an appropriate foundation for more advanced graduate material in algebra. Topics covered will include: semisimple rings, Wedderburn-Artin Theorem, modules over a principal ideal domain, projective, injective and flat modules, introduction to homology theory. (Prerequisite: MATH-2251 and MATH-3200.) (3 lecture hours per week.)

**MATH-4220. Introduction to Group Theory**
This course will cover abstract groups, subgroups,quotient groups, products, isomorphism theorems, group actions, orbits, class equation, Sylow theorems, finitely generated abelian groups. (Prerequisites: MATH-2251 and MATH-3200.) (3 lecture hours per week.)

**MATH-4230. Introduction to Field Theory**
This course will cover polynomial rings, splitting fields, the fundamental theorem of Galois theory, Galois' criterion for solvability by radicals, algebraically closed fields and finite fields. (Prerequisites: MATH-2251 and MATH-3200.) (3 lecture hours per week.) (Cross-listed with MATH-8220)

**MATH-4300. General Topology**
Introduction to general set theoretic topology, including product and quotient spaces, continuity and homeomorphisms, nets and filters, separation and countability, compactness, connectedness. (Prerequisite: MATH-3581.) (3 lecture hours per week.)

**MATH-4570. Functional Analysis**
This course will cover normed and Banach spaces, bounded linear operators, dual spaces, Hahn- Banach theorem, uniform boundedness principle, open mapping theorem, Hilbert spaces, operators on Hilbert spaces, and weak and weak* topologies. (Prerequisite: MATH-4580.) (3 lecture hours per week.)

**MATH-4580. Measure Theory and Integration**
This course will cover measures, Lebesgue measure, Lebesgue integral, monotone and dominated convergence theorems, Fubini's theorem, Lp-spaces, modes of convergence and Radon-Nikodym theorem. (Prerequisite: MATH-3581.) (3 lecture hours per week.)

**MATH-4960. Portfolio Optimization**
This is a first course on Markowitz mean-variance portfolio optimization. The course will cover quadratic programming, parametric quadratic programming, the efficient frontier, the capital asset pricing model, Sharpe ratios and implied risk-free returns, portfolio optimization with constraints, and quadratic programming solution algorithms; also covered are professional writing and presentation skills and the use of optimization software. (Prerequisite: MATH-2251.) (3 lecture hours per week.) (Cross-listed with MATH-8820.)

## STATISTICS COURSES

Undergraduate Statistics courses taught outside Mathematics and Statistics may not be taken for credit in any mathematics program.

**STAT-2910. Statistics for the Sciences**
This course will cover descriptive statistics, probability, discrete and continuous distributions, point and interval estimation, hypothesis testing, goodness-of-fit and contingency tables. (Prerequisite: Grade 12 "U" Advanced Level Mathematics (MHF4U, MCV4U, MDM4U) or Grade 11 Functions and Applications (MCF3M) or Grade 11 Functions (MCR3U).) (Course equivalencies and antirequisites as stated in the University of Windsor Senate Policy on Introductory Statistics Courses.) (May not be taken for credit after taking STAT-2920 or STAT-2950.) (3 lecture hours, 1 tutorial hour per week.)

**STAT-2920. Introduction to Probability**
This course will cover descriptive measures, combinatorics, probability, random variables, special discrete and continuous distributions, sampling distribution, and point and interval estimation. (Prerequisite: MATH-1730.) (3 lecture hours, 1 tutorial hour per week.)

**STAT-2950. Introduction to Statistics**
This course will cover distributions, point and interval estimation, hypothesis testing, contingency tables, analysis of variance, bivariate distributions, regression, correlation and non-parametric methods. (Prerequisite: STAT-2920.) (3 lecture hours, 1 tutorial hour per week.)

**STAT-3920. Probability**
The course will cover the axioms of the theory of probability, discrete and continuous distributions including binomial, Poisson, exponential, normal chi-square, gamma, t, and F distributions, multivariate distributions, conditional distributions, independence, expectation, moment generating functions, characteristic functions, transformation of random variables, order statistics, law of large numbers and central limit theorem. (Prerequisite: STAT-2950.) (3 lecture hours per week.)

**STAT-3950. Statistics**
This course will cover point and interval estimations, properties of estimators, methods of estimation, least squares estimation and linear models, Bayesian estimation, Rao-Blackwell theorem, tests of hypotheses, Neyman-Pearson Lemma and analysis of variance. (Prerequisite: STAT-3920.) (3 lecture hours per week.)

**STAT-3960. Stochastic Operations Research**
This course will cover deterministic dynamic programming, stochastic dynamic programming, queuing theory, Brownian motion, decision analysis and simulation. Optional topics are inventory theory and Markov processes. (Prerequisites: STAT-2920, MATH-1250 or MATH-1260, MATH-1730.) (Antirequisite: INDE-4120.) (3 lecture hours per week.)

**STAT-4000. Topics in Statistics**
This course will cover advanced topics in probability or statistics not covered in other courses. (Prerequisite: consent of instructor.) (3 lecture hours per week.) (May be repeated for credit when the topic is different.)

**STAT-4200. Actuarial Regression and Time Series**
This course introduces regression and time series analyses. Topics include multiple linear regression, least squares, model fitting, estimation, testing, matrix formulation, indicator variables, logistic regression, residual analysis, prediction intervals, times series, autoregressive models, moving average

models, ARIMA models, fitting models, estimation and forecasting. (Prerequisite: STAT-2950.) (Anti-requisite: STAT-4550.) (3 lecture hours per week.)

**STAT-4410. Stochastic Processes**
This course covers discrete and continuous time Markov processes, renewal theory, branching processes, Brownian motion. (Prerequisite: STAT-2920 and STAT-2950, MATH-1250 and MATH-2790.) (3 lecture hours per week.)

**STAT-4460. Statistical Data Analysis**
This course takes a computer-oriented approach to equip students with the experience of data analysis, beginning with the design of experiments to the presentation of results. Depending on the background of the students, different topics will be emphasized. (Prerequisite: STAT-3920, STAT-3950 and STAT-4550 or consent of instructor.) (3 lecture hours per week.)

**STAT-4470. Survival Analysis**
This course covers survivorship and hazard functions and their relationship to lifetime distributions and densities, types of censoring, the Kaplan-Meier and Nelson-Aalen estimators of the survivor and cumulative hazard functions, log rank tests, parametric survival time distributions and related regressions, semi-parametric regression models including the Cox's PH model, and regression diagnostics. Further topics may include the counting process approach, recurrent event analysis, time dependent covariates, frailty models, sequential and group sequential techniques and statistical learning algorithms. (Prerequisite: STAT-3920 and STAT-3950.) (3 lecture hours per week.)

**STAT-4500. Generalized Linear Models**
This course is aimed at giving theoretical and methodological background for the analysis of discrete or continuous data using generalized linear models and other semi-parametric models where full distributional assumptions cannot be justified. (Prerequisite: STAT-3920 and STAT-3950.) (3 lecture hours per week.)

