



NOTICE OF MEETING  
There will be a meeting of the  
PROGRAM DEVELOPMENT COMMITTEE (PDC)  
Monday, March 17, 2021 at 2:00pm-4:00pm  
MS Teams  
AGENDA

Formal Business

- 1 Approval of Agenda
- 2 Minutes of Meeting of February 14, 2021
- 3 Business Arising from the Minutes
- 4 Outstanding Business

Item for Approval

5 Reports/New Business

- |       |  |  |
|-------|--|--|
| 5.1   | Certificate in Forensic Science – New Program Proposal (Form A)                      | Maria Cioppa<br>PDC210317-5.1          |
| 5.2   | Chemistry and Biochemistry Applied Chemistry Stream – Major Program Changes (Form B) | Sirinart Ananvoranich<br>PDC210317-5.2 |
| *5.3  | Computer Science for University Graduate – Minor Program Changes (Form C)            | Imran Ahmad<br>PDC210317-5.3           |
| *5.4  | Biomedical Sciences– Minor Program Changes (Form C)                                  | Andrew Hubberstey<br>PDC210317-5.4     |
| *5.5  | Chemistry and Biochemistry/Biomedical Sciences – Minor Program Changes (Form C)      | Andrew Hubberstey<br>PDC210317-5.5     |
| *5.6  | Biomedical Sciences– New Course Proposals (Form D)                                   | Andrew Hubberstey<br>PDC210317-5.6     |
| *5.7  | Chemistry and Biochemistry – New Course Proposal (Form D)                            | Sirinart Ananvoranich<br>PDC210317-5.7 |
| *5.8  | Law – New Course Proposal (Form D)   | Jasminka Kalajdzic<br>PDC210317-5.8    |
| *5.9  | Nursing – New Course Proposals (Form D)  | Sue Fox<br>PDC210317-5.9               |
| *5.10 | Master of Human Kinetics – Degree Parchment  | Kevin Milne<br>PDC210317-5.10          |

**Items for Information**

- |              |   |  |
|--------------|---|--|
| <b>*5.11</b> | <b>Biomedical– Summary of Minor Course and Calendar Changes (Form E)</b>                  | <b>Andrew Hubberstey</b><br>PDC210317-5.11     |
| <b>*5.12</b> | <b>Chemistry and Biochemistry – Summary of Minor Course and Calendar Changes (Form E)</b> | <b>Sirinart Ananvoranich</b><br>PDC210317-5.12 |
| <b>*5.13</b> | <b>Engineering (Graduate) - Summary of Minor Course and Calendar Changes (Form E)</b>     | <b>Paul Henshaw</b><br>PDC210317-5.14          |
| <b>*5.14</b> | <b>English – Summary of Minor Course and Calendar Changes (Form E)</b>                    | <b>Johanna Luft</b><br>PDC210317-5.14          |
| <b>*5.15</b> | <b>Nursing – Summary of Minor Course and Calendar Changes (Form E)</b>                    | <b>Sue Fox</b><br>PDC210317-5.15               |
| <b>*5.16</b> | <b>Music (BA in Music and Combined BA Music) - Program Learning Outcomes</b>              | <b>Nicolas Papador</b><br>PDC210317-5.16       |
| <b>*5.17</b> | <b>Nursing – Course Learning Outcomes</b>   | <b>Sue Fox</b><br>PDC210317-5.17               |
| <b>*5.18</b> | <b>Computer Science (Graduate) – Course Learning Outcomes</b>                             | <b>Ziad Kobti</b><br>PDC210317-5.18            |

**6 Question Period/Other Business**

**7 Adjournment**

Please carefully review the 'starred' (\*) agenda items. As per the June 3, 2004 Senate meeting, 'starred' item will not be discussed during a scheduled meeting unless a member specifically requests that a 'starred' agenda item be 'unstarred', and therefore open for discussion/debate. This can be done any time before (by forwarding the request to the secretary) or during the meeting. By the end of the meeting, agenda items which remain 'starred' (\*) will be deemed approved or received.

University of Windsor  
Program Development Committee

5.1: **Certificate in Forensic Science – New Program Proposal (Form A)**

Item for: **Approval**

**MOTION: That the Certificate in Forensic Science be approved.^**

*^Subject to approval of the expenditures required.*

**Rationale/Approvals:**

- The proposal has been approved by SPDC as delegated by the Faculty of Science Coordinating Council. and the Provost.
- *See attached.*

**PROGRAM DEVELOPMENT COMMITTEE  
PROPOSAL BRIEF FOR NEW PROGRAMS  
FORM A**

**1. New Program Steering Committee/Provost Approval to Develop New Program Proposal**

*Prior to completing this form, proposers MUST complete a "[New Program Notice of Intent Form](#)" and obtain APPROVAL to proceed from the New Program Steering Committee and the Provost.*

Date of New Program Steering Committee/Provost approval to proceed with development of the new program proposal:	October 26, 2017
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**A. Basic Program Information**

Faculty(ies)	Faculty of Science
Department(s)/School(s)	Forensic Sciences
Name of Program as it Will Appear on the Diploma (e.g., Bachelor of Arts Honours Psychology with thesis)	<b>Certificate in Forensic Science</b>
Proposed Year of Offering* [Fall, Winter, Spring]: *(subject to timely and clear submission)	Winter 2021
Mode of Delivery:	Blend of classroom and online courses
Planned steady-state Student Enrolment (per section B.4.2)	50
Normal Duration for Completion:	Within a 4-year degree
Will the program run on a cost-recovery basis?	No

**B. Overall Program Plan**

**B.1 Objectives of the Program/Summary of Proposal (QAF section 2.1.1; Ministry section 4)**

*Please provide a brief statement about the direction, relevance and importance of the new program. Describe the overall aim and intended impact of the proposed new program. Describe the consistency of the proposed new program with the institution's mission, goals and objectives as defined in its strategic plan. (to view the strategic plan go to: [www.uwindsor.ca/president](http://www.uwindsor.ca/president))*

**Relevance and Importance:** Forensic science is an interdisciplinary area of study with applications in many fields (e.g., law, national security, public health). In the ever-changing global scenario with new kinds of crimes, and the addition of diverse new technologies to solve the crimes, the demand for forensic investigators is ever increasing, including but not limited to: law enforcement agencies, financial institutions, hospitals, military, environmental protection agencies, food and agriculture, border protection services, and private institutions. The widespread use of forensic science techniques suggests that the employment of forensic science technicians is projected to grow by 14% (faster than average) from 2018-2018 (Bureau of Labor Statistics, n.d.). Similarly, within Canada, there is a range of employment opportunities available for those who acquire the interdisciplinary knowledge and skills associated with forensic science (see section B.4.1 for employment data).

**Aim and Impact:** The **Certificate in Forensic Science** is designed to offer students opportunities to learn various aspects of crime scene investigation and management, forensic evidence analysis with new and traditional techniques, criminal law and courtroom (expert witness) testimony, as well as having the opportunity to do more focussed coursework in topics such as forensic medicine, bioterrorism and forensic anthropology. Acquiring this range of scientific knowledge offers students diversity in their employment prospects. Furthermore, the proposed certificate caters to student interests as evident by the increasing enrollment in the on-campus and on-line courses being offered by the Forensic Programs at the University of Windsor (see section B.4.4). To the best of our knowledge, within Ontario, Ryerson is the only university that offers a certificate in forensic science;

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however, this certificate has a specific focus on digital forensics. As such, the proposed certificate is designed to fill a gap in curricula.

The **Certificate in Forensic Science** will provide UWindsor students with the theoretical and technical skills required to analyze and interpret evidence that can be used in civil and criminal proceedings. The certificate consists of 8 courses: four required courses that provide a fundamental understanding of forensic science and criminal investigations; one course that provides hands-on training in forensic identification and/or laboratory techniques, one course on the Canadian legal system; and two courses selected by students that offer advanced knowledge and skills in forensics (e.g., bioterrorism, forensic medicine, etc.). A student graduating with this certificate will have: 1) an understanding of the fundamentals of forensic science, crime scene investigation and evidence analysis as applied to the human species; 2) knowledge of advanced analytical techniques needed for forensic investigations; 3) an introduction to how the legal system within Canada works; and 4) advanced knowledge in an area of forensic science that interests them. Please see section 'C.4 Learning Outcomes' for a more detailed description of the knowledge, skills, and abilities students will have gained upon successful completion of the certificate.

As a result, the proposed **Certificate in Forensic Science** is designed to provide added value to students already enrolled in Science by filling a gap in programming designed to prepare students with career-ready forensic science skills fully integrated into a strong science background. This certificate program is designed for Science students, but it is available to any student with an interest in forensic science who has available electives.

**Consistency with Institutional Goals:** This certificate has a strong interdisciplinary focus, containing aspects of forensic science, the social sciences and criminal law. It is designed for students interested in pursuing careers within law, business, social sciences, management and civil services, police and security services, and forensics sciences. As a result, the new program stream aligns with several Strategic Areas of Program Strength and Expansion within the SMA by addressing 'Business' and 'Law' (point one and nine within the program areas of strength) and 'Law, Education, and Professional Studies', 'Engineering, Science, and Computing', and 'Business, Cultures and Governance' (point two, three, and five within program areas of expansion). Courses within this certificate offer many opportunities for students to engage in hands-on learning which allows them to connect theory and practice. Providing these learning experiences that will prepare students for life after graduation and employment in a variety of sectors. The proposed certificate also contributes to the University of Windsor's mission, goals and objectives through improving the student learning experience in the area of career preparation and innovations in teaching and learning excellence, through the provision of high impact learning experiences.

### References

Bureau of Labor Statistics. (n.d.) U.S. Department of Labor, Occupational Outlook Handbook, Forensic Science Technicians, on the Internet at <https://www.bls.gov/ooh/life-physical-and-social-science/forensic-science-technicians.htm> (visited May 12, 2020).

### B.2 Program Content (QAF Section 2.1.4)

*Evidence that the proposed curriculum is consistent with the current state of the discipline or area of study.*

Undergraduate degree programs in Forensic Science are offered at nine universities in Canada (four of these programs are offered in Ontario). There are a small number of universities and colleges in Ontario, and across Canada that offer certificates in forensic science (see section 'B.4.5 Duplication' for more information).

The University of Windsor offers a Combined BA in Forensics (+ a second major) and Honours Bachelor of Forensic Science. The curriculum included in the proposed certificate is a derivative of these programs, whereby students are completing core courses in forensic science that will provide them with the theoretical understandings and

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practical experiences needed to have an understanding of forensic science. More specifically, the certificate consists of 8 courses: four required courses that provide a fundamental understanding of forensic science and criminal investigations, one course that provides hands-on training in forensic identification, one course that introduces students to the Canadian legal context, and two advanced skills courses where students will specialize in an area of forensic science (e.g., bioterrorism, forensic medicine, etc.). The quantity of courses included in this certificate as well as the subject areas are similar to other certificate programs. As such, the courses included in this certificate are **consistent with the state of the discipline**.

Please see section C.2 for a summary of courses included in the certificate.

**B.2.1 Unique or Innovative Curriculum, Program Delivery, or Assessment Practices (QAF Section 2.1.4)**

*State the unique or innovative curriculum, program delivery, or assessment practices distinguishing this proposal from existing programs elsewhere.*

To the best of our knowledge, within Ontario, Ryerson is the only university that offers a certificate in forensic science (see section 'B.4.5 Duplication' for more information). As such, the proposed certificate program will offer a **unique contribution** to the discipline.

A **distinguishing feature** of the proposed certificate is that it allows students to complete their degree while simultaneously earning a certificate. This certificate can be combined with both science and non-science degrees, thus providing an opportunity for students from varying backgrounds to collaborate, share perspectives, and approaches. This certificate provides more depth than a minor, focuses on various aspect of the discipline, and includes both online and in-class courses offering flexibility to students.

This certificate offers courses in a blended format. Some courses are only available online, some courses are available only face-to-face, and some courses are offered both online and face-to-face providing allowing students to choose their preferred mode of delivery (see below). Students must be available to attend face-to-face courses. The program offers an **innovative curriculum**, including introductory-level forensics and crime scene courses that are not available anywhere except through the University of Windsor on e-Campus. These introductory forensic courses typically have enrolments that exceed 200 students for each course (400+combined- in class and on-line) annually at the University of Windsor. These courses include unique and innovative learning opportunities, including access to state-of-the-art forensics technologies and analyses. The courses included in this certificate have built-in experiential learning components and high impact practices where students will engage in crime scene and moot court examinations, and practical exams. Select courses within the program are taught by practitioners (e.g., police officers and criminal lawyers) who offer professional insights and 'real-world' applications of the subject matter. This will allow students to build their professional network.

The curriculum for the proposed certificate has four major components that will allow students to gain expertise and applied experiences in forensic science. The selected courses will allow students to progress from introductory to mastery level of the certificate learning outcomes. The major components and constitutive courses are:

**A. Fundamentals of forensic science (four required courses):**

- FRSC 1101 (in person)/1107 (online) Introductory Crime Scene Investigation
- FRSC 2007 Introduction to Forensic Science (in person and online depending on course section)
- FRSC 2100 Crime Scene Evidence Analysis (online)
- SACR 2150 Principles of Physical Anthropology (in person)

**B. Hands on skills (1 course): Students must select one course from the following:**

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- FRSC 3105 Forensic Identification (in person)
- FRSC 3101 Forensic Science Laboratory (in person)

**C. Legal Context (1 course): Students must select one course from the following:**

- LAWS 2190 Forensic Evidence and the Canadian Legal System (in person)
- FRSC 3010 Expert Witness in Forensic Science (in person)

**D. Advanced Knowledge and Skills (2 courses): Students must select two courses from the following:**

- SACR 3230 Forensic Anthropology (in person)
- FRSC 3201 Applied Entomology (in person)
- FRSC 3217 Forensic Serology and DNA Analysis (online)
- FRSC 4018 Special Topics in Forensic Science (content varies) (online or in person depending on topic)
- FRSC 4207 New Perspectives in Forensic Evidence Analysis (online)
- FRSC 4217 Advances in Human Identification (online)
- FRSC 4227 Forensic Medicine: Toxins and Pathology (online)
- FRSC 4237 Bioterrorism, Food and Environmental Forensics (online)

There are three courses included in the proposed certificate that are offered outside of the Faculty of Science, specifically Sociology, Anthropology, and Criminology (SACR-2150, SACR-3230) and Law (LAWS-2190). All three of these courses are required as part of the BA and BSc in Forensics. With respect to the proposed certificate, **only** SACR 2150 is a required course. Since this certificate will be completed by current UWindsor students, who may already be completing these courses as part of their degree program or through electives, we do not anticipate that introducing this certificate will greatly impact the enrolment of SACR-2150. SACR-2150 is taught by a faculty member who is part of the existing Forensic Science program.

**B.2.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material**

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In developing this program, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Indigenous content, perspectives, and material may be included in various certificate courses based upon the discretion of the instructor. Individual instructors will review course materials and identify areas where indigenous content can be integrated to provide a holistic perspective of a topic. Courses may include opportunities to discuss: vulnerable populations perspectives, the media representation of indigenous persons, ethical considerations when researching vulnerable populations, and population sampling for geographical representation.

**B.3 Program Name and Degree Designation/Nomenclature (QAF Section 2.1.1; MINISTRY section 1)**

*Explanation of the appropriateness of the name and degree designation for the program content and current usage in the discipline.*

The University of Windsor defines a certificate to be “a non-degree program that... recognizes special sets of skills and knowledge not necessarily based in a single discipline...” Through its breadth, range of courses, and focus on forensic science and associated disciplines, the **Certificate in Forensic Science** fulfils this definition.

**B.4 DEMAND FOR THE NEW PROGRAM**

**B.4.1 Student and Market Demand (MINISTRY section 5)**

*Describe the tools and methodology used to conduct the market assessment. Provide quantitative evidence of student and market demand both within and outside the local region (e.g., responses/statistics from surveys, etc.).*

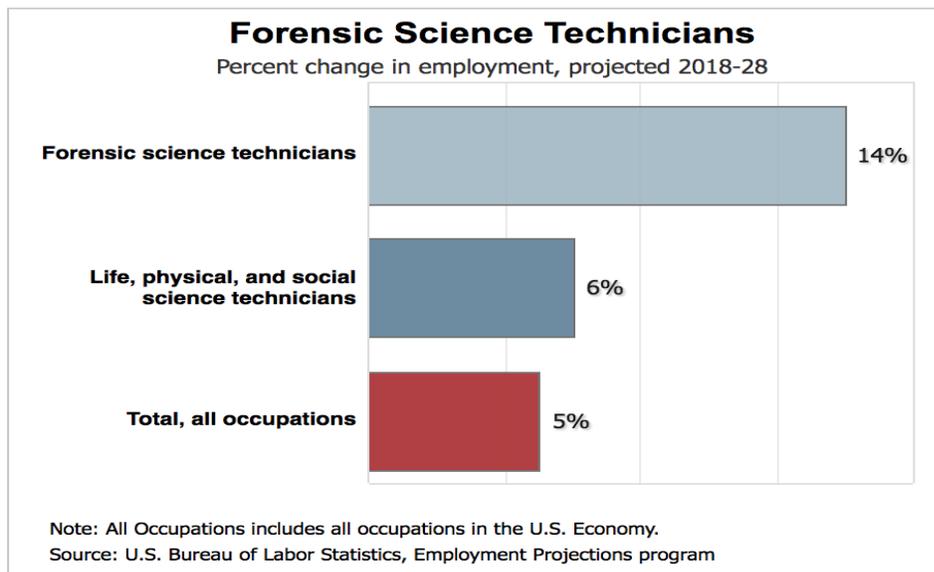
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## Labour Market Data:

The new certificate has a strong interdisciplinary focus in forensic science and the social sciences, and recognizes fundamental knowledge in forensics, crime scene investigations and evidence analysis, as well as an introduction to the legal system within Canada. One of the benefits of completing this interdisciplinary certificate is that it widens the scope of job prospects for students and allows them to draw connections between concepts across boundaries and facilitates creative and critical thinking. Following the completion of this certificate, students will be prepared for a range of careers within law, business, social sciences, management and civil services, police and security services, and forensic science.