**STAT-4550. Regression Analysis**
This course covers simple and multiple linear regression, inference on regression parameters, residual analysis, stepwise regression, polynomial regression, diagnostics and remedial measures for multicollinearity and influential observations, weighted least squares, logistic regression, nonlinear regression. (Prerequisite: (STAT-2910 or STAT-2950) and MATH-1250.) (3 lecture hours per week.)

**STAT-4560. Statistical Consulting**
This course is aimed at training students on how to: (a) develop problem solving skills in applied statistics; (b) interact with clients from other scientific disciplines who seek statistical consultancy; and (c) improve skills for writing statistical data analysis reports. (Pre-requisites: STAT 4460 and STAT 4550; Anti-requisite: STAT 4600) (3 lecture hours a week.)

**STAT-4490. Discrete Multivariate Analysis**
This course is aimed at giving theoretical and methodological background for the analysis of discrete or continuous data using generalized linear models. The main topics covered are descriptive and inferential statistics for two-way and three-way contingency tables, generalized linear models for discrete responses, binary regression models (emphasizing logistic regression), multicategory logit models for nominal and ordinal responses, loglinear models for contingency tables, matched pairs, Modeling correlated, clustered responses, and Random effects: Generalized linear mixed model. (Prerequisite: STAT-3920 and STAT-3950).

**STAT-4600. Practicum in Statistical Consulting**
This course will provide students with practical experience in statistical consulting, where they will integrate statistical theory, methods, and procedures in an applied setting. Students will assist clients with solving a broad range of problems in data analysis, research design, and statistical computing while also gaining skills in conducting and interpreting statistical analyses, oral and written communication, and the ethical practice of consulting. Students will successfully complete the on-line Tri-Council Course on Research Ethics and the SAS base programming certificate. (Prerequisites: STAT-4460 and STAT-4550. Anti-requisite: STAT-4560.) (3 hours per week with a total of 12 lecture hours, 12 tutorial hours, and 12 experiential learning hours.)

**STAT-4980. Experimental Designs**
This course will cover ANOVA models without and with interactions, randomized block, Latin square, factorial, confounded factorial, balanced incomplete block, other designs and response surface methodology. (Prerequisite: STAT-2950 or STAT-3920.) (3 lecture hours per week.)

**STAT-4981. Sampling Theory**
This course will cover basic concepts, simple random and stratified sampling, ratio and regression methods, systematic and cluster sampling, multi-stage sampling, PPS sampling, and errors in surveys and sampling methods in social investigation. (Prerequisite: STAT-2950 or STAT-3920.) (3 lecture hours per week.)

# PHYSICS

## PROGRAMS

### Honours Physics (with/without Co-op)

**Degree Requirements**

Total courses: 40 (43 for co-op option)

(a) PHYS-1400, PHYS-1410, PHYS-1500, PHYS-2200, PHYS-2210, PHYS-2500, PHYS-3100, PHYS-3200, PHYS-3210, PHYS-3500, PHYS-3900, PHYS-4130, PHYS-4100, and six courses in Physics at the 3XXX or 4XXX level.
(b) CHEM-1100, CHEM-1110, CHEM-2400, COMP-1400, COMP-1410, MATH-1250 (or MATH-1260), MATH-1720 (or MATH-1760), MATH-1730, MATH-2780, MATH-2790, MATH-3550, ELEC-2170 or COMP-2650.
(c) two of Arts, Humanities and Social Sciences
(d) seven courses from any area.
<u>For co-op stream, in addition:</u>
(e) three co-op terms: PHYS-2980, PHYS-3980, PHYS-4980, (oral and written reports required). Students must maintain major and cumulative averages of 65% or better to qualify for co-op placements.

All Co-op positions must be full-time, paid, related to the degree program and approved by the University. The process of securing a co-op position is competitive. Co-op students will apply for work opportunities as advertised by the Centre for Career Education using an Internet-based software program and employers will make interview and hiring decisions. Students are also encouraged to seek co-op employment outside of the advertised postings by completing a guided job search process facilitated by the Centre for Career Education.

If a student has an outstanding commitment to an employer, then withdrawal from the co-op program will be granted on an exception basis and will take effect following the work term. If a student withdraws from an undergrad co-op program they will be subject to the following co-op fee payments:

If a student withdraws from co-op prior to the first Friday of classes of the semester following their first work term, no further co-op fees will be charged once the withdrawal has been processed.
If a student withdraws from co-op after the first Friday of classes of the semester following their first work term, they be liable for paying the co-op fee for the term in which they are dropping and one additional term.

In the interest of building solid partnerships with employers, students who have accepted a co-op employment offer (either by ranking a position in round 1 of the job competition or by accepting a position either verbally or in writing in later rounds) must honour that commitment. Therefore, once students have accepted an offer of employment for a work term, they will be considered registered in the appropriate work term course and must remain in the co-op program until they have completed their work term requirements. Failure to honour these commitments and/or to complete all work term requirements will lead to being required to withdraw from the co-op program and will result in a failing grade on his/her transcript for that work term.

Recommended courses (if any): Students who intend to take additional mathematics courses are advised to take MATH-1020 in first year. COMP-2120 is recommended. COMP-3400 and MATH-3590 are strongly recommended. Students planning to pursue health professions should seek advice from an academic advisor in the Department of Physics within the first year.

All Co-op positions must be full-time, paid, related to the degree program and approved by the University. The process of securing a co-op position is competitive. Co-op students will apply for work opportunities as advertised by the Centre for Career Education using an Internet-based software program and employers will make interview and hiring decisions. Students are also encouraged to seek co-op employment outside of the advertised postings by completing a guided job search process facilitated by the Centre for Career Education.

Withdrawal from the co-op program will be granted on an exception basis only as it must be determined that the student has no outstanding commitments to employers. Students who wish to withdraw must meet with a Co-op Coordinator and complete a withdrawal form. However, the only time a student may withdraw from an undergraduate co-op program without further co-op fee payment implications is by the 1st Friday of classes after their first co-op work term. Students who withdraw from Co-operative Education at any other time will be liable for paying the co-op fee for the term in which they are dropping and one additional term. This will help offset the costs of developing another student for placement.

In the interest of building solid partnerships with employers, students who have accepted a co-op employment offer (either by ranking a position in round 1 of the job competition or by accepting a position either verbally or in writing in later rounds) must honour that commitment. Therefore, once students have accepted an offer of employment for a work term, they will be considered registered in the appropriate work term course and must remain in the co-op program until they have completed their work term requirements. Failure to honour these commitments and/or to complete all work term requirements will lead to being required to withdraw from the co-op program and will result in a failing grade on his/her transcript for that work term.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

## Honours Physics with Thesis (with/without Co-op)

**Degree Requirements**

Total courses: 40 (43 for co-op option)

(a) PHYS-1400, PHYS-1410, PHYS-1500, PHYS-2200, PHYS-2210, PHYS-2500, PHYS-3100, PHYS-3200, PHYS-3210, PHYS-3500, PHYS-3900, PHYS-4900 (6.0 credits)**, PHYS-4130, PHYS-4100, and six additional courses in Physics at the 3XXX or 4XXX level.
(b) CHEM-1100, CHEM-1110, CHEM-2400, COMP-1400, COMP-1410, MATH-1250 (or MATH-1260), MATH-1720 (or MATH-1760), MATH-1730, MATH-2780, MATH-2790, MATH-3550, ELEC-2170 or COMP-2650.
(c) two of Arts, Humanities and Social Sciences
(d) five courses from any area.
**Only students who have maintained a major average of 70% and a cumulative average of 60% will be permitted to enrol in PHYS-4900.

For co-op stream, in addition:
(e) three co-op terms: PHYS-2980, PHYS-3980, PHYS-4980, (oral and written reports required). Students must maintain major and cumulative averages of 65% or better to qualify for co-op placements.

All Co-op positions must be full-time, paid, related to the degree program and approved by the University. The process of securing a co-op position is competitive. Co-op students will apply for work opportunities as advertised by the Centre for Career Education using an Internet-based software program and employers will make interview and hiring decisions. Students are also encouraged to seek co-op employment outside of the advertised postings by completing a guided job search process facilitated by the Centre for Career Education.

If a student has an outstanding commitment to an employer, then withdrawal from the co-op program will be granted on an exception basis and will take effect following the work term. If a student withdraws from an undergrad co-op program they will be subject to the following co-op fee payments:

If a student withdraws from co-op prior to the first Friday of classes of the semester following their first work term, no further co-op fees will be charged once the withdrawal has been processed.
If a student withdraws from co-op after the first Friday of classes of the semester following their first work term, they be liable for paying the co-op fee for the term in which they are dropping and one additional term.

In the interest of building solid partnerships with employers, students who have accepted a co-op employment offer (either by ranking a position in round 1 of the job competition or by accepting a position either verbally or in writing in later rounds) must honour that commitment. Therefore, once students have accepted an offer of employment for a work term, they will be considered registered in the appropriate work term course and must remain in the co-op program until they have completed their work term requirements. Failure to honour these commitments and/or to complete all work term requirements will lead to being required to withdraw from the co-op program and will result in a failing grade on his/her transcript for that work term.

Recommended courses (if any): Students who intend to take additional mathematics courses are advised to take MATH-1020 in first year. COMP-2120 is recommended. COMP-3400 and MATH-3590 are strongly recommended. Students planning to pursue health professions should seek advice from an academic advisor in the Department of Physics within the first year.

All Co-op positions must be full-time, paid, related to the degree program and approved by the University. The process of securing a co-op position is competitive. Co-op students will apply for work opportunities as advertised by the Centre for Career Education using an Internet-based software program and employers will make interview and hiring decisions. Students are also encouraged to seek co-op employment outside of the advertised postings by completing a guided job search process facilitated by the Centre for Career Education.

Withdrawal from the co-op program will be granted on an exception basis only as it must be determined that the student has no outstanding commitments to employers. Students who wish to withdraw must meet with a Co-op Coordinator and complete a withdrawal form. However, the only time a student may withdraw from an undergraduate co-op program without further co-op fee payment implications is by the 1st Friday of classes after their first co-op work term. Students who withdraw from Co-operative Education at any other time will be liable for paying the co-op fee for the term in which they are dropping and one additional term. This will help offset the costs of developing another student for placement.

In the interest of building solid partnerships with employers, students who have accepted a co-op employment offer (either by ranking a position in round 1 of the job competition or by accepting a position either verbally or in writing in later rounds) must honour that commitment. Therefore, once students have accepted an offer of employment for a work term, they will be considered registered in the appropriate work term course and must remain in the co-op program until they have completed their work term requirements. Failure to honour these commitments and/or to complete all work term requirements will lead to being required to withdraw from the co-op program and will result in a failing grade on his/her transcript for that work term.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

## Honours Physics (Medical Physics) (with/without Co-op)

**Degree Requirements**

Total courses: 40 (43 for co-op option)

(a) PHYS-1400, PHYS-1410, PHYS-1500, PHYS-2200, PHYS-2210, PHYS-2500, PHYS-3100, PHYS-3200, PHYS-3210, PHYS-3500, PHYS-3700, PHYS-3900, PHYS-4130, PHYS-4100, PHYS-4700, PHYS-4710 and three more courses in Physics at the 3XXX or 4XXX level.
(b) BIOL-1101, CHEM-1100, CHEM-1110, CHEM-2300, CHEM-2400, BIOC-2010 or BIOC-2015, COMP-1400, COMP-1410, MATH-1250 (or MATH-1260), MATH-1720 (or MATH-1760), MATH-1730, MATH-2780, MATH-2790, MATH-3550.
(c) two of Arts, Humanities and Social Sciences.
(d) five courses from any area.
<u>For co-op option, in addition:</u>
(e) three co-op terms: PHYS-2980, PHYS-3980, PHYS-4980, (oral and written reports required). Students must maintain major and cumulative averages of 65% or better to qualify for co-op placements.

All Co-op positions must be full-time, paid, related to the degree program and approved by the University. The process of securing a co-op position is competitive. Co-op students will apply for work opportunities as advertised by the Centre for Career Education using an Internet-based software program and employers will make interview and hiring decisions. Student are also encouraged to seek co-op employment outside of the advertised postings by completing a guided job search process facilitated by the Centre for Career Education.

If a student has an outstanding commitment to an employer, then withdrawal from the co-op program will be granted on an exception basis and will take effect following the work term. If a student withdraws from an undergrad co-op program they will be subject to the following co-op fee payments:
If a student withdraws from co-op prior to the first Friday of classes of the semester following their first work term, no further co-op fees will be charged once the withdrawal has been processed.
If a student withdraws from co-op after the first Friday of classes of the semester following their first work term, they be liable for paying the co-op fee for the term in which they are dropping and one additional term.

In the interest of building solid partnerships with employers, student who have accepted a co-op employment offer (either by ranking a position in round 1 of the job competition or by accepting a position either verbally or in writing in later rounds) must honour that commitment. Therefore, once

students have accepted an offer of employment for a work term, they will be considered registered in the appropriate work term course and must remain in the co-op program until they have completed their work term requirements. Failure to honour these commitments and/or to complete all work term requirements will lead to being required to withdraw from the co-op program and will result in a failing grade on his/her transcript for that work term.

Recommended courses (if any): Students who intend to take additional mathematics courses are advised to take MATH-1020 in first year. COMP-2120 is recommended. COMP-3400 and ELEC-2170 or COMP-2650 are strongly recommended. Students planning to pursue health professions other than Medical Physics should seek advice from an academic advisor in the Department of Physics within the first year.

For medical school, four (4) courses are recommended that are classified as “writing intensive.” (PHYS-3980, PHYS-4980, PHYS-4900, and PHYS-4000 all contain intensive writing components.)

All Co-op positions must be full-time, paid, related to the degree program and approved by the University. The process of securing a co-op position is competitive. Co-op students will apply for work opportunities as advertised by the Centre for Career Education using an Internet-based software program and employers will make interview and hiring decisions. Students are also encouraged to seek co-op employment outside of the advertised postings by completing a guided job search process facilitated by the Centre for Career Education.