The employment of forensic science techniques is anticipated to grow by 14% (faster than average) from 2018-2028 (Bureau of Labor Statistics, n.d; see Figure 1 and Table 1).

**Figure 1: (Reference U.S. Bureau of Labor Statistics, Employment Projections program)**



**Table 1. (Reference U.S. Bureau of Labor Statistics, Employment Projections program)**

Quick Facts: Forensic Science Technicians	
2019 Median Pay <a href="#">?</a>	\$59,150 per year \$28.44 per hour
Typical Entry-Level Education <a href="#">?</a>	Bachelor's degree
Work Experience in a Related Occupation <a href="#">?</a>	None
On-the-job Training <a href="#">?</a>	Moderate-term on-the-job training
Number of Jobs, 2018 <a href="#">?</a>	16,700
Job Outlook, 2018-28 <a href="#">?</a>	14% (Much faster than average)
Employment Change, 2018-28 <a href="#">?</a>	2,400

Multiple job searches were conducted using key words such as 'forensic science', 'forensics', and 'forensic scientist' (searches were performed on May 21<sup>st</sup>, 2020). Below is a summary of the number of postings by search source:

- Indeed Canada: 123 jobs (keyword 'forensic science'); 376 jobs (keyword 'forensics')
- Glassdoor: 8 jobs (keyword 'forensic scientist')

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- WOWjobs: 109 jobs (keyword 'forensic science')
- Forensics.ca Job Posting Board: 32 jobs

Within Ontario, labour market information and statistics suggests that there are current and projected job opportunities in many of the sectors that graduates with experience in forensic science would be prepared for (Ministry of Labour, Training and Skills Development, 2017; see Table 2 for examples). The vast majority of these positions require a university degree and/or completion of a college program, have low unemployment rates, and have a stable job outlook. Therefore, there is evidence of market demand for with skills garnered through this certificate. Please see Table 2 for examples of potential job profiles and employment statistics.

**Table 2. Employment statistics**

Job profile	Median income	Projected number of job openings (2017-2021)	Job outlook (2017-2021) <sup>^</sup>	Number of job postings	Unemployment rate
Police officers (except commissioned)	\$105,854	4,001-5,000	Average	313	0.6% <sup>+</sup>
Commissioned police officers	\$140,086	201-300	Undetermined	18	2% <sup>+</sup>
Correctional service officers	\$79,208	801-900	Undetermined	92	1.2% <sup>+</sup>
Other professional occupations in social science	\$68,421	201-300	Average*	315	5.7%
Sheriffs and bailiffs	\$53,098	<=100	Undetermined	4	3.9% <sup>+</sup>
Probation and parole officers and related occupations	\$76,003	501-600	Undetermined	7	0.5% <sup>+</sup>
Other services supervisors (e.g., chief security guard)	\$42,220	1,001-2,000	Undetermined	58	5.4%
Social and community service workers (e.g., community services officer – social services)	\$50,932	10,001-15,000	Average	784	3.7% <sup>+</sup>
Security guards and related security service occupations	\$35,552	10,001-15,000	Average	3991	6.5%
Employment insurance, immigration, border services and revenue officers	\$68,339	2,001-3,000	Undetermined	102	1.8% <sup>+</sup>

**Note:** These data were gathered from the Ministry of Training, Colleges and Universities Ontario's labour market website for the aforementioned job profiles.

<sup>^</sup>Job outlook ratings can tell you how future demand for this job is expected to compare with other jobs across Ontario.

\*indicates this occupation was assessed as part of a broader group of similar occupations due to sample size restrictions.

<sup>+</sup>Unemployment rate is below the National unemployment rate (5.5% as of June 2019) within Canada:

<https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410028703>

Police offers (except commissioned): <https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=4311>

Commissioned police officers: <https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=0431>

Correctional service officers: <https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=4422>

Other professional occupations in social science: <https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=4169>

Sheriffs and bailiffs: <https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=4421>

Probation and parole officers and related occupations:

<https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=4155#annualJobOpeningsSection>

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Other services supervisors: <https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=6316>  
 Social and community service workers: <https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=4212>  
 Security guards and related security service occupations: <https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=6541>  
 Employment insurance, immigration, border services and revenue officers:  
<https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=1228>

The labour data from job searches and the Ministry of Labour, Training and Skills Development labour market analysis provide support that there are current and projected job openings in forensic science, policing, and related fields. Course enrollment data suggests considerable existing interest among UWindsor students to complete the courses offered within the certificate program (see Table 3 in Section B.4.4.).

Based upon the review of student enrollment (see Table 3) and market demand as well as literature, the proposed certificate program will assist students with the development of theoretical and hands-on skills in forensic science addressing a current gap in the labour market.

### B.4.1.1 Percentage of Domestic and International Students (Ministry section 5)

*Expected proportion (percentage) of domestic and international students. For graduate programs, identification of undergraduate or master’s programs from which students would likely be drawn.*

The percentages of domestic and international students enrolling into the certificate are likely to represent the range of students already enrolled at the University of Windsor.

### B.4.2 Estimated Enrolments (QAF section 2.1.9; Ministry section 5; Senate Co-op Policy)

*Provide details on projected enrolments in the following tables.*

*For Co-op programs: normally an annual intake of a minimum of 20 students is required for new co-op programs or programs with other experiential learning component.*

<i>Projected enrolment levels for the first five years of operation. (If the program is in operation, use actual and projected data.)</i>	First Year of Operation	Second Year of Operation	Third Year of Operation	Fourth Year of Operation	Fifth Year of Operation (Steady-state enrolment overall)
<i>In the regular program (non-co-op)</i>	15	25	35	45-50	50
<i>In the co-op/experiential learning stream (if applicable)</i>					
<i>For co-op option: projected number of international students enrolled in the co-op stream</i>					

<i>Annual projected student intake into the first year of the program: (this may differ from the “first year of operation” projected enrolments which could include anticipated enrolments from students transferring into the second, third, or fourth year of the program)</i>	15
<i>Annual projected student intake into the first year of the co-op/experiential learning version of the program: (this may differ from the “first year of operation” projected enrolments which could include anticipated enrolments from students transferring into the second, third, or fourth year of the program)</i>	

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We assume a gradual uptake of the certificate: enrolment of 15 students in first year of operation, 10 in second, 10 in third, reaching a steady state intake of 10-15 in fourth year, for a total of 50 for the steady state.

**B.4.3 Collaborative Program (QAF section 1.6)**

*If this is a collaborative program with another college/university, identify partners and describe institutional arrangements for reporting eligible enrolments for funding purposes.*

N/A

**B.4.4 Societal Need (Ministry section 6)**

*Describe the tools and methodology used to assess societal need.*

*Elaborate on the*

- 1) dimensions of (e.g., socio-cultural, economic, scientific, or technological),*
  - 2) geographic scope of (e.g., local, regional, provincial, or national), and*
  - 3) anticipated duration of, and trends in,*
- societal need for graduates of the new program*

*Evidence of societal need for the program will typically include a review of relevant industry and provincial survey and statistical data, as well as a review of the proposed program by relevant experts in the field.*

Forensic science is the application of science, and the scientific method to the judicial system. According to the Canadian Society of Forensic Science (n.d.), forensic science “is used to enforce laws and government regulations and statutes, to resolve disputes, to assess blame and establish responsibility, and to improve public safety” (para 3). Forensic science has applications to both criminal and civil proceedings. Given the scope of forensics, it is critically important for lawyers, judges, enforcement officials, and the public to understand the applications and limitations of forensic science (Canadian Society of Forensic Science, n.d.).

In Canada, forensic sciences are a cornerstone in any effective justice system; experts on a multidisciplinary report unanimously concluded that forensic sciences must grow and develop in Canada to enhance public health, safety, and justice (Pollanen, Bowes, VanLaerhoven, & Wallace, 2012). In the ever-changing global scene of population growth and crime, the demand for forensic investigators is increasing in many fields including but not limited to: law enforcement agencies, financial institutions, hospitals, military, environmental protection agencies, food and agriculture, border protection services, and private institutions. As such, students in different degree programs (e.g., computer science, biology, chemistry, criminology) are likely to be interested in this certificate. Information on anticipated labour and student market demand trends can be found in section B. 4.1.

The American Chemical Society (ACS) Forensic Science position statement emphasizes the important role that forensic science has in the investigation of domestic and international incidents, national security, and public health and safety. In particular, they ask policy makers to support forensic science reform through in the following ways:

- Strengthen scientific rigor within the forensics culture and expand and integrate forensic science research with the larger scientific community, including ACS
- Validate and improve the accuracy of forensic analytical methods
- Monitor and ensure the quality of forensic science education and practice (American Chemical Society, n.d.).

To accomplish these aims, academic institutions must expand their forensic science curriculum which will contribute to the training of future forensic science practitioners.

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This proposed certificate will be designed to offer students flexible learning opportunities to learn various aspects of crime scene management, forensic evidence analysis, bioterrorism, food and environmental forensics, forensic pathology, law, and court testimony, etc. The possession of these skills has good market value (Bureau of Labor Statistics, n.d.; Ministry of Labour, Training and Skills Development, 2017) and this is evident by the increasing enrolment in the on-campus and online courses being offered by the Forensic Sciences Program at the University of Windsor.

This proposal builds on the success of the existing courses in forensic sciences that have significantly contributed to a 72% growth in science enrolments since 2011 and 573% growth in course enrolment within interfaculty programs since 2014 at the University (see Table 3). Table 3 demonstrates that many of the FRSC courses are at or close to capacity; however, a high percentage of the students taking the introductory courses are either non-forensic and/or non-science students (e.g. criminology majors) interested in forensic science. As such, growth in the introductory courses is expected to be minimal. The introduction of the certificate is a way for such students to formalize their interest. Indeed, such formalization is advantageous in that it also allows planning for future growth in the upper-year courses and additional allocation of resources if required.

**Table 3. Current course offerings in Forensic Sciences at University of Windsor**

Course No.	Course Name	Enrolment				Winter 2017	Fall 2017	Winter 2018	Fall 2018	Winter 2019	Fall 2019	Winter 2020	Fall 2020
		Winter 2015	Fall 2015	Winter 2016	Fall 2016								
FRSC 1107/ 1101 57-110	Introductory Crime Scene Investigation		200 (200)		200		257 (250)		253		247		52+ 198 +134 (I/S)
FRSC 2007 57-201	Introduction to Forensic Science	325 (300)		400 (400)		400		459 (450)		455		193+ 251	165 (added )
FRSC 2100 57-210	Crime Scene Evidence Analysis		102 (100)		108		114		130 (120)		102		107
FRSC 3217	Forensic Serology and DNA Applications									59 (60)		60	
FRSC 3101	Laboratory in Forensic Science		27 (24)		30		22		22		22		N/O
FRSC 3105	Forensic Identification	39 (40)		22		38		30		41		N/O	
FRSC 3111	Digital Photography	19 (40)		40		36		22		30		38	
FRSC 3010	Expert Witness		23 (40)		26		37		35		40		40
FRSC 3201 / 14-57- 304	Insect Evidence / Applied Entomology		16 (12)		12		N/A		2		19 (18)		23 (24)
FRSC 4207 57-410	New Perspectives in Forensic Evidence Analysis				45 (50)		43		46		43		47
FRSC 4217 57-411	Advances in Human Identification			76 (50)		54		50		41		62	
FRSC 4227 57-480	Forensic Medicine: Toxins and Pathology							40 (40)		35		46	

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FRSC 4237 57-482	Bioterrorism, Food and Environmenta l Forensics								50 (50)		39	
LAWS 2190/ 99- 215	Forensic Evidence and the Canadian Legal System		15		37		36		44 (50)		29 (30)	42 (40)
SACR 2150 / 48-215	Principles of Physical Anthropology		38		47		68 (80)			60 (50)	51 (50)	99 (100)
SACR 3230	Forensic Anthropology			18 (50)		19		30		27		49

Note: Numbers in brackets indicate enrolment caps – if no number, not changed from previous year.

The certificate is designed to provide added value to students already enrolled in degree programs at the University of Windsor and was intentionally created to be interdisciplinary and available to science and non-science students. The benefit of this certificate is that it allows student to earn two credentials in a four-year span. The certificate structure provides students with an opportunity to gain exposure and experience with forensic science which may prepare them for post-graduate education. Through this unique package of existing courses, students will gain an in-depth understanding of forensic theories, complemented with practical experiences in forensic investigation and identification designed to prepare students for careers as crime scene officers, border services officer, behaviour profiler, internet security analyst, forensic psychologist, etc.

Given that this undergrad certificate is dependent on enrollment in other programs at the University of Windsor (i.e., students have to be enrolled in a degree program) and there are a limited number of additional new courses being offered, a full external review of societal need was not required.

**References**

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Pollanen, M., Bowes, M., VanLaerhoven, S., Wallace, J. (2013). Forensic science in Canada: A report of multidisciplinary discussion. Retrieved from <https://www.crime-scene-investigator.net/forensic-science-in-canada.pdf>

Bureau of Labor Statistics. (n.d.) U.S. Department of Labor, Occupational Outlook Handbook, Forensic Science Technicians, on the Internet at <https://www.bls.gov/ooh/life-physical-and-social-science/forensic-science-technicians.htm> (visited May 12, 2020).

**B.4.4.1 Societal Need – Letters, Surveys, Statistics**

<ul style="list-style-type: none"> <li><i>The development of this proposal included consideration of comments or letters solicited from potential employers regarding the need for graduates of the proposed program within their organization and field of endeavour.</i></li> </ul>	<input checked="" type="checkbox"/> <i>Yes</i>	<input type="checkbox"/> <i>No, explain below</i>
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<i>• The development of this proposal included consideration of comments or letters solicited from relevant professional societies or associations about the need for graduates of the proposed program.</i>	___ Yes	__X__ No, explain below
<i>• The development of this proposal included a review of industry employment surveys for evidence of societal need (indicating numbers of positions in the field, numbers of anticipated new positions in the field, number of positions in the field current being advertised, etc.)?</i>	___ Yes	__X__ No, explain below
<i>• The development of this proposal included a review of statistical evidence of the number of Ontario students leaving the province to study the field elsewhere in Canada or abroad?</i>	___ Yes	__X__ No, explain below
<b>If yes, append letters, survey or statistics to proposal.</b>		
<b>If no, explain:</b> We have not undertaken a full consultation with industry and community partners regarding this certificate. Given that this undergrad certificate is dependent on enrollment in other programs at the University of Windsor and consists of existing courses, a full external review of societal need was not required. However, based upon the review of the literature there is evidence of societal need for the program.		

**B.4.5 Duplication (Ministry section 7)**

List similar programs offered by other institutions in the Ontario university system. Resources to identify similar programs offered in Ontario include [www.electronicinfo.ca](http://www.electronicinfo.ca), [www.electronicinfo.ca/einfo.php](http://www.electronicinfo.ca/einfo.php), and [www.oraweb.ucc.ca/showdca.html](http://www.oraweb.ucc.ca/showdca.html). Also, list similars program in the geographically contiguous area, e.g., Michigan/Detroit.

Within Canada, there are seven degree programs in forensic science. Five of these programs are offered at Ontario universities:

- University of Toronto, Mississauga, Forensic Science Honours BSc
- Laurentian University, BSc Forensic Science; BA Forensic Identification
- University of Windsor, Honours Bachelor of Forensic Science; Combined BA Honours in Forensics
- Trent University, Honours BSc. F.S in Forensic Science; Joint Major in Forensics
- University of Ontario Institute of Technology, Bachelor of Science (Honours), Bachelor of Science and Management (Honours)

The course requirements of the aforementioned degree programs are much more than the course requirements of the proposed certificate program.

To the best of our knowledge there is one certificate in Forensic Science within Ontario:

- Ryerson University, Computer Security and Digital Forensics

There are also three colleges in Ontario that offer programs in Forensic Science:

- Humber College, Forensic Identification (Ontario Graduate Certificate)
- Humber College, Forensic Practice (Ontario Graduate Certificate)
- Fleming College, Biotechnology-Advanced Diploma
- Seneca College, Biotechnology-Advanced Diploma
- Seneca College, Fraud Examination & Forensic Accounting (Ontario College Graduate Certificate)
- Algonquin College, Forensic Accounting and Fraud Investigations (Ontario College Graduate Certificate)

The first five college programs are likely to provide students with some theoretical and procedural components of specific aspects of forensic science, while the last are more related to accounting. However, the courses included

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within the proposed certificate will provide a broader scope of scientific literature and theoretical concepts within forensics and social sciences (e.g., law).

To the best of our knowledge, there is only one certificate in forensic science within Ontario offered by an Ontario University; however, there are several offered by colleges. This certificate, offered at Ryerson University, has a specialized focus in computer security and digital forensics. There is no anticipated overlap between Ryerson’s program and the proposed certificate program. As such, the proposed program is a unique and innovative opportunity to fill a gap in programming designed to prepare students with career-ready forensic science skills fully integrated into an interdisciplinary background.

**B.4.5.1 Demonstrate that Societal Need and Student Demand Justify Duplication (Ministry section 7)**

*If the proposed program is similar to others in the system, demonstrate that societal need and student demand justify the duplication. Identify innovative and distinguishing features of proposed program in comparison to similar programs.*

Within Ontario, there is only one known certificate program in Forensic Science, which has a focus on computer security and digital forensics. There is no anticipated overlap between our proposed certificate and Ryerson’s certificate program. Furthermore, the proposed certificate is unique in that it includes online courses, covers a broad range of forensic science topics, and will expose students to state-of-the-art forensic technologies and analyses. This certificate program requires no additional resources, therefore, the benefits of offering this program far outweigh any potential risks.

**B.5 RESOURCES**

*[The resource impact of a proposal is almost never neutral. Note: Proposers must also complete and submit the **Budget Summary** (Appendix B) with the new program proposal.]*

**B.5.1 Resources Available**

**B.5.1.1 Available Faculty and Staff Resources (QAF sections 2.1.7, 2.1.8, 2.1.9 and 2.1.10)**

*Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the proposed program. Please do not name specific individuals in this section.*

The Faculty of Science is committed to supporting this certificate. All courses within this certificate program are offered within the current academic calendar so there are no additional resources required. These courses are regularly offered by faculty members within Science. Faculty leading courses in this certificate have expertise that are central to this program.

Administrative tracking will be provided within the UWinsite system. The Academic Advisor within the Faculty of Science will advise students on matters related to completing this certificate to ensure appropriate sequencing and course selection. The program is intended as a value-added opportunity, and as part of a suite of certificate programs that will enhance enrolment in science overall.

**B.5.1.1a Faculty Members Involved in the Delivery of the Program**

*Complete the following table listing faculty members in the AAU offering the proposed program as well as faculty members from other AAUs who are core to the delivery of the proposed program. Indicate in the table the involvement of each faculty member in the new and existing program(s) offered by the AAU.*

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Faculty Name and Rank (alphabetical)	Graduate Faculty member (for graduate programs only)	Program Affiliation: indicate faculty affiliation to the EXISTING program(s)	Program Affiliation: indicate faculty affiliation to the NEW program
<b>Category 1: Tenured Professors teaching exclusively in the AAU offering the program</b>			
Dr. John Albanese, Associate Professor	N/A	Forensic Science & Sociology/Anthropology and Criminology	Forensic Science & Sociology/Anthropology and Criminology
Dr. Sherah VanLaerhoven, Associate Professor	N/A	Forensic Science & Integrative Biology	Forensic Science & Integrative Biology
<b>Category 2: Tenure-track Professors teaching exclusively in this AAU</b>			
...			
<b>Category 3: Ancillary Academic Staff such as Learning Specialists Positions</b>			
Dr. Pardeep Jasra, Learning Specialist	N/A	Forensic Science & School of the Environment	Forensic Science & School of the Environment
Dr. Shashi Jasra, Learning Specialist	N/A	Forensic Science & BioMedical Sciences	Forensic Science & BioMedical Sciences
<b>Category 4: Limited-term Appointments teaching exclusively in this AAU</b>			
...			
<b>Category 5: Tenure or tenure-track or LTA professors involved in teaching and/or supervision in other AAUs, in addition to being a member of this AAU</b>			
...			
<b>Category 6: Sessionals and other non-tenure track faculty</b>			
Steve Hubley, Sessional Instructor and Adjunct Assistant Professor of Practice	N/A	Forensic Science	Forensic Science
Brian Manarin, Sessional Instructor and Adjunct Professor (LAW)	N/A	Faculty of Law	Forensic Science
Jennifer McLean, Sessional instructor	N/A	Forensic Science	Forensic Science
Gary Scoyne, Sessional instructor and Adjunct Assistant Professor of Practice	N/A	Forensic Science	Forensic Science

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<b>Category 7: Others – Tenure, tenure-track, LTA professors, or sessionals involved in teaching and/or supervision in other AAUs.</b>			
Maria Cioppa, Associate Professor, Forensic Programs Administrator,	N/A	School of the Environment, Forensic Programs	School of the Environment, Forensic Programs

**B.5.1.1b Faculty Expertise Available and Committed to Supporting the New Program**

*Assess faculty expertise available and actively committed to the new program. Provide evidence of a sufficient number and quality of faculty who are qualified to teach and/or supervise in the proposed program, and of the appropriateness of this collective faculty expertise to contribute substantially to the proposed program.*

*Include evidence (e.g., qualifications, research/innovation/scholarly record) that faculty have the recent research or professional/clinical expertise needed to:*

- *sustain the program*
- *promote innovation, and*
- *foster an appropriate intellectual climate.*

*Append curricula vitae – see Appendix A. CVs are not required for undergraduate diploma or certificate proposals.*

The Faculty of Science is committed to supporting this certificate, and the Dean of Science has published on the need for high impact and experiential learning. All certificate courses will be led by specialists in the area who have expertise in the subjects that are central to this program. Given that the courses within the certificate are already being offered within the current academic calendar, there is already a sufficient number of highly qualified faculty to support this proposed program. These expert faculty have published in leading national and international journals on topics (or similar topics) to the courses offered within the program.

**B.5.1.1c Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the New Program**

*Describe the area’s expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the proposed program.*

The courses within the certificate program are part of two larger degree programs: Honours Bachelor of Forensic Science (BFS) and Combined Bachelor of Arts in Forensics. The required or elective forensic courses taught within the full degree programs by non-permanent appointments represents only 5/18 courses (~27%) with 2-3 additional courses taught by full time faculty on overload. Sessional instruction is included in these full degree programs where the sessional instructors provide a clear industry expertise and experience that is not possible in tenure-or permanence-track faculty. The use of sessional instructors within the full program has not influenced the sustainability of these degree programs and was not identified as an issue in the last IQAP review.

Within the proposed certificate, only 4 of 15 courses are taught by non-permanent staff (see section [B.5.1.5a](#) for a summary table). As enrolment grows in these degree programs, additional permanent resources will be allocated to support this program. The creation of the certificate will ensure that we have sustainable and appropriate-sized sections and can limit the number of electives at a savings that is to be invested in new faculty hires.

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**B.5.1.1d Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY)**

*Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision.*

N/A

**B.5.1.1e Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY)**

*Where appropriate to the program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.*

N/A

**B.5.1.1f Other Available Resources (Ministry sections 3 and 4)**

*Provide evidence that there are adequate resources available and committed to the proposed program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities, including for example:*

- *staff support,*
- *library,*
- *teaching and learning support,*
- *student support services,*
- *space,*
- *equipment,*
- *facilities*
- *GA/TA*

The courses within the certificate program are offered within the current undergraduate academic calendar. Students from other program can already take the courses in the certificate and this certificate is recognizing their activity and ensure that if they complete a specific combination of courses, they will earn a degree and certificate simultaneously. As such, there is already adequate resources available and a commitment to sustaining the educational experience of undergraduate students within the forensic programs.

Additional sections of specific courses (e.g. FRSC 3010, FRSC 3105, FRSC 3111, LAWS 2190) are already anticipated to be required as enrolment in the programs has increased in the last couple of years. This increase will require additional space and equipment, and this is currently under discussion with the Faculty of Science office. However, no new resources beyond those already planned are required to offer this certificate.

**B.5.1.2 Resource Implications for Other Campus Units (Ministry sections 3 and 4)**

*Describe the proposed program's reliance on existing resources from other campus units, including for example:*

- *existing courses,*
- *equipment or facilities outside the proposer's control,*
- *external resources requiring maintenance or upgrading using external resources*

*Provide relevant details.*

The courses within the certificate program are offered regularly within the current undergraduate academic calendar. For some science students, the courses within the certificate are already used as options within their degree program. There are two courses within this certificate from Sociology, Anthropology, and Criminology. SACR-2150 is a required course and SACR-3230 is an elective. These two courses are already required courses for the BA and BFSc in Forensics, and their enrolment typically consists of 50% forensic students and 50% non-science (SACR) students. Since this certificate will be completed by current UWindsor students, who may already be completing these courses as part of their degree program or through electives, we do not anticipate that introducing this certificate will greatly impact the enrolment of SACR-2150, which is taught by a faculty member

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who is part of the existing Forensic Science program. There is also one elective course from Law (LAW-2190). This course is also a required course for the BA and BfSc in Forensics. LAW 2190 is not a required course in this certificate program. Instead, students can choose to take LAW 2190 or FRSC 3010 so this choice minimizes the reliance on resources from other units. All other courses within the program are offered within the Faculty of Science, so there is minimal reliance on existing resources from other campus units.

**B.5.1.3 Anticipated New Resources (QAF sections 2.1.7, 2.1.8 and 2.1.9; Ministry section 4)**

List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the proposed program.

N/A

**B.5.1.4 Planned Reallocation of Resources and Cost-Savings (QAF section 2.1.7 and 2.1.9; Ministry section 4)**

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in preparing this proposal. (e.g., streamlining existing programs and courses, deleting courses, etc.)

N/A

**B.5.1.5a Additional Resources Required – Resources Requested (QAF section 2.1.7 and 2.1.9)**

Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the proposed program.

<b>Faculty:</b>	No change beyond what is expected from normal enrollment growth
<b>Staff:</b>	No change beyond what is expected from normal enrollment growth
<b>GA/TAs:</b>	No change beyond what is expected from normal enrollment growth

The courses within the certificate program are part of two larger degree programs: Honours Bachelor of Forensic Science (BFS) and Combined Bachelor of Arts in Forensics. In the last two years, “normal enrolment growth” has led to adding sections of several courses, increasing enrolment in others, modifying course requirements (adding lab sections and TAs), and introducing several pilot special topics courses (including a Destination Science field course at Strathclyde University). The Faculty of Science has supported these curriculum changes and has committed to support the additional costs as enrolment continues to increase. As enrolment grows in these degree programs, additional permanent resources will be allocated to support this program. As noted in the table below, the courses included in the certificate are primarily taught by full-time faculty (i.e., 11 of 15 courses). Sessional instructors are relied on when industry expertise and experience is required and is not available in tenure-or-permanence-track faculty.

Course	Instructor	Rank
*FRSC 1101/1107 Introductory Crime Scene Investigation (Required)	Dr. Pardeep Jasra	Learning Specialist
*FRSC 2007 Introduction to Forensic Science (Required)	Dr. Shashi Jasra / Dr. Pardeep Jasra	Learning Specialist
*FRSC 2100 Crime Scene Evidence Analysis (Required)	Dr. Shashi Jasra	Learning Specialist
*SACR 2150 Principles of Physical Anthropology (Required)	Dr. John Albanese	Associate Professor

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FRSC 3105 Forensic Identification (Elective)	Constable Gary Scoyne (Ret.) Constable Wade Knaap (Ret.)	Sessional Instructor and Adjunct Assistant Professor of Practice (Scoyne)
*FRSC 3101 Forensic Science Laboratory (Elective)	Dr. Shashi Jasra	Learning Specialist
LAWS 2190 Forensic Evidence and the Canadian Legal System (Elective)	Dr. Brian Manarin	Sessional Instructor and Adjunct Professor (LAW)
FRSC 3010 Expert Witness in Forensic Science (Elective)	Constable Steve Hubley	Sessional Instructor and Adjunct Assistant Professor of Practice
*SACR 3230 Forensic Anthropology (Elective)	Dr. John Albanese	Associate Professor
*FRSC 3201 Applied Entomology (Elective)	Dr. VanLaerhoven	Associate Professor
FRSC 3217 Forensic Serology and DNA Analysis (Elective)	Ms. Jennifer McLean	Sessional instructor
*FRSC 4207 New Perspectives in Forensic Evidence Analysis (Elective)	Dr. Pardeep Jasra	Learning Specialist
*FRSC 4217 Advances in Human Identification (Elective)	Dr. Shashi Jasra	Learning Specialist
FRSC 4227 Forensic Medicine: Toxins and Pathology (Elective)	Dr. Shashi Jasra	Learning Specialist
FRSC 4237 Bioterrorism (Elective)	Dr. Pardeep Jasra	Learning Specialist

Note: \* indicates courses taught as part of the normal teaching load by full-time faculty.

**B.5.1.5b Additional Institutional Resources and Services Required by all Affected Areas or Departments**

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the proposed program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance.*

<b>Library Resources and Services:</b>	No change
<b>Teaching and Learning Support:</b>	No change
<b>Student Support Services:</b>	No change
<b>Space and Facilities:</b>	No change beyond what is expected from normal enrollment growth
<b>Equipment (and Maintenance):</b>	No change beyond what is expected from normal enrollment growth

The Faculty of Science has demonstrated commitment to the growth of this program by investing in new equipment in the last two years and continues to explore opportunities to further develop and support the program. This has allowed the changes mentioned in B.5.1.5a.

**C. Program Details**

**C.1 Admission Requirements (QAF section 2.1.2)**

*Describe program-specific admission requirements, selection criteria, credit transfer, arrangements for exemptions or special entry, and alternative admission requirements, if any, for admission into the program, such as minimum average, additional language requirements or portfolios, recognition of prior work or learning experience (and how this will be assessed), etc.*

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.

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**C.1.1 Admission Requirements and Attainment of Learning Outcomes (QAF section 2.1.2)**

*Demonstrate that admission requirements are sufficient to prepare students for successful attainment of the intended learning outcomes (degree level expectations) established for completion of the program.*

All students who have met the entrance requirements for Science or who are in good standing are eligible to register for the certificate program. For some science students, the courses required are already part of their degree program; therefore, these students should be able to meet the intended learning outcomes for the certificate program. For those students who complete these courses as electives within their degree program, proper course sequencing will ensure students will be prepared for the successful attainment of the intended learning outcomes. The Academic Advisor within the Faculty of Science will advise students on matters related to completing this certificate to ensure appropriate sequencing and course selection.

**C.2 Program Curriculum Structure/Program of Study (QAF sections 2.1.4 and 2.1.10)**

*Provide evidence of a program structure and faculty research that will ensure the intellectual quality of the student experience. NB: For graduate programs, provide evidence that each graduate student in the program is required to take a minimum of two-thirds of the course requirements from among graduate-level courses. Include course requirements with course numbers and course titles.*

**Certificate in Forensic Science**

**Total courses: 8**

**Degree requirements:**

**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

**Hands on skills (1 course): Students must select one course from the following:**

- FRSC 3105 Forensic Identification
- FRSC 3101 Forensic Science Laboratory

**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

**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 electives.

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**Courses used to calculate the major average are:**

N/A (see C.3.2 for requirements for continuation and graduation).

**Description of thesis option (if applicable):** N/A

**Provide requirements for the Co-op/Experiential Learning Component AND a description of how the program requirements differ for students who complete the experiential learning option and those who opt not to (if applicable). [If the co-op/experiential learning component is new (not part of the existing stand-alone program), a PDC Form B is required]:** N/A

**Explain how credit will be awarded for the experiential learning component (length of component, credit weighting, etc.):** N/A

**Guidelines for experiential learning/co-op work term reports:** N/A

**General length of experiential learning/co-op work term:** N/A

**Is the completion of the experiential learning/co-op component a requirement of the program?** N/A

**C.3.1 For Graduate Program ONLY (QAF sections 2.1.3 and 3; Senate Co-op Policy)**

N/A

**C.3.1.1 Normal Duration for Completion**

*Provide a clear rationale for program length that ensures that the program requirements can be reasonably completed within the proposed time period.*

N/A

**C.3.1.2 Program Research Requirements**

*For research-focused graduate programs, provide a clear indication of the nature and suitability of the major research requirements for completion of the degree.*

N/A

**C.3.1.3 Fields in a Graduate Program (optional)**

*Where fields are contemplated, provide the following information:  
The master's program comprises the following fields: ...[list, as applicable]  
The PhD program comprises the following fields: ...[list, as applicable]*

**C.3.2 For All Program Proposals**

**C.3.2.1 Standing Required for Continuation in Program**

*Minimum average requirements for continuation in the program. Must conform to the regulations for standing required for continuation in the program as set out in Senate policy. Specify standing required for continuation in the experiential learning option or co-op option of the program, where applicable.*

Minimum of 60% in all courses taken for the certificate.

**C.3.2.2 Standing Required for Graduation**

*Minimum average requirement to graduate in the program. Must conform to the regulations for standing required for continuation in the program as set out in Senate policy. Specify standing required for graduation in the experiential learning option or co-op option of the program, where applicable.*

Minimum of 60% in all courses taken for the certificate.

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**C.3.2.3 Suggested Program Sequencing**

*Provide suggested program sequencing for each year of the program, ensuring that all pre-requisites are met in the sequencing. Where applicable, provide work/study/placement sequencing for each year of the experiential learning/co-op version of the program. Please ensure that all pre-requisites are met in the sequencing. For Co-op programs: The proposed work/study sequence or alternative arrangement should allow for year-round availability of students for employers (if appropriate) and, wherever possible, should meet the guidelines for co-operative education as set out by the Canadian Association for Co-operative Education (see Policy on Co-op Programs).*

YEAR 1: FRSC 1101/1107, FRSC 2007,  
 YEAR2: FRSC 2100, SACR 2150  
 YEAR 3: LAWS 2190 or FRSC 3010, FRSC 3105 or FRSC 3101  
 YEAR 4: Two advanced knowledge and skills courses

**C.4 LEARNING OUTCOMES (Degree Level Expectations) (QAF section 2.1.1, 2.1.3, and 2.1.6)  
 COMPLETE THIS TABLE FOR UNDERGRADUATE PROGRAMS**

*In the following table, provide the specific learning outcomes (degree level expectations) that constitute the overall goals of the Combined program or Concurrent offering (i.e., the intended skills and qualities of graduates of this program). Link each learning outcome to the Characteristics of a University of Windsor Graduate by listing them in the appropriate rows. A learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate. All University of Windsor programs should produce graduates able to demonstrate each of the nine characteristics. Program design must demonstrate how students acquire all these characteristics. All individual courses should contribute to the development of one or more of these traits: a program in its entirety must demonstrate how students meet all of these outcomes through the complete program of coursework. Proposers are strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes (degree level expectations). **For Combined Programs and Concurrent Offerings:** The program learning outcomes would include the outcomes for the two standalone programs with a few additional outcomes to reflect the benefits of pursuing the two disciplines in an integrated manner. [For learning outcome A, the integration of knowledge can be within a program and between the two programs.] **For programs with an Experiential Learning or Co-op Option:** Include learning outcomes for the program with a few additional outcomes highlighted to reflect the benefits of pursuing the experiential learning/co-op option.*

<b>Program Learning Outcomes (Degree Level Expectations)</b> <i>This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.</i>  <u>At the end of this program, the successful student will know and be able to:</u>	<b>Characteristics of a University of Windsor Graduate</b>  <u>A UWindsor graduate will have the ability to demonstrate:</u>	<b>COU-approved Undergraduate Degree Level Expectations</b>
A. Identify, integrate, and apply the fundamentals of forensic science, crime scene investigation and evidence analysis as applied to the human species.	A. the acquisition, application and integration of knowledge	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge

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<p><b>Program Learning Outcomes (Degree Level Expectations)</b> <i>This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.</i></p> <p><u>At the end of this program, the successful student will know and be able to:</u></p>	<p><b>Characteristics of a University of Windsor Graduate</b></p> <p><u>A UWindsor graduate will have the ability to demonstrate:</u></p>	<p><b>COU-approved Undergraduate Degree Level Expectations</b></p>
<p>B. Collect, review, and evaluate scientific research within the context of forensic science and forensic case studies.</p>	<p>B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)</p>	<p>1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits Knowledge</p>
<p>C. Critically analyze crime scenes and apply appropriate analytical techniques to forensic investigations and evidence analysis.</p>	<p>C. critical thinking and problem-solving skills</p>	<p>1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge</p>
<p>D. Construct arguments that present evidence clearly, concisely, and coherently (also relevant to F).</p>	<p>D. literacy and numeracy skills</p>	<p>4. Communication Skills 5. Awareness of Limits of Knowledge</p>
<p>E. Investigate, analyze, interpret and present forensic evidence according to relevant legal, ethical, and professional protocols (also relevant to G).</p>	<p>E. responsible behaviour to self, others and society</p>	<p>5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity</p>
<p>F. Communicate forensic science ideas using written, spoken, numerical, and visual formats (also relevant to D)</p>	<p>F. interpersonal and communications skills</p>	<p>4. Communication Skills 6. Autonomy and Professional Capacity</p>
<p>G. Debate and discuss current issues in forensic science.</p>	<p>G. teamwork, and personal and group leadership skills</p>	<p>4. Communication Skills 6. Autonomy and Professional Capacity</p>
<p>H. Describe the role and limitations of professional experts in forensic science.</p>	<p>H. creativity and aesthetic appreciation</p>	<p>2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity</p>
<p>I. Recognize and identify trends, new techniques, and developments within forensic science.</p>	<p>I. the ability and desire for continuous learning</p>	<p>6. Autonomy and Professional Capacity</p>

**C.4.1 Program Structure and Regulations Ensure Learning Outcomes Can be Met**

*Describe how the program's structure and regulations ensure that its specified learning outcomes can be met by successful students.*

Through completion of the certificate's courses, students will be provided with the knowledge, skills, and abilities to understand a range of scientific literature, critically analyze crime scenes and apply appropriate analytical techniques

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to forensic investigations, and apply the fundamentals of forensic science. The Dean’s office within the Faculty of Science and the Academic Advisor for Science will oversee that certificate requirements are being met.