Withdrawal from the co-op program will be granted on an exception basis only as it must be determined that the student has no outstanding commitments to employers. Students who wish to withdraw must meet with a Co-op Coordinator and complete a withdrawal form. However, the only time a student may withdraw from an undergraduate co-op program without further co-op fee payment implications is by the 1st Friday of classes after their first co-op work term. Students who withdraw from Co-operative Education at any other time will be liable for paying the co-op fee for the term in which they are dropping and one additional term. This will help offset the costs of developing another student for placement.

In the interest of building solid partnerships with employers, students who have accepted a co-op employment offer (either by ranking a position in round 1 of the job competition or by accepting a position either verbally or in writing in later rounds) must honour that commitment. Therefore, once students have accepted an offer of employment for a work term, they will be considered registered in the appropriate work term course and must remain in the co-op program until they have completed their work term requirements. Failure to honour these commitments and/or to complete all work term requirements will lead to being required to withdraw from the co-op program and will result in a failing grade on his/her transcript for that work term.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

# Honours Physics (Medical Physics with Thesis) (with/without Co-op)

**Degree Requirements**

Total courses: 40 (43 for co-op stream)

(a) PHYS-1400, PHYS-1410, PHYS-1500, PHYS-2200, PHYS-2210, PHYS-2500, PHYS-3100, PHYS-3200, PHYS-3210, PHYS-3500, PHYS-3700, PHYS-3900, PHYS-4900 (6.0 credits)**, PHYS-4130, PHYS-4100, PHYS-4700, PHYS-4710, plus three additional courses in Physics at the 3XXX or 4XXX level.
(b) BIOL-1101, CHEM-1100, CHEM-1110, CHEM-2300, CHEM-2400, BIOC-2010 or BIOC-2015, COMP-1400, COMP-1410, MATH-1250 (or MATH-1260), MATH-1720 (or MATH-1760), MATH-1730, MATH-2780, MATH-2790, MATH-3550.
(c) two of Arts, Humanities and Social Sciences.
(d) three courses from any area.
**Only students who have maintained a major average of 70% and a cumulative average of 60% will be permitted to enrol in PHYS-4900.
<u>For co-op option, in addition:</u>
(e) three co-op terms: PHYS-2980, PHYS-3980, PHYS-4980, (oral and written reports required). Students must maintain major and cumulative averages of 65% or better to qualify for co-op placements.

All Co-op positions must be full-time, paid, related to the degree program and approved by the University. The process of securing a co-op position is competitive. Co-op students will apply for work opportunities as advertised by the Centre for Career Education using an Internet-based software program and employers will make interview and hiring decisions. Student are also encouraged to seek co-op employment outside of the advertised postings by completing a guided job search process facilitated by the Centre for Career Education.

If a student has an outstanding commitment to an employer, then withdrawal from the co-op program will be granted on an exception basis and will take effect following the work term. If a student withdraws from an undergrad co-op program they will be subject to the following co-op fee payments:
If a student withdraws from co-op prior to the first Friday of classes of the semester following their first work term, no further co-op fees will be charged once the withdrawal has been processed.
If a student withdraws from co-op after the first Friday of classes of the semester following their first work term, they be liable for paying the co-op fee for the term in which they are dropping and one additional term.

In the interest of building solid partnerships with employers, student who have accepted a co-op employment offer (either by ranking a position in round 1 of the job competition or by accepting a position either verbally or in writing in later rounds) must honour that commitment. Therefore, once students have accepted an offer of employment for a work term, they will be considered registered in the appropriate work term course and must remain in the co-op program until they have completed their work term requirements. Failure to honour these commitments and/or to complete all work term requirements will lead to being required to withdraw from the co-op program and will result in a failing grade on his/her transcript for that work term.

Recommended courses (if any): Students who intend to take additional mathematics courses are advised to take MATH-1020 in first year. COMP-2120 is recommended. COMP-3400 and ELEC-2170 or COMP-2650 are strongly recommended. Students planning to pursue health professions other than

Medical Physics should seek advice from an academic advisor in the Department of Physics within the first year.

For medical school, four (4) courses are recommended that are classified as “writing intensive.” (PHYS-3980, PHYS-4980, PHYS-4900, and PHYS-4000 all contain intensive writing components.)

All Co-op positions must be full-time, paid, related to the degree program and approved by the University. The process of securing a co-op position is competitive. Co-op students will apply for work opportunities as advertised by the Centre for Career Education using an Internet-based software program and employers will make interview and hiring decisions. Students are also encouraged to seek co-op employment outside of the advertised postings by completing a guided job search process facilitated by the Centre for Career Education.

Withdrawal from the co-op program will be granted on an exception basis only as it must be determined that the student has no outstanding commitments to employers. Students who wish to withdraw must meet with a Co-op Coordinator and complete a withdrawal form. However, the only time a student may withdraw from an undergraduate co-op program without further co-op fee payment implications is by the 1st Friday of classes after their first co-op work term. Students who withdraw from Co-operative Education at any other time will be liable for paying the co-op fee for the term in which they are dropping and one additional term. This will help offset the costs of developing another student for placement.

In the interest of building solid partnerships with employers, students who have accepted a co-op employment offer (either by ranking a position in round 1 of the job competition or by accepting a position either verbally or in writing in later rounds) must honour that commitment. Therefore, once students have accepted an offer of employment for a work term, they will be considered registered in the appropriate work term course and must remain in the co-op program until they have completed their work term requirements. Failure to honour these commitments and/or to complete all work term requirements will lead to being required to withdraw from the co-op program and will result in a failing grade on his/her transcript for that work term.

Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study.

## Combined Honours Physics Programs

**Degree Requirements**

Total courses: forty.

(a) Physics: PHYS-1400, PHYS-1410, PHYS-1500, PHYS-2200, PHYS-2210, PHYS-2500, PHYS-3100, PHYS-3200, PHYS-3210, PHYS-3500, and two more Physics courses at the 3XXX or 4XXX level.
(b) Course requirements-Other Subject: courses used to calculate the major average in the other subject area, as prescribed by that area of study.
(c) CHEM-1100, CHEM-1110, CHEM-2400, MATH-1250, MATH-1720, MATH-1730, MATH-2780, MATH-2790, MATH-3550
(d) additional courses, if necessary, from any area of study, to a total of forty.

Courses used to calculate the major average are: courses listed under requirements (a) and (b), and any courses taken in the major area(s) of study.

## Major and Minor Concentrations - Bachelor of Interdisciplinary Arts and Science (IAS) - Physics

Major Concentration: PHYS-2200, PHYS-2250, PHYS-2500, PHYS-3200, PHYS-3500, PHYS-3210, PHYS-3100, PHYS-3110, MATH-2780, MATH-2790, MATH-3550, and one other Physics course at 3XXX or 4XXX level. (additional requirements: PHYS-1400, PHYS-1410, MATH-1720 and MATH-1730, and MATH-1250.

Minor Concentration: PHYS-2200, PHYS-2250, PHYS-2500, and three other Physics courses at the 3XXX or 4XXX level. (additional requirements: PHYS-1400, PHYS-1410, MATH-1250, MATH-1720, MATH-1730.)