The certificate consists of 8 courses: four required courses that provide a fundamental understanding of forensic science and criminal investigations, one course that provides hands-on training in forensic identification and/or crime scene analysis, one course that introduces students to the Canadian legal context, and two advanced skills courses where students will specialize in an area of forensic science (e.g., bioterrorism, forensic medicine, etc.). Course specific assessments will be used to evaluate students’ mastery of the certificate learning outcomes. These assessments may include, though are not limited to: standard lectures with active learning techniques embedded (e.g., debates, discussions), laboratories, mock crime scene and moot court practical experiences, integrative review of research papers, presentations, and written assignments. Furthermore, the structure of the certificate program is scaffolded to ensure students can meet the learning outcomes as well as progress from ‘introduction’ to ‘mastery’ of the certificate learning outcomes. Please see Table 5 for a summary of the certificate curriculum map.

**Table 5. Curriculum map**

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9
FRSC-1101/1107	I	I	I	I	I	I	I	I	I
FRSC-2007	I	I	I	I	I	I		I	I
FRSC-2100	R		R	R	R	R	R	R	R
SACR-2150	R		R	R		R		R	R
FRSC-3105 or FRSC 3101	R	R		R	R	R		R	R
LAWS-2190 or FRSC-3010	R	R		R		R		R	
Two courses in 'Advanced Knowledge and Skills'	M	M	M	M	M	M	M	M	M

\* = Required course; all other categories provide choice in course selection

LO = learning outcome

I = Introduction

R = Reinforce

M = Mastery

PLO1: Identify, integrate, and apply the fundamentals of forensic science, crime scene investigation and evidence analysis as applied to the human species.

PLO2: Collect, review, and evaluate scientific research within the context of forensic science and forensic case studies.

PLO3: Critically analyze crime scenes and apply appropriate analytical techniques to forensic investigations and evidence analysis.

PLO4: Construct arguments that present evidence clearly, concisely, and coherently (also relevant to F).

PLO5: Investigate, analyze, interpret and present forensic evidence according to relevant legal, ethical, and professional protocols (also relevant to G).

PLO6: Communicate forensic science ideas using written, spoken, numerical, and visual formats (also relevant to D)

PLO7: Debate and discuss current issues in forensic science.

PLO8: Describe the role and limitations of professional experts in forensic science.

PLO9: Recognize and identify trends, new techniques, and developments within forensic science.

**C.4.2 Impact of Experiential Learning Component on Attainment of Learning Outcomes**

*For programs with an experiential learning or co-op component: describe how the experiential learning/co-op component changes the emphasis or the means of achieving the intended learning outcomes for the program.*

N/A

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**C.4.3 Mode of Delivery (QAF section 2.1.5)**

*Demonstrate that the proposed modes of delivery are appropriate to meet the program learning outcomes. Discuss online vs. face-to-face (e.g., lecture, seminar, tutorial, lab) modes of delivery, as well as specialized approaches intended to facilitate the acquisition of specific skills, knowledge, and attitudes.*

Introductory and technique-focused courses primarily rely on face-to-face offerings, with **some** courses offered online (see list in section B.2.1) Course delivery may vary according to instructor; however, courses may include: standard lectures with active learning techniques embedded (e.g., debates, discussions), laboratories, mock crime scene and moot court practical experiences, integrative review of research papers, presentations, and written assignments.

The modes of delivery and the teaching methods used will provide students with a variety of learning experiences and assist them in developing the knowledge, skills, and abilities to meet the learning outcomes.

**C.5 Student Workload**

*Provide information on the expected workload per course credit (3.0) of a student enrolled in this new program. (For assistance with this exercise, proposers are encouraged to contact the Centre for Teaching and Learning.)*

Expected Workload per 3.0 Course Credit/Week	Average Time <i>per week</i> the Student is Expected to Devote to Each Component Over the Course of the Program
Lectures	2-3
Tutorials	0-1
Practical experience/labs	0-3
Service or experiential learning	
Independent study	2-3
Reading and work for assessment, including meeting classmates for group work/project assignments (essays, papers, projects, laboratory work, etc.)	2-3
Studying for tests/examinations	1
Other: <i>[specify]</i>	

**Compare the student workload for this program with other similar programs in the AAU:**  
The majority of courses in the certificate program are offered as courses for students in science programs. Therefore, the workload of this certificate program will be consistent with the level of efforts required in science programs.

**D. MONITORING AND EVALUATION (QAF section 2.1.6)**

*Describe and explain the appropriateness of the proposed methods of assessing student achievement given the intended learning outcomes and degree level expectations.*

Curriculum mapping was undertaken to ensure assessments were sufficiently measuring students' ability to meet the indent learning outcomes. These planned assessment activities are intended to focus on achievement of knowledge and skills in forensic science. This is consistent with the stream learning outcomes. Assessments may take different forms, including though not limited to: examinations, written documents (e.g., research papers, literature reviews, essays), practical exams, debates/discussions, crime scene and moot court examinations/presentations, and presentations. Following the completion of curriculum mapping, it is evident that assessments adequately align with, and measure students' achievement of the program learning outcomes (see Table 5 for a copy of the curriculum map).

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For an overview of assessment methods that may be used to evaluate students' achieving the learning outcomes please see Table 6: Alignment of assessments & learning outcomes.

The academic advisor within the Faculty of Science will be responsible for overseeing that requirements are being met as well as how student process through the program. As questions arise, students can consult the academic advisor.

**Table 6. Alignment of assessments & learning outcomes**

<b>Courses</b>	<b>Assessments*</b>	<b>Alignment with Program Learning Outcomes (PLO)</b>	<b>Sequence</b>
<b>Fundamentals Four Required Courses</b>			
FRSC-1101/1107	Examinations, case study presentations, discussion	PLO1-PLO9	Year 1
FRSC-2007	Examinations, discussion, assignments	PLO1-PLO6, PLO8, PLO9	Year 1
FRSC-2100	Examinations, assignments, discussion	PLO1, PLO3-PLO9	Year 2
SACR-2150	Examinations	PL01, PLO3, PLO4, PLO6-PLO9	Year 2
<b>Hands on skills One course from:</b>			
FRSC-3105	Mock crime scene and moot court examination/presentation, critical review, individual/peer evaluation, examinations	PLO1, PLO2, PLO4-PLO6, PLO8, PLO9	Year 3
FRSC-3101	Examinations, discussion, lab exam	PLO1, PLO2, PLO4-PLO6, PLO8, PLO9	Year 3
<b>Legal Context One Course from:</b>			
LAWS-2190	Examinations	PLO1, PLO2, PLO4, PLO6, PLO8	Year 3
FRSC 3010	Examinations, paper, presentation of opinion evidence (mock courtroom testimony)	PLO1, PLO2, PLO4, PLO6, PLO8	Year 3
<b>Advanced Knowledge and Skills Two courses from:</b>			
SACR-3230	Practical examination, case report	PLO1-PLO9	Year 4
FRSC-3201	Examinations, assignments, insect collection	PLO1-PLO9	Year 4
FRSC-3217	Examination, assignments	PLO1-PLO9	Year 4
FRSC-4207	Examination, assignments, discussion, peer review assignment, written assignment, class activities	PLO1-PLO9	Year 4
FRSC-4217	Examinations, peer review assignment, discussion, research paper	PLO1-PLO9	Year 4
FRSC-4227	Examination, research paper, discussion	PLO1-PLO9	Year 4
FRSC-4237	Examination, case study, blog submission and comments	PLO1-PLO9	Year 4

**Note:** Students are provided choice in some of course requirements for the certificate. However, regardless of the electives chosen, they will provide additional opportunities for reinforcement and mastery of the learning outcomes.

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\* This is not a comprehensive list of assessments as there may be additional assessments used within courses that test students' achievement of certificate LOs.

**D.1 Plan for Documenting And Demonstrating Student Performance Consistent with Learning Outcomes**

*Describe the plan for documenting and demonstrating student performance level and demonstrate its consistency with the stated learning outcomes and degree level expectations.*

Students will work towards the mastery of certificate learning outcomes through the completion of eight courses. Planned assessment activities will focus on achievement of theoretical and technical skills related to forensic science, crime scene investigation and evidence analysis as well as an introduction to the legal system in Canada, aligning with the certificate learning outcomes. While there is flexibility in course selection, all courses will provide foundational knowledge and test to what extent students have achieved the learning outcomes through a variety of evaluation formats. Please see Table 5 in C.4.1 for the curriculum map and Table 6 in 'Monitoring and Evaluation' for how course assessments may align with certificate learning outcomes.

As the certificate evolves student success and performance level will be tracked through consultation, student feedback, and grades. The academic advisor within Forensic Science will be responsible for monitoring student progression and responding to student questions regarding the stream. All courses will contribute to students' attainment of the program learning outcomes.

**E. EXPERIENTIAL LEARNING/CO-OP COMPONENT ONLY (Senate Co-op Policy)**

*[Complete this section ONLY if the proposed program includes an experiential learning or co-op component involving paid or unpaid placements.]*

N/A

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5.2: **Bachelor of Science Honours Chemistry (Applied Chemistry Stream) – Major Program Change (Form B)**

Item for: **Approval**

**MOTION: That the Bachelor of Science Honours Chemistry (Applied Chemistry Stream) be approved.^**

*^Subject to approval of the expenditures required.*

**Rationale/Approvals:**

- The Department of Chemistry and Biochemistry is proposing a new stream, Applied Chemistry, within the Honours Chemistry program to recognize the interests of CAAT graduates from a three-year Chemical Laboratory Technology program.
- The variability in Chem Lab Tech programs in Ontario has limited our offering to only St. Clair College at this time. In the future we aim to revisit the program requirement and to expand the pathways to other CAATs.
- This stream will facilitate a new degree completion pathway, structured as a '3+1' where students will earn an advanced diploma in Chemical Laboratory Technology from a recognized CAAT (or equivalent) in three years, followed by completing their degree at the University of Windsor in an additional one year.
- Students who graduate from this program will obtain a BSc degree which is the same qualification as someone completing a four-year BSc. The Department will provide academic consultation to the transfer students who wish to pursue professional schools and/or graduate schools, similarly to what we provide to students with direct admission from high schools.
- The proposal has been approved by the School of the Environment Council, SPDC as delegated by the Faculty of Science Coordinating Council, and the Provost.
- *See attached.*

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**A. Basic Program Information**

Faculty(ies)	Science
Department(s)/School(s)	Department of Chemistry and Biochemistry
Name of Program as it Will Appear on the Diploma (e.g., Bachelor of Arts Honours Psychology with thesis)	Honours Chemistry - Applied Chemistry Stream
Proposed Year of Offering* [Fall, Winter, Spring]: *(subject to timely and clear submission)	Summer 2020
Mode of Delivery:	Classroom
Planned steady-state Student Enrolment (per section B.4.2)	10 students
Normal Duration for Completion:	1 year (3 terms, part/full time) following the completion of a recognized three-year College of Applied Arts and Technology (CAAT) advanced diploma or equivalent in Chemical Laboratory Technology if students complete specific math courses at St. Clair College (see C.2 Program Curriculum Structure/Program of Study)  1.5 years (5 terms, part/full time) following the completion of a recognized three-year College of Applied Arts and Technology (CAAT) advanced diploma or equivalent in Chemical Laboratory Technology if students do <b>not</b> complete specific math courses at St. Clair College (see C.2 Program Curriculum Structure/Program of Study).
Will the program run on a cost-recovery basis?	Yes

**B. Major Program Changes - Overall Plan**

**B.1 Objectives of the Program/Summary of Proposal (QAF section 2.1.1; Ministry section 4)**

*Please provide a rationale for the proposed change, including a brief statement about the direction, relevance and importance of the revised program.*

*Describe the overall aim and intended impact of the revised program.*

*Describe the consistency of the revised program with the institution's mission, goals and objectives as defined in its strategic plan. (to view the strategic plan go to: [www.uwindsor.ca/president](http://www.uwindsor.ca/president))*

**Relevance and Importance:** The Department of Chemistry and Biochemistry is proposing a new stream, **Applied Chemistry**, within the Honours Chemistry program to recognize the interests of CAAT graduates from a three-year Chemical Laboratory Technology program. These college graduates would have knowledge in the core sciences as well as problem-solving fundamentals for chemistry, biochemistry, physics, and math (St. Clair College, 2020). This stream will target students from Chemical Laboratory Technology programs (MCU 61302); however, additional CAAT equivalent programs across Canada could be applicable and will be reviewed for consideration on an ad-hoc basis. This stream will facilitate a new degree completion pathway, structured as a '3+1' where students will earn an advanced diploma in Chemical Laboratory Technology from a recognized CAAT (or equivalent) in three years, followed by completing their degree at the University of Windsor in an additional one year. Please note, in order for students to complete the Honours Chemistry - Applied Chemistry Stream in one year following their CAAT advanced diploma

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they will need to complete specific optional math courses (described in section C.2). If students do not complete these optional math courses than it will take students approximately 1.5 years (or 5 terms) to earn the Honours Chemistry - Applied Chemistry Stream degree.

Please note, that while not part of the degree requirement, students may choose to complete a research project (CHEM-4900. Research); however, it is a 6-credit course and so it would result in those students taking a supernumerary course and complete an addition year of study (i.e., complete two years at the University of Windsor instead of one).

This new stream, which facilitates the degree completion pathway, allows the Faculty of Science to maintain competitive with other institutions who have transfer/articulation agreements in place and provides accessible and transparent opportunities for movement between postsecondary institutions, thus aligning with the Ontario Government's "Policy Statement for Ontario's Credit Transfer System" (Ontario MTCU, 2011). Specifically, this policy states:

"Ontario will have a comprehensive, transparent and consistently applied credit transfer system that will improve student pathways and mobility, support student success and make Ontario a postsecondary education destination of choice. The credit transfer system will assist qualified students to move between postsecondary institutions or programs without repeating prior, relevant learning. (Ontario MTCU, 2011)".

Through this new stream, the Faculty of Science is catering to this need for credit transfer by offering a transparent degree completion pathway which allows students to move between postsecondary institutions without repeating previously learned material. Beyond offering an accessible credit transfer system, this new stream will assist in supporting the demand for hybrid higher education in Ontario (Brown, 2016) and the projected number of job openings in relevant fields that generally have low employment rates, high salaries, and positive job outlooks (see section B.4.1 Expected Impact of the Proposed Changes to Student and Market Demand). While there are multiple job sectors for chemists to work, some of these positions require employees to have a bachelor degree; therefore, the applied stream will improve CAAT students' opportunities for employment in these fields. This new stream will increase the overall enrollment in Science, specifically in the Department of Chemistry and Biochemistry, by recruiting college graduates to complete the new stream while not requiring additional resources beyond what is associated with typical program growth. We believe our degree completion pathway, facilitated through this new stream will be an attractive option for students wanting to earn a university degree, due to the potential cost savings compared to direct entry into a four-year degree program (Trick, 2013). Students will also earn two credentials – an advanced diploma and degree in four years (assuming full time status). The Dean of Science has discussed this new stream and degree completion pathway with the Vice President Academic at St. Clair College and has received their support. St. Clair college will also help advertise and promote this program to their students as well as advise students on how to successfully transfer into this new stream (see Appendix B for their letter of support).

This new stream, although distinct from the traditional four-year Honours Chemistry degree, has been mapped to show equivalency in terms of the program-level learning outcomes and careful consideration has been given to the program standards students would have met following the successful completion of their CAAT advanced diploma (or equivalent) in order to ensure minimal duplication in curricula. The new stream offers complementary, yet equivalent, learning outcomes when compared to the traditional four-year degree. The new stream recognizes the applied experiences students will have garnered through their CAAT advanced diploma, whereas the traditional 4-year program will offer students enhanced learning opportunities such as undergraduate research experiences and access to a greater range of courses from which to choose that offer high-impact learning experiences compared to those students in the new stream. While both programs offer hands-on experiences, students in the traditional 4-year program will gain these through the University of Windsor, while students in the stream would have already acquired many of the technical laboratory skills at the college; thus, students within the new stream will not negatively impact the availability of high impact courses for students in the 4-year program.

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**Aim and Impact:** This new stream in **Applied Chemistry** will offer a degree completion pathway for CAAT graduates from a Chemical Laboratory Technology program. Specifically, students may obtain an Honours Chemistry - Applied Chemistry Stream following the completion of a Chemical Laboratory Technology CAAT (or equivalent) advanced diploma program (see section C.1 Admission Requirements for more information on admission).

**Within Ontario, there are approximately four colleges that offer Chemical Laboratory Technology programs. Some of these programs have specialities (e.g., pharmaceutical) that limit the breadth of chemistry courses offered. Therefore, at this time, one pathway has been created for St. Clair College; however, the Department of Chemistry and Biochemistry will be collaborating with other colleges that offer Chemical Laboratory Technology to develop comparable pathways into this applied stream.** See C.2. Program Curriculum Structure/Program of Study for a description of the pathway for St. Clair College.

To facilitate this degree completion pathway, we reviewed the Chemical Laboratory Technology program standards to ensure minimal duplication of course content. This degree completion pathway will help to streamline and harmonize the student experience and will provide an efficient pathway for students to combine their hands-on college education with a strong theoretical background in chemistry. Students will receive diverse learning experiences from a variety of sources, including experiential learning and high impact practices that will position them for future career success as well as opportunities to pursue post-graduate education. Please see section 'C.4 Learning Outcomes' for a detailed description of the knowledge, skills, and abilities students will have gained upon successful completion of the new program stream.

**Consistency with Institutional Goals:** This new stream aligns with multiple *Strategic Areas of Program Strength and Expansion* within the SMA by addressing 'Physical and Chemical Sciences' (point ten within the program areas of strength) and 'Engineering, Science, and Computing' (point three within program areas of expansion). This new stream will help address the need for trained persons who have problem-solving skills, the understanding of multiple sciences, and in-depth knowledge of chemistry. The applied experiences gained from the college, combined with the theoretical and high impact learning experiences from the University of Windsor will foster well-rounded students who are prepared for life after graduation; aligning with the University of Windsor's commitment to providing learning experiences that will prepare students for employment. This stream will facilitate partnership building with colleges (a priority within the SMA) and expand the University of Windsor's college-university pathway development, thus increasing overall enrollment.

**References:**

Brown, L. (2016). Transferring credits between college and university can be rocky. *Maclean's*. Retrieved from <https://www.macleans.ca/education/college/transferring-credits-between-college-and-university-can-be-rocky/>

Ontario Ministry of Training, Colleges and Universities. (2011). Policy statement for Ontario's credit transfer system. Retrieved from [https://www.ontransfer.ca/files\\_docs/content/pdf/en/news\\_and\\_events/news\\_and\\_events\\_2.pdf](https://www.ontransfer.ca/files_docs/content/pdf/en/news_and_events/news_and_events_2.pdf)

St. Clair College. (2020). Chemical Laboratory Technology Program Overview. Retrieved from <https://www.stclaircollege.ca/programs/chemical-laboratory-technology>

Trick, D. (2013) College-to-University Transfer Arrangements and Undergraduate Education: Ontario in a National and International Context. Toronto: Higher Education Quality Council of Ontario. Retrieved from <http://www.heqco.ca/SiteCollectionDocuments/Transfer%20Arrangements%20Trick%20ENG.pdf>

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**B.2 Changes to Program Content (QAF Section 2.1.4)**

*Evidence that the revised curriculum is consistent with the current state of the discipline or area of study.*

We are proposing a new stream in **Applied Chemistry** to facilitate a degree completion pathway. This new stream will recognize students who have an in-depth knowledge of chemistry (e.g., understanding chemical properties, chemical reactions, operating laboratory equipment, etc.) and analytical testing skills, as well as significant applied experience combined with problem-solving fundamentals for chemistry gained through their Chemical Laboratory Technology advanced diploma or equivalent. As such, this stream is consistent with the current discipline.

Across Canada, there are a number of diploma-to-degree pathways, and transfer and articulation agreements between universities and colleges for Chemical Laboratory Technology programs (e.g., Algoma, Royal Military College, York, Western, University of Guelph). Providing college graduates an opportunity to receive credits towards a university degree is common within the current state of the discipline. For example, institutions such as Western allows graduates of Fanshawe's Chemical Laboratory Technology- Science Laboratory program to transfer into Year 3 Western's Bachelor of Science degree. Similar articulation agreements exist with Seneca and the University of Guelph where graduates of the Chemical Laboratory Technology-Pharmaceutical program are granted up to 10 credits towards a General BSc or an Honours BSc. Transfer opportunities also between the Chemical Laboratory Technology program at St. Clair College and Algoma, Queen's University, York, and Royal Military College of Canada. York University also offers many block transfer arrangements.

Providing CAAT graduates from Chemical Laboratory Technology programs (or equivalent) an opportunity to receive credit towards a University degree or a degree completion pathway is common within the current state of the discipline.

**B.2.1 Unique or Innovative Curriculum, Program Delivery, or Assessment Practices (QAF Section 2.1.4)**

*State the unique or innovative curriculum, program delivery, or assessment practices distinguishing the revised program from existing programs elsewhere.*

The proposed new stream is innovative as it allows CAAT graduates from Chemical Laboratory Technology (or equivalent) to complete their diploma and University degree in four years (i.e., 3 years at the college and 1 year at the University). Through the degree completion pathway, from Chemical Laboratory Technology, students will be admitted into the Honours Chemistry - Applied Chemistry Stream. The enrollment in this stream will consist only of graduates from the Chemical Laboratory Technology advanced diploma program or equivalent. This structure will facilitate a sense of community and collaboration among peers.

Two-year diploma programs in relevant chemistry fields will be analyzed for additional potential credit transfer on an ad-hoc basis, while considering minimum residency and core course requirements.

The new stream will benefit students by recognizing the value of hands-on career-oriented educational experiences learned at college, while complementing these practical experiences with additional scientific knowledge gained through university courses. Additionally, this new degree completion pathway will streamline and harmonize the student experience by ensuring college course content is not duplicated, while offering a diverse learning opportunity as students will arrive from different institutions allowing for varied perspectives.

The new stream and degree completion pathway were intentionally designed based upon the analysis of CAAT program standards set forth by the Ministry of College and Universities (MCU). Program standards apply to all similar programs of instruction offered by publicly funded colleges across the province. The development of program standards by the Ministry first started in the 1990s to bring more consistency to college programming, broaden the skills of college graduates to include essential employability skills and provide accountability for the quality and relevance of college programs (MCU, 2017). Thus, by mapping these program standards against our curriculum and

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utilizing the information to develop a customized program stream and degree completion pathway, rather than targeting specific programs at specific CAATs, we are able to widen our recruitment scope (see Appendix C for details on the review and analysis of CAAT program standards and curriculum mapping). In addition to working within the program standard framework set forth by MCU, these institutions are required to follow a rigorous quality review process at a program level basis on a regular frequency.

**Please note, because of the variability in the type of chemistry courses offered within some of the Chemical Laboratory Technology programs, we have created one pathway for St. Clair College; however, the Department of Chemistry and Biochemistry will be collaborating with other colleges that offer Chemical Laboratory Technology to develop comparable pathways into this applied stream.**

In most jurisdictions, the cost to the government and the student of a degree achieved through three years at the college followed by one year at the university is lower than a four-year university program (Trick, 2013.). As a result, our degree completion pathways allow students to gain applied educational experiences at the college, while also saving money compared to completing four years of full-time study at a university. Moreover, our 3+1 model will be an attractive option to students as most institutions' articulation agreements require students to complete more than one year at their institution.

**References:**

MCU. (2017). Published college program standards. Retrieved from <http://www.tcu.gov.on.ca/pepg/audiences/colleges/progstan/>

Trick, D. (2013). College-to-University Transfer Arrangements and Undergraduate Education: Ontario in a National and International Context. Toronto: Higher Education Quality Council of Ontario. Retrieved from <http://www.heqco.ca/SiteCollectionDocuments/Transfer%20Arrangements%20Trick%20ENG.pdf>

**B.2.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material**

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In developing or revising this program, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Indigenous content, perspectives, and material may be included in various courses based upon the discretion of the instructor. Individual instructors will review course materials and identify areas where indigenous content can be integrated to provide a holistic perspective of a topic.

**B.3 Changes to Program Name and Degree Designation/Nomenclature (QAF Section 2.1.1; Ministry section 1)**

*Explanation of the appropriateness of the proposed new name and degree designation for the program content and current usage in the discipline*

The proposed name for the new stream, **Applied Chemistry** recognizes both the subject area of study and the practical educational experiences students received within their CAAT advanced diploma. Therefore, we believe the name is representative of the program content and current usage in the discipline.

**B.4 DEMAND FOR THE MODIFIED PROGRAM**

**B.4.1 Expected Impact of the Proposed Changes to Student and Market Demand**

*Describe the tools and methodology used to conduct the market assessment in support of the proposed program revisions.*

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*Provide Quantitative evidence of student and market demand for the revisions to the program, both within and outside the local region (e.g., responses/statistics from surveys, etc.).*

Degree programs in chemistry offer students career paths as researchers, laboratory technicians, quality assurance superiors, and research and design managers. Students are also well positioned to pursue professional schools (medicine, pharmacy, dentistry). One of the benefits of completing this stream is that it allows CAAT graduates to pursue professional schools that they would otherwise be ineligible for following their CAAT advanced diploma. Through this stream, students will learn core chemistry, but also gain strong communication and analytical skills. Generally, individuals employed in a chemistry-related position are well paid (American Chemical Society, 2014).

**Labour Market Data:**

In 2017, the chemical industry employed 87,300 workers (see Table 1 and Figure 2) which represented 5.5% of all manufacturing jobs. Many in-direct jobs exist to support the purchasing and expenditure-induced activity of the chemical industry such that it supports approximately 525,000 jobs in the overall Canadian economy. Within Ontario, the chemical industry directly employed 46,200 people in Ontario (280,000 indirect jobs), an increase of 4.7% from 2016 (Chemistry Industry Association of Canada, 2017).

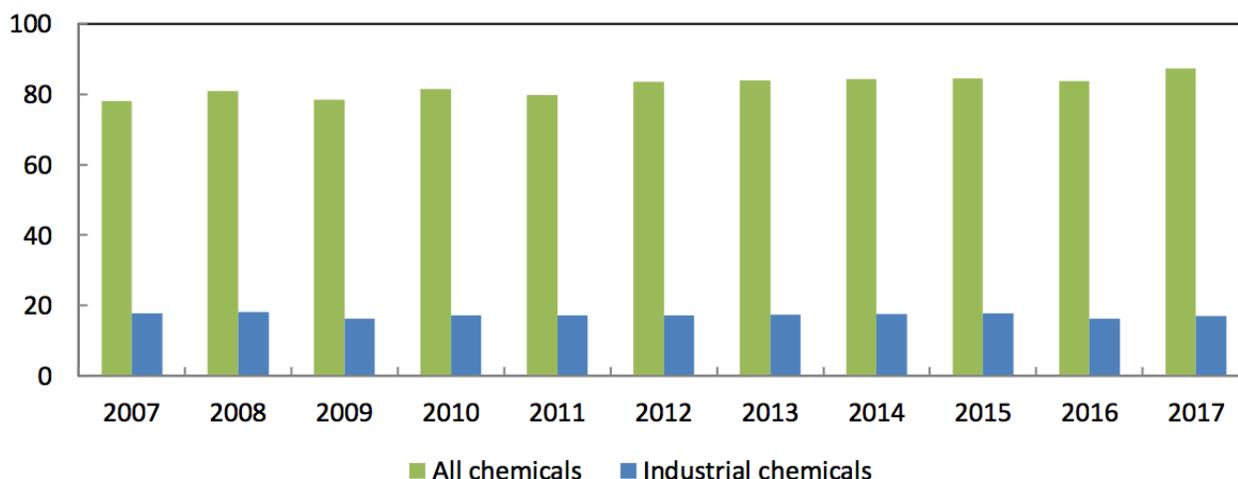
**Table 1: Employment in the Canadian Chemical Industry**



Total employment, thousand	2016	2017	Change 2016-17
All chemicals	83.8	87.3	4.0%
Industrial chemicals	16.3	17.0	4.3%

Chemistry Industry Association of Canada. (2017). Chemistry Industry Economic Profile, 2017. Retrieved from [https://canadianchemistry.ca/wp-content/uploads/2018/06/Stats\\_Review\\_2017-FINAL.pdf](https://canadianchemistry.ca/wp-content/uploads/2018/06/Stats_Review_2017-FINAL.pdf)

**Figure 1: Chemical industry employment**



Chemistry Industry Association of Canada. (2017). Chemistry Industry Economic Profile, 2017. Retrieved from [https://canadianchemistry.ca/wp-content/uploads/2018/06/Stats\\_Review\\_2017-FINAL.pdf](https://canadianchemistry.ca/wp-content/uploads/2018/06/Stats_Review_2017-FINAL.pdf)

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Multiple job searches were conducted on job posting websites using key words such as ‘chemist’, ‘chemistry’, ‘research chemist, and ‘laboratory technician’ (searches were performed on January 26<sup>th</sup>, 2020). Below is a summary of the number of postings by search and source:

- Indeed Canada: 144 jobs (keyword ‘chemist’); 811 jobs (keyword ‘chemistry’)
- LinkedIn: 1,025 jobs (keyword ‘chemist’); 1,328 jobs (keyword ‘chemistry’); 98 jobs (keyword ‘research chemist’); 705 (keyword ‘laboratory technician’)
- Workopolis: 137 jobs (keyword ‘chemist’); 1,520 jobs (keyword ‘chemistry’)

Based on these searches, there appears to be a number of positions available for chemistry graduates.

Within Ontario, labour market information suggests that there are current and projected job opportunities within chemistry and related fields (Ministry of Labour, Training and Skills Development, 2017; see Table 2 for examples). Most of these job profiles have low unemployment rates, projected job openings, and require a bachelor degree and/or the completion of a college program. However, more commonly, individuals working as policy researchers, consultants, and program officer, as chemists, and within the physical sciences have a bachelor’s degree rather than college diplomas. Therefore, students earning an advanced diploma and honours degree will improve their employment opportunities in these sectors. This combination of theoretical and applied scientific knowledge gained through the advanced diploma and degree will help ensure students are attractive candidates for these jobs.

**Table 2. Employment statistics**

Job profile	Median income	Projected number of job openings (2017-2021)	Job outlook (2017-2021) <sup>^</sup>	Number of job postings	Unemployment rate
Chemists	\$70,502	1,001-2,000	Average	167	3.1% <sup>+</sup>
Chemical technologists and technicians	\$60,855	1,001-2,000	Below average	113	6.3%
Supervisors, petroleum, gas and chemical processing and utilities	\$94,813	1,001-2,000	Undetermined	0	2.7% <sup>+</sup>
Natural and applied science policy researchers, consultants and program officers	\$85,673	1,001-2,000	Undetermined	89	3.3% <sup>+</sup>
Other professional occupations in physical sciences	\$88,349	401-500	Average	27	7.3%

**Note:** These data were gathered from the Ministry of Training, Colleges and Universities Ontario’s labour market website for the aforementioned job profiles.

<sup>^</sup>Job outlook ratings can tell you how future demand for this job is expected to compare with other jobs across Ontario.

<sup>+</sup>Unemployment rate is below the National unemployment rate (5.5% as of June 2019) within Canada:

<https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410028703>

Chemists: <https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=2112>

Chemical technologists and technicians: <https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=2211>

Supervisors, petroleum, gas and chemical processing and utilities:

<https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=9212>

Natural and applied science policy researchers, consultants and program officers:

<https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=4161>

Other professional occupations in physical sciences: <https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=2115>

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**Student data:** The number of students seeking a baccalaureate education across all disciplines is projected to increase from 50,000 to 104,000 from 2009 to 2025 (Trick, 2013). CAAT graduation rates from Chemical Laboratory Technology (see Table 3) suggest that there is a sufficient pool of potential graduates to attract into the Applied Chemistry Stream. Furthermore, St. Clair College offers the Chemical Laboratory Technology project and we anticipate a great deal of interest from these students. We believe meeting our steady state target of 6-10 students will be very feasible and that our new stream will be an attractive option to college graduates wishing to earn a university degree due to potential cost savings and the opportunity to earn two credentials in a four-year span. Specifically, Trick (2013) estimates cost savings for college-to university transfer programs within Ontario to student who can complete a university degree in a total of four years of study (e.g., 3 years at college + 1 years at university; 3+1 model).

Following the approval of this new program stream, the Faculty of Science will formally begin their recruitment plan. This includes emailing recruitment flyers to all program coordinators of relevant business programs as well as launching a social media campaign targeted towards individuals who meet the programs demographics. In the Fall 2020, additional recruitment efforts (e.g., site visits) will take place in order to achieve the projected steady state in year two. The Dean within the Faculty of Science has discussed this new stream and degree completion pathway with the Vice President Academic at St. Clair College and has received their support. St. Clair College will help advertise and promote this program to their students as well as advise students on how to successfully transfer into this new stream (see Appendix B for the letter of support).

**Table 3. Number of graduates of full-time postsecondary college programs**

Program	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Chemical Laboratory Technology (3 years)	69	111	94	133	75

Data source: Ministry of Training, Colleges and Universities. (2018). Labour Market. Retrieved from <https://www.app.tcu.gov.on.ca/eng/labourmarket/employmentprofiles/compare.asp>

Based upon the review of market demand and college graduation rates, the proposed new stream will assist students with the development of chemistry knowledge, addressing a current gap in the labour market.