## Minor in Physics

The minor in Physics consists of six PHYS courses one of which must be at the 3XXX level. Courses that cannot count toward the Physics minor are: PHYS 1000, 1010, 2000, 2040, 2050, 2060, 2980, 3980, 4980, and 4900. A minimum grade of 60% must be received in each course.

# PHYSICS COURSES

Not all courses listed will necessarily be offered in each year.

**PHYS-1000. Introduction to Astronomy I**
The solar system with emphasis on the results of recent space exploration. This is a descriptive course suitable for the non-scientist. (May be taken by B.Sc. students for credit, but does not count as a Physics course or other science course towards the fulfillment of the requirements for the B.Sc. degree.) (2 lecture hours a week.)

**PHYS-1010. Introduction to Astronomy II**
The stars, galaxies, including pulsars, black holes, and quasars. Current theories of the structure of the universe will be discussed. This is a descriptive course suitable for the non-scientist. (May be taken by B.Sc. students for credit, but does not count as a Physics course or other science course towards the fulfillment of the requirements for the B.Sc. degree.) (2 lecture hours a week.)

**PHYS-1300. Introductory Physics for Life Sciences I**
This is an algebra-based course intended for students interested in the biological or health sciences, or related disciplines. The topics covered include the basic mechanical concepts of force, work and energy, properties of matter, and heat, with examples and applications drawn from the modeling of biological systems. (Prerequisites: one 4 “U” or OAC mathematics course or equivalent.) (3 lecture hours a week, 3 laboratory hours per week) (Anti-requisites: PHYS-1305, PHYS-1400.) (Open to students in Human Kinetics, Forensic Science, Bachelor of Arts and Science, and all programs within in the Faculty of Science; exceptions only with the permission of the Head or designate.)

**PHYS-1305. Introductory Physics for Life Sciences I (B)**
This is an algebra-based course intended for students interested in the biological or health sciences, or related disciplines. The topics covered include the basic mechanical concepts of force, work and energy, properties of matter, and heat, with examples and applications drawn from the modeling of biological systems. This course serves as the prerequisite for PHYS-1400 and GENG-1110. Majors in Science and

Majors in Engineering will not be given credit for this course. (Antirequisite: PHYS-1300.) (Prerequisites: One 4U or OAC mathematics course or equivalent.) (3 lecture hours a week.)

**PHYS-1310. Introductory Physics for Life Sciences II**
This course is a continuation of PHYS-1305 intended for students interested in the biological or health sciences, or related disciplines. The topics covered include wave motion, sound, electricity and magnetism, light, and an introduction to topics in modern physics involving the life sciences such as the quantum nature of radiation and its interaction with biomolecules, high energy radiation and radioactivity, and the statistical treatment of data. (Prerequisite: PHYS-1300 or PHYS-1400.) (3 lecture hours per week, 3 laboratory hours per week.) (Antirequisites: PHYS-1410.) (Open to students in Human Kinetics, Forensic Science, Bachelor of Arts and Science, and all programs within in the Faculty of Science; exceptions only with the permission of the Head or designate.)

**PHYS-1400. Introductory Physics I**
First semester in a four-semester sequence in calculus-based introductory physics with an emphasis on mechanics. (Prerequisites: Grade 12"U" Advanced Functions and Introductory Calculus or equivalent. Recommended co-requisite: MATH-1720.) (3 lecture hours per week, 3 laboratory hours per week.) Open to students in Human Kinetics, Forensic Science, Bachelor of Arts and Science, ~~,~~and all programs within in the Faculty of Science; exceptions only with the permission of the Head or designate. (Antirequisites: PHYS-1300, PHYS-1305.)

**PHYS-1410. Introductory Physics II**
Second semester in a four-semester sequence in calculus-based introductory physics with an emphasis on electricity and magnetism. (Prerequisite: PHYS-1400 or GENG-1110. Recommended co-requisite: MATH-1730.) (3 lecture hours per week, 3 laboratory hours per week.) (Antirequisites: PHYS-1310) (Open to students in Engineering, Human Kinetics, Forensic Science, Bachelor of Arts and Science, and all programs within in the Faculty of Science; exceptions only with the permission of the Head or designate.)

**PHYS-1500. From Symmetry to Chaos in the Universe: An Introduction to Theoretical Methods in Contemporary Physics**
An introduction to the pillars of 20th and 21st century physics which form the basis of subsequent courses in physics and the basis of current research: complexity and chaos, special and general relativity, quantum phenomena, symmetry and symmetry breaking, and cosmology. Motivated by these pillars, mathematical tools and techniques that are used extensively in physics for practical problem solving and data analysis are introduced at a first-year level. Computer-aided graphical and approximate computational methods will also be introduced. (Prerequisites: PHYS-1400, MATH-1720, and MATH-1250) (3 lecture hours and one tutorial hour per week.)

**PHYS-2000. The Exoplanet Revolution**
This course will examine the development and evolution of our understanding of the nature and origins of planetary systems before and after the discovery of the first exoplanets. Students will learn about the various methods used to detect and measure exoplanets, and will actively engage in the analysis of data collected through remote off-site telescopes. The course will include a review of recent discoveries regarding the different classes of planets that exist and their characteristics and origins. It will also look more closely at planets found in the habitable zones around their stars and the conditions that exist there, particularly in planetary atmospheres. Finally, it will review the latest developments in new telescope technologies and space missions and what their capabilities should allow astronomers to discover in coming years. (Prerequisite: PHYS-1000 or PHYS-1010.) (May be taken by B.Sc. students for

credit, but does not count as a Physics course or other science course towards the fulfillment of the requirements for the B.Sc. degree.) (3 lecture hours a week.)

**PHYS-2050. Physics and Society-The Past**
Discoveries in astronomy have altered the way we perceive ourselves, our planet, and our place in the universe. This course, 'From Antiquity to Newton', reviews the contributions made by the Egyptians, Babylonians, Greeks, and Islamic cultures, together with medieval Christian views and on to the emergence of modern science. The course - which is a blend of physics, history, philosophy and religion - will also examine how we came to move from 'geocentric' to a 'heliocentric' view of the solar system, by examining the contributions of Copernicus, Brahe, Kepler, Galileo and Newton. (2 lecture hours a week.) Does not count towards the major requirements for a degree in the Department of Physics.

**PHYS-2060. Physics and Society-The Present**
Modern society is dominated by the dramatic development of physics and technology from the industrial revolution to the present. This development and its impact on society are explored in the course. A number of topics of current interest such as, nuclear energy, world energy supplies, pollution, global warming, climate change, and possible solutions to the energy crisis are discussed in detail. This course gives students who are majoring in the arts, humanities, business, law, and biomedical sciences an introduction to modern ideas in Physics and to see how these ideas affect our day-to-day lives. (2 lecture hours a week.) Does not count towards the major requirements for a degree in the Department of Physics.

**PHYS-2200. Oscillations, Waves, and Electromagnetism**
Third semester in a four-semester sequence in calculus-based introductory physics with an emphasis on wave phenomena, oscillations, and electromagnetism. (Prerequisite: PHYS-1410 or equivalent.) (3 lecture hours and 3 laboratory hours per week.)