**References**

American Chemical Society. (2014). Chemistry Employment: Domestic Workforce by the Numbers. Retrieved from <https://www.acs.org/content/acs/en/careers/salaries/surveys/salary-graduate-survey-highlights/chem-employment-survey-2014.html>

Chemistry Industry Association of Canada. (2017). Chemistry Industry Economic Profile, 2017. Retrieved from [https://canadianchemistry.ca/wp-content/uploads/2018/06/Stats\\_Review\\_2017-FINAL.pdf](https://canadianchemistry.ca/wp-content/uploads/2018/06/Stats_Review_2017-FINAL.pdf)

Ministry of Labour, Training and Skills Development. (2017). Ontario's labour market. Retrieved from <https://www.ontario.ca/page/labour-market>

Trick, D. (2013). College-to-University Transfer Arrangements and Undergraduate Education: Ontario in a National and International Context. Toronto: Higher Education Quality Council of Ontario. Retrieved from <http://www.heqco.ca/SiteCollectionDocuments/Transfer%20Arrangements%20Trick%20ENG.pdf>

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**B.4.1.1 Percentage of Domestic and International Students (Ministry section 5)**

*Expected proportion (percentage) of domestic and international students. For graduate programs, identification of undergraduate or master's programs from which students would likely be drawn.*

We expect all students to be domestic.

**B.4.2 Estimated Enrolments (QAF section 2.1.9; Ministry section 5; Senate Co-op Policy)**

*Provide details on projected enrolments for the revised program in the following tables.*

*For Co-op programs: normally an annual intake of a minimum of 20 students is required for new co-op programs or programs with other experiential learning component.*

<i>Projected enrolment levels for the first five years of operation of the revised program. (If the program is in operation, use actual and projected data.)</i>	First Year of Operation	Second Year of Operation	Third Year of Operation	Fourth Year of Operation	Fifth Year of Operation (Steady-state enrolment overall)
<i>In the regular program (non-co-op)</i>	6	10	10	10	10
<i>In the co-op/experiential learning stream (if applicable)</i>					
<i>For co-op options: projected number of international students enrolled in the co-op stream</i>					

<i>Annual projected student intake into the first year of the revised program: (this may differ from the "first year of operation" projected enrolments which could include anticipated enrolments from students transferring into the second, third, or fourth year of the program)</i>	10
<i>Annual projected student intake into the first year of the co-op/experiential learning version of the revised program: (this may differ from the "first year of operation" projected enrolments which could include anticipated enrolments from students transferring into the second, third, or fourth year of the program)</i>	N/A

**B.4.3 New Involvement in a Collaborative Program/Changes to Collaborative Program (QAF section 1.6)**

*If this is a new collaborative program with another college/university, or revision to a collaborative program, identify partners and institutional arrangements for reporting eligible enrolments for funding purposes.*

N/A

**B.4.4 Evidence of Societal Need for the Revised Program (Ministry section 6)**

*Describe the tools and methodology used to assess societal need.*

*Elaborate on the*  
 1) dimensions of (e.g., socio-cultural, economic, scientific, or technological),  
 2) geographic scope of (e.g., local, regional, provincial, or national), and  
 3) anticipated duration of, and trends in,  
 societal need for graduates of the modified program

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*Provide evidence that the proposed program revisions respond to societal need for graduates of the revised program and/or changes in the field, including sources of data and expert input or feedback collected to support this change in direction.*

Increasing the rate of college to university transfers has been a priority within Ontario. (e.g., Kerr, McCloy, & Liu, 2010; Ontario MTCU, 2011). As a response to the Ontario government's call for visible credit transfers between colleges and universities, this new stream was designed to assist qualified students to move between postsecondary institutions or programs without repeating prior learning (Ontario MTCU, 2011). Building partnerships with colleges has been identified as an important part of institutional collaborations and partnerships in the 2017-2020 SMA. This new stream will significantly enhance these partnerships by further engaging with college students and facilitating a degree completion pathway between colleges to the University of Windsor in a visible way and address this movement towards comprehensive, transparent and consistently applied credit transfers. In doing so, the University of Windsor is streamlining and harmonizing the student experience for CAAT graduates wishing to earn a university degree. Advanced diploma programs have the highest rates of transfer (McCloy, Steffler, & Decock, 2017).

Given the rising cost of education, we believe our 3+1 model will be appealing to students as it offers an opportunity to earn two credentials within a four-year time period. Cost projections suggest our new stream will offer a less expensive route to earning a university degree compared to students pursuing a four-year direct entry into university (Trick, 2013). Savings are also generated by eliminating credit duplication. This stream will also improve Ontario's ability to meet the demand for a skilled and flexible workforce through building capacity and flexibility in postsecondary education (Ontario MTCU, 2011). Beyond these possible cost savings, we are responding to the demand for hybrid higher education in Ontario. Each year 55,000 students switch institutions, and 40% of these students move from a college to a university (Brown, 2016). Similarly, Trick (2013) has projected that the number of students seeking a baccalaureate education will increase from 50,000 to 104,000 from 2009 to 2025. Lastly, this stream will also prepare students for post-graduate education (e.g., graduate degrees, law school, etc.) which they would have been previously ineligible for following the completion of the CAAT diploma.

For information on anticipated labour and student market demand trends can be found in section B. 4.1.

**References:**

Brown, L. (2016). Transferring credits between college and university can be rocky. *Maclean's*. Retrieved from <https://www.macleans.ca/education/college/transferring-credits-between-college-and-university-can-be-rocky/>

Kerr, A., McCloy, U., Liu, S. (2010). Forging Pathways: Students who Transfer Between Ontario Colleges and Universities. Toronto: Higher Education Quality Council of Ontario. Retrieved from <http://www.heqco.ca/SiteCollectionDocuments/ForgingPathwaysENG.pdf>

McCloy, U., Steffler, M., & Decock, H. (2017). The changing patterns of college-to-university transfer: Examination of Ontario's Graduate Satisfaction Survey 2007-2015. Retrieved from <https://www.senecacollege.ca/mobilityresearch/reports/The-Changing-Patterns-of-College-to-University-Transfer.pdf>

Ontario Ministry of Training, Colleges and Universities. (2011). Policy statement for Ontario's credit transfer system. Retrieved from [https://www.ontransfer.ca/files\\_docs/content/pdf/en/news\\_and\\_events/news\\_and\\_events\\_2.pdf](https://www.ontransfer.ca/files_docs/content/pdf/en/news_and_events/news_and_events_2.pdf)

**B.4.5 Duplication (Ministry section 7)**

*List similar programs offered by other institutions in the Ontario university system. Resources to identify similar programs offered in Ontario include [www.electronicinfo.ca](http://www.electronicinfo.ca), [www.electronicinfo.ca/einfo.php](http://www.electronicinfo.ca/einfo.php), and*

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[www.oraweb.aucc.ca/showdcu.html](http://www.oraweb.aucc.ca/showdcu.html). Also, list similar programs in the geographically contiguous area, e.g., Michigan/Detroit.

Degree programs in Science are available at most institutions across Ontario, as are programs in Chemistry. Within Ontario there are a number of diploma-to-degree pathways as well as transfer and articulation agreements between universities and colleges for Chemical Laboratory Technology programs. These transfer opportunities exist for a range of CAAT Chemical Laboratory Technology programs into BSc programs. Some of the institutions that offer these programs include, though are not limited to\*:

- Western
- Algoma University
- York University
- University of Guelph
- Queen's University
- Royal Military College of Canada

Despite the possible similarities that exist, it is important for the Faculty of Science to offer a degree completion pathway for college students in order to stay competitive with other institutions' programming. Furthermore, we believe our degree completion pathway will be more appealing to students as it allows them to earn their advanced diploma and degree within four years (assuming full time study) compared to other institutions whose pathways require longer for students to earn their degree.

\*Note: for a comprehensive list of all transfer options, please see: [https://www.ontransfer.ca/index\\_en.php](https://www.ontransfer.ca/index_en.php)

**B.4.5.1 Demonstrate that Societal Need and Student Demand Justify Duplication (Ministry section 7)**

*If the revised program is similar to others in the system, demonstrate that societal need and student demand justify the duplication. Identify innovative and distinguishing features of the revised program in comparison to similar programs.*

Despite the existence of diploma-to-degree pathways and transfer and articulation agreements between universities and colleges for Chemical Laboratory Technology programs at other institutions, some universities require students to complete more than one year of full-time study to earn their degree. As such, we believe our 3+1 degree completion pathway where students earn a college advanced diploma and university degree in four years will be more attractive to students. The new stream requires no additional resources beyond those associated with typical program growth, but will increase the overall enrollment in the Department of Chemistry and Biochemistry and will allow it to remain competitive with other universities that have transfer/articulation agreements in place with colleges.

**B.5 RESOURCES**

*[The resource impact of a proposal is almost never neutral. Note: Proposers must also complete and submit the attached **Budget Summary** (Appendix A) with the revised program proposal.]*

**B.5.1 Resources Available**

**B.5.1.1 Available Faculty and Staff Resources (QAF sections 2.1.7, 2.1.8, 2.1.9 and 2.1.10)**

*Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the program change(s). Please do not name specific individuals in this section.*

Courses within this new stream are offered regularly within the current academic calendar, such that there are no anticipated additional resources required to offer this new stream beyond what is associated with natural

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enrollment growth over time. The vast majority of courses are offered from the Department of Chemistry and Biochemistry, which has capacity for growth and will be able to accommodate the projected increases in enrollment. Students will also complete two courses in Physics and potentially courses in Computer Science and Mathematics and Statistics (depending on their college electives). These programs can also accommodate the projected growth in enrollment. The core university courses required are regularly offered by faculty members within departments within Science. Faculty teaching courses within this stream have current knowledge and expertise that are central to the program curriculum.

Administrative tracking will be provided within the UWinsite Student system. Academic advising will occur within the Department of Chemistry and Biochemistry. The advisor responsible for the Honours Chemistry will also advise students on matters related to the new stream, including appropriate sequencing and course selection. St. Clair college has also confirmed that they will advise students on how to successfully transfer into this new stream (see Appendix B for the letter of support).

**B.5.1.1a Faculty Members Involved in the Delivery of the Program**

*Complete the following table listing faculty members in the AAU offering the program as well as faculty members from other AAUs who are core to the delivery of the revised program. Indicate in the table the involvement of each faculty member in the revised and existing program(s) offered by the AAU.*

**Note:** Faculty program affiliations will be the same for the existing and new programs stream. In addition to faculty from the Department of Chemistry and Biochemistry, only the faculty members from departments outside of the Department of Chemistry and Biochemistry who typically teach core courses within this new stream were included in the table below.

Faculty Name and Rank (alphabetical)	Graduate Faculty member (for graduate programs only)	Program Affiliation: indicate faculty affiliation to the EXISTING program(s)	Program Affiliation: indicate faculty affiliation to the REVISED program
<b>Category 1: Tenured Professors teaching exclusively in the AAU offering the program</b>			
Dr. Sirinart Ananvoranich, Associate Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. Tricia Carmichael, Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. Phil Dutton, Associate Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. S. Holger Eichhorn, Associate Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. James Gauld, Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. James Green, Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. Samuel Johnson, Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry

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Dr. Lana Lee, Associate Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. Stephen Loeb, University Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. Siyaram Pandey, Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. Jeremy Rawson, Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. Keith Taylor, Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. Jichang Wang, Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. Zhuo Wang, Associate Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. Panayiotis Vacratsis, Associate Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
<b>Category 2: Tenure-track Professors teaching exclusively in this AAU</b>			
Dr. Marcus Drover, Assistant Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. Drew Marquardt, Assistant Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. Scott Mundle, Assistant Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. Simon Rondeau-Gagné, Assistant Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. John Trant, Assistant Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. Yufeng Tong, Assistant Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
Dr. Nick Vukotic, Assistant Professor	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
<b>Category 3: Ancillary Academic Staff such as Learning Specialists Positions</b>			
Dr. Tranum Kaur, Learning Specialist	N/A	Chemistry and Biochemistry	Chemistry and Biochemistry
<b>Category 4: Limited-term Appointments teaching exclusively in this AAU</b>			
...			
<b>Category 5: Tenure or tenure-track or LTA professors involved in teaching and/or supervision in other AAUs, in addition to being a member of this AAU</b>			
...			

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<b>Category 6: Sessionals, Lecturers, and other non-tenure track faculty</b>			
<b>Category 7: Others- Tenure, tenure-track, LTA professors, or sessionals involved in teaching and/or supervision in other AAUs.</b>			
Dr. Arunita Jaekel, Professor (COMP-2067)	N/A	Computer Science	Computer Science
Prof. Justin Lariviere, Learning Specialist and Director, Math and Stats Learning Centre, (MATH-2780)	N/A	Mathematics and Statistics	Mathematics and Statistics
Dr. Elena Maeve, Professor, (PHYS-2250)	N/A	Physics	Physics
Dr. Chitra Rangan, Professor, (PHYS-2000)	N/A	Physics	Physics
Dr. Dilian Yang, Professor, (MATH-2790)	N/A	Mathematics and Statistics	Mathematics and Statistics

**B.5.1.1b Faculty Expertise Available and Committed to Supporting the Revised Program**

*Assess faculty expertise available and actively committed to supporting the revised program. Provide evidence of a sufficient number and quality of faculty who are qualified to teach and/or supervise in the revised program, and of the appropriateness of this collective faculty expertise to contribute substantially to the revised program.*

*Include evidence (e.g., qualifications, research/innovation/scholarly record) that faculty have the recent research or professional/clinical expertise needed to:*

- *sustain the program*
- *promote innovation, and*
- *foster an appropriate intellectual climate.*

All courses from the University of Windsor are offered from the Department of Chemistry and Biochemistry and Department of Physics. Two courses will be taken from the School of Computer Science, or Department of Mathematics and Statistics (depending on college electives). These courses are offered regularly within the undergraduate calendar and are already taught by expert faculty. As such, there is already a sufficient number of highly qualified faculty to support this new stream. The faculty teaching these courses are specialists in the area who have expertise in the subjects that are central to the new program stream. These expert faculty have published in leading national and international journals on topics (or similar topics) to the courses offered within the program.

**B.5.1.1c Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program**

*Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program.*

There is no anticipated reliance on adjunct, limited-term, or sessional faculty beyond what is already being used.

**B.5.1.1d Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY)**

*Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.*

N/A

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**B.5.1.1e Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY)**

*Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.*

N/A

**B.5.1.1f Other Available Resources (Ministry sections 3 and 4)**

*Provide evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities, including for example:*

- *staff support,*
- *library,*
- *teaching and learning support,*
- *student support services,*
- *space,*
- *equipment,*
- *facilities*
- *GA/TA*

Courses within this new stream are offered regularly within the current academic calendar. Most of the courses within this stream are offered from the Department of Chemistry and Biochemistry which has capacity for growth and will be able to accommodate the projected increases in enrollment without impact on resources. There are no anticipated new resources required to sustaining the educational experience of undergraduate students beyond what is associated with natural enrollment growth over time.

With continual enrollment growth, this new stream may require two sessional lectures to offer CHEM-2500 and CHEM-2510 during the summer term. These courses would also be made available to all students in the Department of Chemistry and Biochemistry as well as students from other departments interested in the subject matter and serve as an additional opportunity to complete these courses (BIOC-2010 is already offered in Winter and Summer terms).

**B.5.1.2 Resource Implications for Other Campus Units (Ministry sections 3 and 4)**

*Describe the reliance of the proposed program revisions on existing resources from other campus units, including for example:*

- *existing courses,*
- *equipment or facilities outside the proposer's control,*
- *external resources requiring maintenance or upgrading using external resources*

*Provide relevant details.*

The majority of courses within this stream are offered through the Department of Chemistry and Biochemistry. Two courses will be completed in the Department of Physics and potentially courses from the School of Computer Science and Department of Mathematics and Statistics (depending on college electives). Departments that offer these courses can accommodate the increased enrolment numbers as our projected enrolment from the new stream.

**B.5.1.3 Anticipated New Resources (QAF sections 2.1.7, 2.1.8 and 2.1.9; Ministry section 4)**

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revised program.*

N/A

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**B.5.1.4 Planned Reallocation of Resources and Cost-Savings (QAF section 2.1.7 and 2.1.9; Ministry section 4)**

*Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revised program. (e.g., streamlining existing programs and courses, deleting courses, etc.)*

N/A

**B.5.1.5 Additional Resources Required – Resources Requested (QAF section 2.1.7 and 2.1.9)**

*Describe all additional faculty, staff and GA/TA resources (in all affected areas and departments) required to run the revised program.*

<b>Faculty:</b>	No change beyond what is expected from normal enrollment growth
<b>Staff:</b>	No change beyond what is expected from normal enrollment growth
<b>GA/TAs:</b>	No change beyond what is expected from normal enrollment growth

**B.5.1.5b Additional Institutional Resources and Services Required by all Affected Areas or Departments**

*Describe all additional institutional resources and services required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance.*

<b>Library Resources and Services:</b>	No change
<b>Teaching and Learning Support:</b>	No change
<b>Student Support Services:</b>	No change
<b>Space and Facilities:</b>	No change
<b>Equipment (and Maintenance):</b>	No change

**C. Program Details**

**C.1 Admission Requirements (QAF section 2.1.2)**

*Describe new or changes to*

- program-specific admission requirements,
- selection criteria,
- credit transfer,
- arrangements for exemptions or special entry, and
- alternative admission requirements, if any, for admission into the program, such as minimum average, additional language requirements or portfolios, recognition of prior work or learning experience (and how this will be assessed), etc.

**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.

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- 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.
- 4) The Honours Chemistry - Applied Chemistry Stream will be reviewed and amended, if appropriate, by the Department of Chemistry and Biochemistry every five years following the approval of the stream. This timing corresponds with the review frequency undertaken by the CAAT diploma programs forming the basis of admission and this frequency of review will ensure the program curriculum and requirements adapt to these standards as they shift.

**\*Through the completion of specific optional courses at St. Clair College, student 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.