**PHYS-2210. Modern Physics**
A calculus-based physics course with an emphasis on physical models of phenomena at subatomic length scales and high velocities. The course includes an introduction to the special theory of relativity, quantum mechanics, nuclear physics, particle physics, and standard model physics. The technological applications of these phenomena will be discussed. (Prerequisite: PHYS-1410 or equivalent.) (3 lecture hours per week.)

**PHYS-2250. Optics**
Geometrical optics: review of laws of reflection and refraction; lenses and mirrors (matrix optics); stops, optical systems, aberrations. Introduction to wave optics; interferometry, diffraction, polarization, Fresnel equations, elements of dispersion theory. (Prerequisites: PHYS-1410 and MATH-1730.) (3 lecture, 3 laboratory hours a week.)

**PHYS-2040. History of Astronomy**
This online course explores the contributions to astronomy made by First Nations, Indian, Chinese, Mayan, Australian, Egyptian, Babylonian, Greek, and Islamic cultures. We start with oral history traditions and follow with explorations of early astronomical instruments and their applications. We will examine medieval European views and how these led to the philosophies of modern astronomy. The course will also highlight how we came to move from a 'geocentric' to a 'heliocentric' view of the solar system by examining the contributions of Copernicus, Brahe, Kepler, Galileo, and Newton. (Open to students with semester 3 and above standing.) (May be taken by BSc and BFS students for credit, but satisfies only the course requirements for "any area of study" toward the fulfilment of the requirements for a BSc or BFS.) (Online asynchronous delivery.)

**PHYS-2500. Intermediate Classical Mechanics**
Classical mechanics at the intermediate (second-year) level: Newton's Laws and consequences – Galilean invariance, conservation theorems, applications to rectilinear motion and motion in two/three dimensions; introduction to noninertial reference frames, particularly in rectilinear motion; driven oscillators with damping; central forces, the Kepler problem; dynamics of rigid bodies – planar motion; special relativity – Lorentz transformations, relativistic kinematics and dynamics. (Prerequisites: PHYS-1410 and MATH-1730, or equivalent; Recommended: PHYS-1500.) (3 lecture hours and 1 tutorial hour per week.)

**PHYS-2980. Co-op Work Term I**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course can not continue in the co-op program.)

**PHYS-3100. Quantum Physics and Chemistry**
Classical and quantum physics, relativistic physics, black-body radiation, photoelectric effect, Compton scattering, atomic structure, Schroedinger equation, particle in a box, harmonic oscillator, conduction in solids; semiconductor and superconductor devices. (Prerequisites: MATH-2780 and MATH-2790 or equivalents.) (3 lecture, 3 laboratory hours a week.)

**PHYS-3105. Quantum Physics and Chemistry**
(Same as PHYS-3100 without the laboratory.) Classical and quantum physics, black-body radiation, photoelectric effect, Compton scattering, atomic structure, Schroedinger equation, particle in a box, harmonic oscillator, conduction in solids; semiconductor and superconductor devices. (Prerequisites: MATH-2780 and MATH-2790 or equivalents.) (3 lecture hours a week.)

**PHYS-3110. Atomic and Molecular Spectra**
Introduction to atomic and molecular spectroscopy, hydrogen and helium atoms, perturbation theory, isotopes; introduction to nuclear physics. (Prerequisites: PHYS-3100 or PHYS-3105, MATH-2780, and MATH-2790, or equivalents.) (3 lecture, 3 laboratory hours a week.)

**PHYS-3115. Atomic and Molecular Spectra**
(Same as PHYS-3110 without the laboratory.) Introduction to atomic and molecular spectroscopy, hydrogen and helium atoms, perturbation theory, isotopes; introduction to nuclear physics (Prerequisites: PHYS-3100 or PHYS-3105, MATH-2780, and MATH-2790 or equivalents.) (3 lecture hours a week.)

**PHYS-3200. Electromagnetic Theory**
Classical electrodynamics, focusing on stationary phenomena: electrostatics and magnetostatics in vacuum; potential theory, multipole expansion; electrostatics and magnetostatics in ponderable media; boundary value problems; electromagnetic induction. (Prerequisites: MATH-2780, PHYS-2200. Corequisite: MATH-2790.) (3 lecture hours per week.)

**PHYS-3210. Electromagnetic Waves**
Classical electrodynamics, focusing on dynamic phenomena: Maxwell’s equations and the potential formulation; electromagnetic waves – free space, waves in matter, interfaces, guided waves; Lienard-

Wiechert potentials; electromagnetic radiation; electrodynamics and special relativity. (Prerequisites: PHYS-3200 and MATH-3550.) (3 lecture hours and 3 laboratory/tutorial hours per week.)

**PHYS-3500. Advanced Classical Mechanics**
Classical mechanics, focusing on further developments of formalism and more complex systems: calculus of variations; Lagrangian formalism and an introduction to the Hamiltonian formalism; systems of particles; noninertial reference frames – rotating coordinate systems, centrifugal and Coriolis forces; three-dimensional rigid body motion – inertia tensor, Euler angles, equations of motion; coupled oscillations; continuum mechanics. (Prerequisites: PHYS-2500, MATH-2780, and MATH-2790 or equivalents.) (3 lecture hours and 1 tutorial hour per week.)

**PHYS-3600. Computational Physics**
An introduction to computational methods in physics, with an emphasis on applications to problems in Classical Mechanics, Electromagnetism and Quantum Mechanics. Best practices for scientific computing, data analysis and visualization will be emphasized. Specific topics to be discussed may include numerical integration, differentiation, and optimization; linear and non-linear equations; techniques for initial and boundary value problems for ordinary and partial differential equations; fast Fourier transforms; eigenvalue problems; numerical linear algebra; and an introduction to Monte Carlo methods. (Prerequisites: PHYS-3200, PHYS-3500, and PHYS-3100.) (3 lecture hours and 1 tutorial hour per week.)

**PHYS-3610. The Mathematics of Physics**
Mathematical topics/methods ubiquitous in physics, to give accelerated access to upper-level physics courses by providing the essential background in mathematics: central differential equations of physics and their solutions (e.g. Bessel functions, spherical harmonics, orthogonal polynomials); vector/function spaces, Fourier series/orthogonal function expansions; calculus of complex variables, residue theorem; Schwartz distributions; Green's functions; with time permitting, selected topics of current interest in mathematical/theoretical physics. (Prerequisites: MATH-2780 and MATH-2790, or equivalent. Recommended: PHYS-1500.) (3 lecture hours per week.)

**PHYS-3700. Introduction to Medical Physics**
Physical principles and experimental techniques applied to medicine and biology. Applications of x-rays and gamma rays in medical diagnosis and therapy. Physical principles of lasers, ultrasound, and magnetic fields in mapping structures. Physical techniques for the diagnosis and therapy of the human body. This course is intended to be of interest to students in Biology and Chemistry/Biochemistry, as well as Physics. (Prerequisite: PHYS-1400 and PHYS-1410, or the consent of the instructor.) (3 lecture hours per week.)