**C.1.1 Admission Requirements and Attainment of Learning Outcomes (QAF section 2.1.2)**

*Demonstrate that admission requirements for the revised program are sufficient to prepare students for successful attainment of the intended learning outcomes (degree level expectations) established for completion of the program.*

Admission requirements ensure that students entering the Honours Chemistry - Applied Chemistry Stream meet an equivalent basis of admission as students entering directly from high school into the Honours Chemistry. Generally, students in the Applied Chemistry Stream will complete the same core courses as those students in the Honours Chemistry program (excluding courses that are deemed equivalent to the material covered in the CAAT programs and where the BSc degree program permits choice). As such, students will be prepared to successfully meet the intended learning outcomes for this new stream. Additionally, prior research suggests that students transferring from college to university are satisfied with their academic preparation (Decock, McCloy, Liu, & Hu, 2011).

**Reference:**

Decock, H., McCloy, U., Liu, S., and Hu, B. (2011). The Transfer Experience of Ontario Colleges who Further their Education – An analysis of Ontario's College Graduate Satisfaction Survey. Toronto: Higher Education Quality Council of Ontario.

**C.2 Program Curriculum Structure/Program of Study (QAF sections 2.1.4 and 2.1.10)**

*Provide evidence of a program structure and faculty research that will ensure the intellectual quality of the student experience.*

*NB: For graduate programs, provide evidence that each graduate student in the revised program is required to take a minimum of two-thirds of the course requirements from among graduate-level courses. Include course requirements with course numbers and course names.*

*Identify in **BOLD** and **STRIKETHROUGH** the changes to program requirements.*

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**Pathway for St. Clair College:**

**Total courses:** 18\*

**Degree requirements:** (list of remaining courses required for completion of degree program):

(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, student 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

Elective course for those wanting to complete a research project: CHEM-4900

**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.
- A review of program standards and their elements of performance was done for the Chemical Laboratory Technology CAAT program to ensure minimal duplication of course content within degree requirements. Courses that were deemed sufficiently covered by the program standards were removed from the degree requirements.

**Courses used to calculate the major average are:** All courses listed under section (a).

**Description of thesis option (if applicable):**

While not part of the degree requirement, students may choose to complete a research project (CHEM-4900. Research); however, it is a 6-credit course and so it would result in those students taking a supernumerary course and complete an additional year of study (i.e., complete two years at the University of Windsor instead of one).

**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%.)

**Provide requirements for the Co-op/Experiential Learning Component AND a description of how the program requirements differ for students who complete the experiential learning option and those who opt not to (if applicable).** *[If the co-op/experiential learning component is new (not part of the existing stand-alone program), a PDC Form B is required]:* N/A

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Explain how credit will be awarded for the experiential learning component (length of component, credit weighting, etc.): N/A

Guidelines for experiential learning/co-op work term reports: N/A

General length of experiential learning/co-op work term: N/A

Is the completion of the experiential learning/co-op component a requirement of the program? N/A

**C.3.1 For Graduate Program ONLY (QAF sections 2.1.3 and 3; Senate Co-op Policy)**

**C.3.1.1 Normal Duration for Completion**

*Provide a clear rationale for program length that ensures that the revised program requirements can be reasonably completed within the proposed time period.*

N/A

**C.3.1.2 Program Research Requirements**

*For research-focused graduate programs, provide a clear indication of the nature and suitability of the major research requirements for completion of the revised program.*

N/A

**C.3.1.3 New or Changes to Fields in a Graduate Program (optional)**

*Where fields are contemplated, provide the following information:  
The master's program comprises the following fields: ...[list, as applicable]  
The PhD program comprises the following fields: ...[list, as applicable]*

N/A

**C.3.2 For All Program Proposals**

**C.3.2.1 New or Changes to Standing Required for Continuation in Program**

*Minimum average requirements for continuation in the program.  
Must conform to the regulations for standing required for continuation in the program as set out in Senate policy.  
Specify new or changes to standing required for continuation in the experiential learning option or co-op option of the revised program, where applicable.*

Continuation in this new stream is consistent with those for the Honours Chemistry program.

**C.3.2.2 New or Changes to Standing Required for Graduation**

*Minimum average requirement to graduate in the program.  
Must conform to the regulations for standing required for continuation in the program as set out in Senate policy.  
Specify new or changes to standing required for graduation in the experiential learning option or co-op option of the revised program, where applicable.*

Graduation from this stream is consistent with the Honours Chemistry.

**C.3.2.3 New or Changes to Suggested Program Sequencing**

*Provide suggested program sequencing for each year of the revised program, ensuring that all pre-requisites are met in the sequencing.*

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*Where applicable, provide work/study/placement sequencing for each year of the experiential learning/co-op version of the revised program. Please ensure that all pre-requisites are met in the sequencing.*

*For Co-op programs: The proposed work/study sequence or alternative arrangement should allow for year-round availability of students for employers (if appropriate) and, wherever possible, should meet the guidelines for co-operative education as set out by the Canadian Association for Co-operative Education (see Policy on Co-op Programs).*

**13 Course Sequence for St. Clair College Students\* (if students complete all of the specified optional math courses at St. Clair College)**

**Summer:** CHEM-2500, CHEM-2510, BIOC-2010

**Fall:** PHYS-1400, CHEM-3300, CHEM-3400, CHEM-3500, one of CHEM-4XXX (excluding CHEM-4007),

**Winter:** PHYS-1410, CHEM-3310, CHEM-3710, two of CHEM-4XXX (excluding CHEM-4007)

**With Research Project (CHEM-4900)\***

**Summer:** CHEM-2500, CHEM-2510, BIOC-2010

**Fall:** PHYS-1400, CHEM-3300, CHEM-3400, CHEM-3500, one of CHEM-4XXX (excluding CHEM-4007), CHEM-4900 (overload)

**Winter:** PHYS-1410, CHEM-3310, CHEM-3710, CHEM-4900, one of CHEM-4XXX (excluding CHEM-4007)

**18 Course Sequence for St. Clair College Students (if no additional math courses are completed at St. Clair College)**

**Summer 1:** CHEM-2500, CHEM-2510, BIOC-2010, MATH-1250

**Fall 1:** PHYS-1400, MATH-1720, CHEM-3300, CHEM-3400, CHEM-3500

**Winter 1:** MATH-1730, PHYS-1410, CHEM-3310, CHEM-3710, one of CHEM-4XXX (excluding CHEM-4007)

**Summer 2 (and Fall 2):** two of COMP-2067, MATH-2780, MATH-2790, PHYS-2200 or PHYS-2250 (PHYS-2200 or PHYS-2250 are generally offered in the fall)

**Fall 2:** two of CHEM-4XXX (excluding CHEM-4007)

**With Research Project (CHEM-4900)\***

**Summer 1:** CHEM-2500, CHEM-2510, BIOC-2010, MATH-1250

**Fall 1:** PHYS-1400, MATH-1720, CHEM-3300, CHEM-3400, CHEM-3500

**Winter 1:** MATH-1730, PHYS-1410, CHEM-3310, CHEM-3710, one of CHEM-4XXX (excluding CHEM-4007),

**Summer 2 (and Fall 2):** two of COMP-2067, MATH-2780, MATH-2790, PHYS-2200 or PHYS-2250 (PHYS-2200 or PHYS-2250 are generally offered in the fall)

**Fall 2:** CHEM-4900, two of CHEM-4XXX (excluding CHEM-4007)

**Winter 2:** CHEM-4900

*Note:* CHEM-2500 and CHEM-2510 exist online through e-campus Ontario.

**C.4 NEW OR CHANGES TO LEARNING OUTCOMES (Degree Level Expectations)(QAF section 2.1.1, 2.1.3, and 2.1.6)**

**COMPLETE THIS TABLE FOR UNDERGRADUATE PROGRAMS**

*In the following table, provide the specific learning outcomes (degree level expectations) that constitute the overall goals of the Combined program or Concurrent offering (i.e., the intended skills and qualities of graduates of this program). Link each learning outcome to the Characteristics of a University of Windsor Graduate by listing them in the appropriate rows.*

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*A learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate. All University of Windsor programs should produce graduates able to demonstrate each of the nine characteristics. Program design must demonstrate how students acquire all these characteristics. All individual courses should contribute to the development of one or more of these traits: a program in its entirety must demonstrate how students meet all of these outcomes through the complete program of coursework.*

*Proposers are strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes (degree level expectations).*

***For Combined Programs and Concurrent Offerings:** The program learning outcomes would include the outcomes for the two standalone programs with a few additional outcomes to reflect the benefits of pursuing the two disciplines in an integrated manner. [For learning outcome A, the integration of knowledge can be within a program and between the two programs.]*

***For programs with an Experiential Learning or Co-op Option:** Include learning outcomes for the program with a few additional outcomes highlighted to reflect the benefits of pursuing the experiential learning/co-op option.*

<b>Program Learning Outcomes (Degree Level Expectations)</b> <i>This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.</i>  <u>At the end of this program, the successful student will know and be able to:</u>	<b>Characteristics of a University of Windsor Graduate</b>  <u>A UWindsor graduate will have the ability to demonstrate:</u>	<b>COU-approved Undergraduate Degree Level Expectations</b>
Explain and apply the major theories and concepts of chemistry in all four traditional sub-disciplines (analytical, inorganic, organic, and physical). (also applies to D)  Explain and apply the scientific method as it relates to chemistry research and societal issues. (also applies to B, C, H, and I)	A. the acquisition, application and integration of knowledge	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge
Review and evaluate relevant scientific literature and data sets in chemistry to solve applied problems. (also applies to C and D)  Properly select, calibrate, troubleshoot, and operate laboratory instruments for solving chemical problems. (also applies to C)	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits Knowledge
Assess and correctly interpret scientific data and the accuracy of the results. (also applies to D)	C. critical thinking and problem-solving skills	1. Depth and Breadth of Knowledge 2. Knowledge of Methodologies 3. Application of Knowledge 5. Awareness of Limits of Knowledge

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<b>Program Learning Outcomes (Degree Level Expectations)</b> <i>This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.</i>  <u>At the end of this program, the successful student will know and be able to:</u>	<b>Characteristics of a University of Windsor Graduate</b>  <u>A UWindsor graduate will have the ability to demonstrate:</u>	<b>COU-approved Undergraduate Degree Level Expectations</b>
Report scientific results concisely and accurately. (also applies to F)	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge
Effectively use safe laboratory practice (e.g., use and handling of chemicals). (also applies to G)	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
Communicate chemistry subjects, data, results, and analysis in oral, written, and numerical form. (also applies to D)	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
Integrate and apply scientific knowledge in a group or leadership role.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
Use scientific concepts in designing solutions to chemistry problems.	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
Monitor and identify advances in chemistry knowledge and laboratory techniques.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

**C.4.1 Revised Program Structure and Regulations Ensure Learning Outcomes Can be Met**

*Describe how the revised program's structure and regulations ensure that the specified learning outcomes can be met by successful students.*

All Chemical Laboratory Technology programs within Ontario adhere to the same Ministry Program Standards. The knowledge, skills, and abilities detailed within these Ministry Program Standards have been captured in the Honours Chemistry- Applied Chemistry Stream learning outcomes. Therefore, CAAT graduates will be prepared to successfully meet the learning outcomes of the new stream (see Appendix C for more information on curriculum mapping).

CAAT graduates would have achieved sophisticated knowledge in the core sciences, problem solving fundamentals for chemistry and biochemistry, the ability to analyze and synthesize chemical compounds and samples, and basic laboratory techniques needed to test chemical reactions safely. Upon entering the new stream, students will be introduced to a broader scope of scientific literature and laboratory techniques in chemistry. As such, all CAAT graduates will enter the Applied Chemistry stream with at the 'reinforcement' level understanding of the program learning outcomes. As they progress through the stream, they will gain more depth and breadth of scientific

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knowledge, including designing experiments, understanding chemical properties, and advanced laboratory techniques needed to study chemical processes and reactions.

The new stream includes course-specific assessments that will be used to evaluate students' mastery of the learning outcomes. These assessments may include, though are not limited to: examinations (e.g., quizzes, midterms, final exams), assignments of various formats related to course content (e.g., problem sets, lab reports), papers (e.g., research papers), and presentations. The structure of the stream is scaffolded to ensure students can meet the learning outcomes as well as progress from 'reinforcement' to 'mastery' of the stream learning outcomes. There will also be many opportunities for students to reinforce and practice these skills through both the required and elective courses within economics. Please see Appendix C for a copy of the curriculum map.

**C.4.2 Impact of Experiential Learning Component on Attainment of Learning Outcomes**

*For programs with a proposed experiential learning or co-op component: describe how the experiential learning/co-op component changes the emphasis or the means of achieving the intended learning outcomes for the program.*

There are no new or revised experiential learning components.

**C.4.3 Mode of Delivery (QAF section 2.1.5)**

*Demonstrate that the proposed modes of delivery are appropriate to meet the new or revised program learning outcomes. Discuss online vs. face-to-face (e.g., lecture, seminar, tutorial, lab) modes of delivery, as well as specialized approaches intended to facilitate the acquisition of specific skills, knowledge, and attitudes.*

Courses primarily rely on face-to-face offerings and delivery may vary according to instructor. Approaches may include: standard lectures with active learning techniques embedded (e.g., discussions), laboratories, tutorials, presentations, and written assignments.

The modes of delivery and the teaching methods used will provide students with a variety of learning experiences and assist them in developing the knowledge, skills, and abilities to meet the learning outcomes.

**C.5 Student Workload**

*Provide information on the expected workload per course credit (3.0) of a student enrolled in this revised program. (For assistance with this exercise, proposers are encouraged to contact the Centre for Teaching and Learning.)*

<b>Expected Workload per 3.0 Course Credit/Week</b>	<b>Average Time per week the Student is Expected to Devote to Each Component Over the Course of the Program</b>
Lectures	1-3
Tutorials	0-1
Practical experience	
Service or experiential learning	
Independent study	2-3
Reading and work for assessment, including meeting classmates for group work/project assignments (essays, papers, projects, laboratory work, etc.)	2-3
Studying for tests/examinations	1
Other: <i>[specify]</i>	Laboratories: 0-3 hours
<b>Compare the student workload for this program with other similar programs in the AAU:</b>	

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The core university courses for this stream are courses that are completed by students enrolled in the Honours Chemistry program. Therefore, the workload for the new stream is consistent with the workload for a student completing a Honours Chemistry degree.

**D. MONITORING AND EVALUATION (QAF section 2.1.6)**

*Describe and explain the appropriateness of the proposed methods of assessing student achievement given the new or revised intended learning outcomes and degree level expectations.*

Curriculum mapping was undertaken to ensure assessments were sufficiently measuring students' ability to meet the intended learning outcomes. These planned assessment activities are intended to focus on achievement of knowledge, skills, and methods in chemistry. This is consistent with the stream learning outcomes. Assessments may take different forms, including though not limited to: examinations (e.g., quizzes, midterms, final exams), assignments of various formats related to course content (e.g., problem sets, lab reports), papers (e.g., research papers), and presentations. Following the completion of curriculum mapping, it is evident that assessments adequately align with, and measure students' achievement of the program learning outcomes (see Appendix C for a copy of the curriculum map).

For an overview of assessment methods that may be used to evaluate students' fulfillment of the learning outcomes, please see Table 4: Alignment of assessments & learning outcomes.

The academic advisor within the Department of Chemistry and Biochemistry will be responsible for overseeing that requirements are being met as well as how student process through the program. As questions arise students can consult the academic advisor.

**Table 4. Alignment of assessments & learning outcomes**

Courses	Assessments*	Alignment with Program Learning Outcomes (PLO)	Sequence
BIOC-2010	Examinations, lab reports	PLO1-PLO3, PLO5-PLO9, PLO11	Summer term
CHEM-2500	Examinations	PLO1, PLO5-PLO8, PLO11	Summer term
CHEM-2510	Examination, labs	PLO1, PLO4, PLO6-PLO8	Summer term
PHYS-1400	Examinations, lab reports		Fall term
CHEM-3300	Labs, examinations, reports, presentation	PLO1, PLO3-PLO6, PLO8-PLO11	Fall term
CHEM-3400	Lab reports, examinations	PLO1-PLO6, PLO8	Fall term
CHEM-3500	Examinations, written assignments, labs	PLO1-PLO4, PLO6, PLO8, PLO9, PLO11	Fall term
PHYS-1410	Examinations, lab reports		Winter term
CHEM-3710	Examinations, presentation	PLO1-PLO3, PLO5-PLO10	Winter term

**Note:** Students are required to take three of CHEM-3310, CHEM-4XXX (excluding CHEM-4007). These were not included in the curriculum map or Table 4 given the variety of courses students are able to choose from. However, regardless of the courses chosen, they will provide additional opportunities for reinforcement and mastery of the stream learning outcomes.

Students may also have to complete some, or all of MATH-1720 or MATH-1760, MATH-1730, MATH-1250 or MATH 1270, and two of COMP-2067, MATH-2780, MATH-2790, PHYS-2200 or PHYS-2250 if they do not take the corresponding course equivalencies at St. Clair College; however, through student advising, we anticipate these courses being completed at SCC and therefore did not include them in the curriculum map or Table 2.

\*This is not a comprehensive list of assessments as there may be additional assessments used within courses that test students' achievement of certificate LOs.

**D.1 Plan for Documenting And Demonstrating Student Performance Consistent with Learning Outcomes**

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*Describe the plan for documenting and demonstrating student performance level and demonstrate its consistency with the new or revised stated learning outcomes and degree level expectations.*

As the stream evolves, student success and performance level will be tracked through consultation, student feedback, and grades. The academic advisor within the Department of Chemistry and Biochemistry will be responsible for monitoring student progression and responding to student questions regarding the stream. All courses will contribute to students' attainment of the program learning outcomes.

Please see Appendix C for the curriculum map and Table 4 for how course assessments may align with program learning outcomes.

**E. NEW OR REVISIONS TO EXPERIENTIAL LEARNING/CO-OP COMPONENT ONLY (Senate Co-op Policy)**

*[Complete this section ONLY if the program change includes new or revisions to the experiential learning/co-op component involving paid or unpaid placements.]*

Note: There are no new or revised experiential learning components.

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APPENDIX A – BUDGET SUMMARY SHEET**

Contact the Office of Quality Assurance for assistance in completing this form.