**PHYS-3900. Techniques in Experimental Physics I**
All physics hypotheses, models, and theories need to be tested and verified through experiments to ensure their validity in representing the observable universe. This course will emphasize the concepts of experimental design and techniques needed for making these observations. The student will design and construct experiments that test theories presented in upper-year physics courses, with an emphasis on electromagnetism and quantum mechanics. Topics may include error analysis, circuit design and analysis, microwave radiation, fibre optics, and spectroscopy. (Prerequisites: PHYS-2210 and one of MATH-3550 or PHYS-3610.) (1.5 hours of laboratory and 1.5 hours of tutorial per week.)

**PHYS-3910. Techniques in Experimental Physics II**
All physics hypotheses, models, and theories need to be tested and verified through experiments to ensure their validity in representing the observable universe. This course is a continuation of PHYS-3900, with an emphasis on experimental design, modelling, simulation, and construction. Topics may

include design and fabrication of apparatus, microprocessor programming, sources of noise, and noise reduction in measurements. (Prerequisites: PHYS-3900 or consent of instructor.) (1.5 hours of laboratory and 1.5 hours of tutorial per week.)

**PHYS-3980. Co-op Work Term II**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course can not continue in the co-op program.)

**PHYS-4000. Technical Communication Skills**
Introductory lectures and workshops on technical writing and instruction, followed by supervised instruction of first-year Physics students in PHYS-1500, and projects in writing resumes and technical manuals and in preparing a multimedia computer module for a problem area in physics instruction. The computer module can employ any suitable combination of Maple, C++, Visual Basic, HTML, Java. (Prerequisite: PHYS-1500.) (2 lecture, 2 laboratory honours a week.

**PHYS-4100. Quantum Mechanics I**
Probability amplitudes and transformations; operators and physical observables; symmetries and conservation theorems; time-development operator and Dyson expansion; two-state systems, density matrices; perturbation theory and the variational method; identical particles, spin, the Thomas-Fermi atom. (Prerequisites: PHYS-3100 or PHYS-3115, PHYS-3500, and MATH-3550 or consent of instructor.) (3 lecture hours a week.)

**PHYS-4130. Introduction to Statistical Mechanics**
Thermal equilibrium, diffusive equilibrium; Boltzmann and Gibbs distributions, canonical and grand canonical partition functions; thermodynamics from statistical mechanics, entropy, work, heat; Helmholtz free energy, Gibbs free energy, enthalpy, Gibbs-Duhem relation, equations of state, Maxwell relations, response functions; Planck distribution and thermal radiation, Fermi-Dirac distribution and the Fermi gas, Bose-Einstein distribution and the Bose gas, ideal gas; chemical reactions; binary mixtures; phase transitions; elementary kinetic theory. (Prerequisites: CHEM-2400, PHYS-3100 or PHYS-3105, PHYS-3110 or PHYS-3115, and CHEM-3400 (for Chemistry students only).)

**PHYS-4160. Condensed-Matter Physics**
Elements of crystallography, crystal diffraction, reciprocal lattices, lattice dynamics and thermal properties of solids, phonons, solution of Schroedinger equation in periodic potential, band theory, Fermi surfaces of metals and semiconductors, optical properties of dielectrics. (Prerequisite: PHYS-3100 or consent of instructor.) (3 lecture hours per week.)

**PHYS-4200. Classical Electrodynamics**
Conservation laws, Bremsstrahlung scattering of radiation, multipole radiations fields, Liénard-Wiechert potentials, Green functions, radiation reaction, Lorentz-Dirac equation, radiation from time-dependent currents. (Prerequisites: PHYS-3200 and PHYS-3210.) (3 lecture hours a week.)

**PHYS-4250. Design and Application of Lasers**
Stimulated emission, rate equation approach to amplification and output power calculations; Gaussian beams, stable and unstable resonators, Q-switching, mode-locking and cavity dumping, ruby, Nd:YAG

and other solid-state lasers, semi-conductor, gas and dye lasers. (Prerequisites: PHYS-3110 or PHYS-2200, and PHYS-2250, or three years of Electrical Engineering or Engineering Materials, or equivalent.) (3 lecture hours a week.

**PHYS-4600. Special Topics in Physics**
Advanced topics in contemporary physics. (Prerequisite: to be determined according to the topic.) (May be given as a seminar course , or as a directed, self-study course.) (May be repeated for credit when the topic is different.)

**PHYS-4670. Special Techniques in Health Physics**
This course consists of a variety of specialized topics involving the applications of the principles of physics to the study and characterization of living tissues, and the detection and treatment of pathological conditions. Topics will include the applications of acoustic microscopy, computational and statistical methods in medical physics, nanotechnology, and the interaction of ionizing radiation with living tissue. Course may be repeated when the topic is different. (Prerequisite: PHYS-3700, or the consent of the instructor.) (3 lecture hours a week.)

**PHYS-4700. Radiological Physics**
Radioactive decay schemes, interaction of photons with matter, linear and mass attenuation coefficients, stopping power for charged particles, radiation detection and instrumentation. The course will include clinical experience. (Prerequisite: PHYS-3700, or the consent of the instructor.) (3 lecture, 3 lab hours a week.)

**PHYS-4710. Medical Imaging**
The course will cover a broad range of modern imaging techniques and their theoretical foundations, such as ultrasound, planar x-ray imaging, computer tomography (CT) imaging, magnetic resonance imaging (MRI), positron emission tomography (PET), and radionuclide molecular imaging. The course will include practical laboratory experience at the University of Windsor, and at the Windsor Regional Cancer Centre. (Prerequisite: PHYS-3700, or the consent of the instructor.) (3 lecture hours and 3 laboratory hours per week.)

**PHYS-4720. Magnetic Resonance Imaging**
This course will present the physics and mathematics of magnetic resonance imaging with an emphasis on signal generation and detection, spatial encoding, and image reconstruction. Advanced topics in current MRI research (pulse sequence design, constrained image reconstruction, other topics) will also be presented. (Prerequisites: PHYS-3700.) (3 lecture hours a week.)

**PHYS-4730. Radiobiology**
Radiobiology is the study of the action of ionizing radiation on living things. A thorough understanding of the benefits and risks to humans associated with exposure to all forms of ionizing radiation is essential for any medical physicist. This course will review all the forms of ionizing radiation as well as the physics and chemistry of radiation absorption and interactions in the cells of the body. Students will be introduced to the events which have led to our current understanding of the field of radiobiology including in vitro cellular experiments, in vivo animal model experiments, clinical trials on human patients, and nuclear accident/bomb victim exposures. Ultimately, all of the current understanding of radiobiology will be used to explain why the current practice of clinical radiation therapy is practiced as it is by clinical medical physicists and radiation oncologists and how this knowledge can inform future developments in the field. (Prerequisites: PHYS-4700 or consent of instructor.) (3 lecture hours per week.)

**PHYS-4900. Research**
Design, researching, execution and managing, analysis, and reporting (Written and oral) of a supervised physics project in a recognized research laboratory, on- or off-campus. This is a problem-based course with emphasis on team work. Students must present three seminars discussing their research project: on background, on the research plan, and a final seminar accompanying a written report containing the main results, conclusions, and suggestions for further work. With departmental approval, the research may be applied toward partial fulfillment of the M.Sc. degree. (Prerequisites: PHYS-1500.) (1 lecture hour, 12 laboratory hours per week over two terms) (6.0 credit hours).

**PHYS-4980. Co-op Work Term III**
Supervised experience in an approved career-related setting with a focus on the application of theory and the development of transferable skills. The co-op work experience is designed to provide students with an enriched learning opportunity to integrate academic theory and concepts in an applied setting. (Prerequisite: Student must be enrolled in a co-operative education program. Offered on a Pass/non-Pass basis. Supervised practicum requires the successful completion of a minimum of 420 hours. Students who do not pass the course cannot continue in the co-op program.)

# The Schulich School of Medicine and Dentistry – Windsor Program

Launched in Fall 2008, the Schulich School of Medicine & Dentistry – Windsor Program is based on a distributed medical education model involving a partnership between the Schulich School of Medicine & Dentistry at the University of Western Ontario (UWO), the University of Windsor, and regional hospitals. This partnership builds on the Southwestern Ontario Medical Education Network (SWOMEN) which was initiated in 2002 to optimize medical education opportunities in the area and address the shortage of physicians across the region. All students will be fully registered at UWO and will receive UWO degrees.

For more information go to: http://www.uwindsor.ca/medicine.

**Regulations**
Students in the Windsor Program are subject to the academic regulations of the University of Western Ontario and its Schulich School of Medicine & Dentistry. University of Windsor non-academic policies and procedures govern student conduct on the University of Windsor campus.

**Admission and Program Information**
For admission and program information see the University of Western Ontario Schulich School of Medicine and Dentistry.

**Student Services at the University of Windsor**
Although fully registered at UWO, students in the Windsor Program have “affiliate” student status at the University of Windsor, with access to University of Windsor services and facilities.

# GLOSSARY

This glossary explains some terms which are used frequently throughout this Calendar. It is intended as a quick-reference guide and may not necessarily offer the complete, official definitions and explanations as they are applied to the University's programs and the administration of its regulations.

**Antirequisite -** A course or other level of attainment which, if already successfully completed, does not permit registration for credit in another course, and which cannot be taken for credit concurrently with that other course.

**Attempt -** Generally, any course for which a final grade has been assigned, including "WF" - Withdrew Failing. Failures which are repeated and for which credit is subsequently earned may or may not be considered as attempts, depending upon individual faculty regulations. If a student transfers from one program to another, not all previous attempts necessarily will be counted as attempts within the student's new program.

**Bachelor's Degree (Baccalaureate) -** The first university degree, for which a student follows a specific undergraduate program (e.g., B.A.- Bachelor of Arts).

**Certificate -** At the undergraduate level, a program consisting of eight to twelve one-term course equivalents in a specialized area(s) of study.

**Corequisite -** A course which must be taken concurrently with another course which lists it as a corequisite.

**Course -** A unit of study identified by a course title and a unique course number. Unless otherwise specified, the term "course" refers to a one-term, 3.0 credit course offering.

**Two-Term Course -** A course taught over two terms, usually the Fall and Winter terms. A two-term course normally carries twice the credit value of a one-term course, or 6.0 credits.

**Half Course -** A course having a value of 1.5 credits. Half courses may be offered for fewer contact hours per week over an entire term, or may be concentrated in either the first or the second half of a term.

**Credit -** A unit of academic value earned within a particular program. A credit value of 3.0 normally is assigned to a one-term course. A two-term course, therefore, would have a credit value of 6.0; a half-course 1.5.

Other credit values may be assigned. Some courses may be taken for varying amounts of credit within a specific range (e.g. 2.0 to 9.0 credits); other courses may be offered for alternate credit values (e.g., 3.0 or 6.0 credits).

Credit values are used in the calculation of averages for academic standing and in the determination of the student's year or level within a specific program. (See also "Weight").

**Cross-Listed Courses -** Courses which are listed under two different numbers in two different subject areas. Cross-listed courses may be taken in either subject area, but credit may be earned in only one course.

**Cumulative Average -** An average which is based upon all courses counted as attempts within a student's career.

**Diploma -** At the undergraduate level, a program of study less extensive than a degree program, but requiring more courses than a certificate program.

**Full-Time Student -** A student who is registered in four or more undergraduate courses in a term. (i.e., 12.0 credits or more).

**Linked Courses -** Credit may not be allocated to certain courses until a subsequent course is also successfully completed. Such "linking" of courses will be noted in the course descriptions.

**Major -** A formal, specific concentration of courses within a subject area as defined by its degree program(s).

**Major Average -** An average based upon courses attempted within the student's major as defined by the student's degree program.

**Part-Time Student -** A student who is registered in less than four undergraduate courses in a term (i.e., less than 12.0 credits).

**Prerequisite -** A course for which credit must have been earned prior to registration in another course which lists it as a prerequisite. ("Consent of Instructor" may be listed as an alternative to, or in addition to a given course prerequisite.)

**Program -** A combination of courses in a subject area (or areas) which fulfills the requirements for a degree, certificate, or diploma.

**Program Approval -** For students in certain programs, consulting with and obtaining the signed approval of course selections by a faculty advisor may be required as part of the registration process.

**Registration -** The process of selecting courses, obtaining faculty approval for course selections where necessary, and making the appropriate arrangements with the University to pay the required fees.

**Required Course -** A course for which credit must be earned in a student's program.

**Semester -** Same as "Term" (see below).

**Standing Required -** Individual faculties and set out specific requirements which students must meet in order to continue in their programs. These requirements normally include the maintenance of specific minimum cumulative and major averages, and also place certain restrictions upon the number of courses a student is permitted to have failed. Progress is reviewed at the end of each term.

**Term -** An academic period of twelve to thirteen weeks' duration. The Fall term extends from September to December; the Winter term from January to April. Intersession, which extends for six weeks from mid-May through the end of June, and Summer Session, which extends from the beginning of July to mid-August are considered together as a single term.

**Transcript -** A document issued by the Office of the Registrar which records all aspects of a student's registrations and grades obtained at the University. An "official" transcript is one which bears the official seal of the University and which is sent directly to another institution or official of an organization. "Unofficial" transcripts also may be issued to the student.

**Withdrawal -** A formal procedure set out within the regulations of the University for withdrawing from an individual course(s), or from the University entirely.

**Weight -** For students registered in the Faculty of Engineering, the calculation of averages is based upon a weighting factor. The weight of an individual course is equal to the number of lecture hours per week, plus one-half of the number of laboratory and/or tutorial hours per week.

**Year (or Semester) -** Attaining a particular Year or Semester level depends upon earning credit for a specific number of courses. The number of courses normally taken in one term/semester determines the Semester level; the number of courses normally taken in a program over both the Fall and Winter terms of a "regular" academic year would determine the Year level. In some programs, the attainment of a specific level also may reflect the earning of credits in a particular group or sequence of courses.