<b>Projections of Enrolment, Expenditures and Revenues (enrolments over 5 years)</b>						
<b>Year</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23 Steady stream</b>	<b>2023-24</b>	<b>2024-25</b>	<b>Total</b>
<b>Revenue</b>						
Tuition income*1	\$34,800 (5,800x6)	\$58,870 (5,887x10)	\$59,750 (5,975x10)	\$60,650 (6,065x10)	\$61,560 (6,156x10)	\$275,630
Potential Provincial funding*2	\$34,800	\$58,870	\$59,750	\$60,650	\$61,560	\$275,630
Other sources of funding (please list)						
	0	0	0	0	0	0
<b>Total Revenue</b>	<b>\$69,600</b>	<b>\$117,740</b>	<b>\$119,500</b>	<b>\$121,300</b>	<b>\$123,120</b>	<b>\$551,260</b>
<b>Expenses</b>						
Additional Sessional Faculty*3	\$20,000 (10,000x2)	\$20,200 (10,100x2)	\$20,402 (10,201x2)	\$20,606 (10,303x2)	\$20,812 (10,406x2)	\$102,020
GA/TA*4	\$10,000 (5,000x2)	\$10,100 (5,050x2)	\$10,202 (5,101x2)	\$10,304 (5,152x2)	\$10,408 (5,204x2)	\$51,014
<b>Total Expenses</b>	<b>\$30,000</b>	<b>\$30,300</b>	<b>\$30,604</b>	<b>\$30,910</b>	<b>\$31,220</b>	<b>\$153,034</b>
<b>Net Income</b>	<b>\$39,600</b>	<b>\$87,440</b>	<b>\$88,896</b>	<b>\$90,390</b>	<b>\$91,900</b>	<b>\$398,226</b>

\*1 Estimate \$5,800 per full-time equivalent domestic undergraduate student per year in 2020-21, with a 1.5% increase in each future year tuition rates.

\*2 Estimate same amount as tuition per full-time equivalent domestic undergraduate student

\*3 Estimate Sessional Faculty costs of \$10,000 in 2020-21 and a 1% annual increase

\*4 Estimate \$5,000 per GA/TA allocation in 2020-21 and a 1% annual increase

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Appendix B-Letter of Support from St. Clair College**



January 24, 2020

Dr. Chris Houser  
Dean, Faculty of Science  
University of Windsor  
401 Sunset Avenue  
Windsor, Ontario  
N9B 3P4

Dear Chris:

After reviewing the block transfer proposals to allow admission for St. Clair College graduates into the Forensics, Environmental Science, Economics, and Chemistry programs, please accept this letter as support to obtain the necessary approvals at the University of Windsor.

These 2 + 2-degree completion pathways will provide opportunities for graduates from programs related to: Police Foundations, business, the environment, and chemistry.

We anticipate that approximately 5 to 10% of graduating students from the aforementioned program areas will be interested in transferring to one of the prescribed degree completion pathways. St. Clair College will assist in advertising and promoting the programs to their students (e.g. sharing flyers, allowing site visits, etc.), as well as advising students on how to successfully transfer to the University of Windsor.

Should you require further information, I may be reached by email at [whabash@stclaircollege.ca](mailto:whabash@stclaircollege.ca) or by telephone at 519-972-2727, extension 5090.

I look forward to our continued collaboration.

Waseem Habash  
Vice President, Academic

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**Appendix C-Review and Analysis of CAAT Program Standards & Curriculum Mapping**

**Background information:**

CAAT program standards and their elements of performance for Chemical Laboratory Technology were carefully reviewed and categorized by the Characteristics of a University of Windsor Graduate. Following this review, stream learning outcomes were created that captured both the Chemical Laboratory Technology program standards and the program learning outcomes for the Honours Chemistry.

**Note:** The degree completion pathway is structured to ensure course material is not duplicated between Chemical Laboratory Technology programs and University of Windsor courses. Potential duplication in course content between Chemical Laboratory Technology and the University of Windsor courses were determined by examining the program standards and their elements of performance. For more information, please see the curriculum map below.

\* Chemical Laboratory Technology program standards and their elements of performance can be accessed here:

<http://www.tcu.gov.on.ca/pepg/audiences/colleges/progstan/techno/CheLabT6.html>

# PROGRAM DEVELOPMENT COMMITTEE

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### FORM B

**Courses to Program Outcomes: Applied Chemistry Stream (all courses)**

Course	A D PLO 1	A B C H I PLO 2	B C D PLO 3	B C PLO 4	C D PLO 5	D F PLO 6	E G PLO 7	F D PLO 8	G PLO 9	H PLO 10	I PLO 11
Chemistry Laboratory Technology Program	R	R	R	R	R	R	R	R	R	R	R
BIOC-2010	R	R	R		R	R	R	R	R		R
CHEM-2500	R				R	R	R	R			R
CHEM-2510	R			R		R	R	R			
CHEM-3300	R		R	R	R	R	M	R	R	R	R
CHEM-3400	M	R	R	M	M	R	M	R			
CHEM-3500	M	M	M	M		R	M	R	R		R
CHEM-3710	M	M	M		R	M	R	M	M	M	M
PHYS-1400		I			I	I	I		I		
PHYS-1410		I			I	I	I		I		

#### Legends

##### Courses

Chemistry Laboratory Technology Program	Chemistry Laboratory Technology Program
BIOC-2010	Organic Chemistry of Biomolecules
CHEM-2500	Introductory Inorganic Chemistry I
CHEM-2510	Introductory Inorganic Chemistry II
CHEM-3300	Spectroscopic Structure Identification
CHEM-3400	Quantum Chemistry
CHEM-3500	Organometallic Chemistry
CHEM-3710	Materials Chemistry
PHYS-1400	Introductory Physics I
PHYS-1410	Introductory Physics II

##### Program Learning Outcomes (PLOs)

PLO 1	Explain and apply the major theories and concepts of chemistry in all four traditional sub-disciplines (analytical, inorganic, organic, and physical)
PLO 2	Explain and apply the scientific method as it relates to chemistry research and societal issues.
PLO 3	Review and evaluate relevant scientific literature and data sets in chemistry to solve applied problems.
PLO 4	Properly select, calibrate, troubleshoot, and operate laboratory instruments for solving chemical problems.
PLO 5	Assess and correctly interpret scientific data and the accuracy of the results.
PLO 6	Report scientific results concisely and accurately.
PLO 7	Effectively use safe laboratory practice (e.g use and handling of chemicals).
PLO 8	Communicate chemistry subjects, data, results, and analysis in oral, written, and numerical form.

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## MAJOR PROGRAM CHANGES

### FORM B

- PLO 9 Integrate and apply scientific knowledge in a group or leadership role.  
PLO 10 Use scientific concepts in designing solutions to chemistry problems.  
PLO 11 Monitor and identify advances in chemistry knowledge and laboratory techniques.

#### Cell Values

- I Introduction  
R Reinforcement  
M Mastery  
■<sup>A</sup> (superscript) assessments indicated  
■<sup>H</sup> (superscript) high-impact assessments indicated

#### University Graduate Attributes

- A the acquisition, application and integration of knowledge  
B research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)  
C critical thinking and problem-solving skills  
D literacy and numeracy skills  
E responsible behaviour to self, others and society  
F interpersonal and communications skills  
G teamwork, and personal and group leadership skills  
H creativity and aesthetic appreciation  
I the ability and desire for continuous learning

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Document generated June 08, 2020.

**Note:** Students are required to take three of CHEM-3310, CHEM-4XXX (excluding CHEM-4007). These were not included in the curriculum map or Table 4 given the variety of courses students are able to choose from. However, regardless of the courses chosen, they will provide additional opportunities for reinforcement and mastery of the stream learning outcomes.

University of Windsor  
Program Development Committee

\*5.3: **Computer Science – Degree Completion Program (Form C1)**

Item for: **Approval**

**MOTION: That the Bachelor of Computer Science (Honours) for University Graduates be approved.^**

*^Subject to approval of the expenditures required.*

**Rationale/Approvals:**

- The proposal has been approved by the School of Computer Science Council and SPDC as delegated by the Faculty of Science Coordinating Council.
- *See attached.*

**PROGRAM DEVELOPMENT COMMITTEE  
ARTICULATION AGREEMENT/DEGREE COMPLETION PATHWAY  
FORM C1**

<b>TITLE OF PROGRAM/CERTIFICATE:</b>	<b>Bachelor of Computer Science (Honours) for University Graduates</b>
<b>DEPARTMENT(S)/SCHOOL(S):</b>	<b>School of Computer Science</b>
<b>FACULTY(IES):</b>	<b>Faculty of Science</b>

<b>Proposed articulation agreement or degree completion pathway effective as of*</b> [Fall, Winter, Spring]: <i>*(subject to timely and clear submission)</i>	Spring 2021
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**A. Program Details**

**A.1 Admission Requirements (QAF section 2.1.2)**

<p><i>Describe admission requirements for the articulation agreement/degree completion pathway:</i></p> <ul style="list-style-type: none"> <li><i>program-specific admission requirements, selection criteria, credit transfer, arrangements for exemptions or special entry, and alternative admission requirements, if any, for admission into the program, such as minimum average, additional language requirements or portfolios, recognition of prior work or learning experience (and how this will be assessed), etc.</i></li> </ul>
--

This program is also suggested to those considering future application to the M.Sc. Computer Science program.

- (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.

**A.2 Articulation Agreement/Degree Completion Pathway (QAF sections 2.1.4 and 2.1.10)**

<p><i>Sample wording for articulation agreement:</i></p> <p><b>Diploma in Protection, Security and Investigation (formerly Law and Security) (Two Year Diploma):</b> Graduates of the two-year Diploma in Protection, Security and Investigation program with a cumulative average grade of B or better <b>may</b> receive credit equivalent to five courses (15.00 credits) toward a B.A. or B.S.W. degree. Transfer credit is awarded for approved courses with a minimum grade of B- or better. <b>Medical Laboratory Science Program:</b> 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.</p> <p><i>Degree Completion Pathways specify the remaining courses that need to be completed for the awarding of the degree program.</i></p>
--

**Bachelor of Computer Science (Honours) for University Graduates**

**Total courses:** 27

**Degree requirements** (list remaining courses required for completion of degree pathway):

- (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.

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## ARTICULATION AGREEMENT/DEGREE COMPLETION PATHWAY

### FORM C1

(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).

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 (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.

(c) Summer/Intercession (Semester 1)

Intercession (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

(d) 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).

(e) 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.

(f) Summer/Intercession (Semester 4)

12-week: COMP-3220, COMP-3300, COMP-3670, MATH-1250 (or MATH-1260), and STAT-2910 (or STAT-2920).

(g) Fall (Semester 5)

12-week: COMP-3540, COMP-4400, COMP-4540, COMP-4990B (or COMP-4960B) and MATH-3940.

**Provide requirements for the Co-op/Experiential Learning Component (if applicable):** Either COMP-4960 or COMP-4990 will provide experiential learning component.

**Is the completion of the experiential learning/co-op component a requirement of the program? Yes, through the completion of required course COMP-4960 or COMP-4990.**

#### **A.3 Admission Requirements and Attainment of Learning Outcomes (QAF 2.1.2)**

*Demonstrate that admission requirements for the articulation agreement/degree completion pathway are sufficient to prepare students for successful attainment of the intended learning outcomes (degree level expectations) established for completion of the pathway. Include in appendices an assessment of course and program equivalencies demonstrating that the proposed advanced standing and credit transfer is appropriate and students who complete the program through the articulation agreement/degree completion pathway will be able to attain the intended learning outcomes.*

Admission requirements for students entering the Bachelor of Computer Science (Honours) for University Graduates are consistent with the requirements for students entering directly from high school into the Bachelor of Computer Science (Honours) program. Students in the Bachelor of Computer Science (Honours) for University Graduates will

# PROGRAM DEVELOPMENT COMMITTEE

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### FORM C1

complete the same core courses as those students in the existing Bachelor of Computer Science (Honours) program (excluding courses that are deemed equivalent to the material covered in their previous degree and electives). As such, students will be prepared to successfully meet the intended learning outcomes.

#### B. RATIONALE

*Please provide a brief rationale for the proposed articulation agreement/degree completion pathway.*

In Fall 2010, the School of Computer Science introduced Bachelor of Computer Science (General) for University graduates consisting of 16 courses. In Fall 2012, Bachelor of Computer Science (Honours Applied Computing) for University graduates, consisting of 25 courses was added. These two programs allow students to finish their degree requirements in 3 and 5 terms, respectively. These programs are quite successful in attracting domestic and some international students and have been acknowledged by the IQAP review committee. There is a demand from both the domestic (primarily) and international students getting credentials in Computer Science to be able to continue towards a graduate degree in Computer Science. This new pathway program is also inline with the Recommendations #4 of the IQAP 2020 external reviewers' report.

#### B.1 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In developing this articulation agreement or degree completion pathway, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

The AAU, in partnership with the members of the university's Aboriginal Education Council, the School of Computer Science will cyclically review its programs to identify aspects of various courses which have direct application or relevance to the indigenous communities. Where appropriate material directly relevant to these communities will be highlighted and presented in conjunction with material of a more generic nature.

#### C. RESOURCES

##### C.1 Available Faculty and Staff Resources (QAF sections 2.1.7, 2.1.8, 2.1.9 and 2.1.10)

*Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the articulation agreement/degree completion pathway. Please do not name specific individuals.*

Admission requirements for the Bachelor of Computer Science (Honours) for University Graduates are consistent with admission requirements for students entering directly from high school into the Bachelor of Computer Science (Honours) program. Students in the Bachelor of Computer Science (Honours) for University Graduates will complete the same core courses as those students in the Bachelor of Computer Science (Honours) program (excluding courses that are deemed equivalent on the basis of material covered in their previous degree and electives). As such, students will be prepared to successfully meet the intended learning outcomes.

##### C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Articulation agreement/Degree Completion Pathway

*Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the articulation agreement/degree completion pathway.*

There is no anticipated reliance on adjunct, limited-term, or sessional faculty beyond what is already being used.

##### C.1.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY)

*Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the articulation agreement/degree completion pathway.*

N/A

# PROGRAM DEVELOPMENT COMMITTEE

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### FORM C1

**C.1.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY)**

*Where appropriate to the articulation agreement/degree completion pathway, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.*

N/A

**C.2 Other Available Resources (Ministry sections 3 and 4)**

*Provide evidence that there are adequate resources available and committed to the articulation agreement/degree completion pathway to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities, including for example: staff support, library, teaching and learning support, student support services, space, equipment, facilities, GA/TA*

Courses within this program are offered regularly within a regular academic calendar so there are no anticipated additional resources required to offer the Bachelor of Computer Science (Honours) for University Graduates. Courses within this program has capacity for growth and will be able to accommodate the projected increases in enrollment. There are no anticipated new resources required to sustaining the educational experience of undergraduate students.

**C.3 Resource Implications for Other Campus Units (Ministry sections 3 and 4)**

*Describe the reliance of the proposed articulation agreement/degree completion pathway on existing resources from other campus units, including for example:*

- *existing courses, equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources. Provide relevant details.*

The majority of courses within this stream are offered through the School of the Computer Science. There is a small number of introductory courses in math and statistics that the students must complete. Programs that offer these courses can accommodate the increased enrolment numbers as our projected enrolment from this new degree completion pathway is consistent with typical program growth.

**C.4 Anticipated New Resources (QAF sections 2.1.7, 2.1.8 and 2.1.9; Ministry section 4)**

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the articulation agreement/degree completion pathway.*

N/A

**C.5 Planned Reallocation of Resources and Cost-Savings (QAF section 2.1.7 and 2.1.9; Ministry section 4)**

*Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the articulation agreement/degree completion pathway. (e.g., streamlining existing programs and courses, deleting courses, etc.).*

N/A

**C.6 Additional Resources Required – Resources Requested (QAF section 2.1.7 and 2.1.9)**

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the articulation agreement/degree completion pathway. If not applicable, write n/a.*

<b>Faculty:</b>	None
<b>Staff:</b>	None
<b>GA/TAs:</b>	None

**PROGRAM DEVELOPMENT COMMITTEE  
ARTICULATION AGREEMENT/DEGREE COMPLETION PATHWAY  
FORM C1**

**C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments**

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the articulation agreement/degree completion pathway, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

<b>Library Resources and Services:</b>	None
<b>Teaching and Learning Support:</b>	None
<b>Student Support Services:</b>	None
<b>Space and Facilities:</b>	None
<b>Equipment (and Maintenance):</b>	None

**D.1 Form History** (Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)

<b>Date of Modification</b>	<b>Approval Body Modifying</b>	<b>Reason for Modification</b>

**APPENDIX A  
COURSE OR PROGRAM EQUIVALENCIES**

The proposed degree completion pathway is not based on program equivalencies; rather, students are admitted into the proposed program from a full 3-4 year degree from another discipline than computer science and the non-core program requirements are covered from students' completion of their previous degree. Students entering the Bachelor of Computer Science (Honours) for University Graduates will complete the core degree requirements for the Bachelor of Computer Science (Honours) (except in cases where course equivalencies are granted) and, therefore, will be well positioned to meet the program learning outcomes. A possible course transfer credit against the core requirements, will allow students who have sufficient additional overlap in their non-Computer Science incoming degree to reduce their course requirements for any additional equivalent program content, on a case-by-case basis, to ensure requirements are not being repeated and students are not earning unnecessary credits for material already successfully completed. This transfer, however, will be based on the University of Windsor and The School of Computer Science course transfer policies and residency requirements. Lastly, the admissions requirement that the incoming student is to have degree from an accredited University in a discipline other than Computer Science, that has exposure to some form of math, statistics, computers or science (e.g. Engineering, Science, Math, Business, Economics, etc.), is simply to ensure that the student meets the intended additional learning requirements and to ensure that the student has some balance of mathematical and/or science background outside meeting those intended in the programs' core requirements.

University of Windsor  
Program Development Committee

\*5.4 Biomedical Sciences - Minor Program Changes (Form C)

Item for: **Approval**

**MOTION 1:** That the degree requirements for the Honours Biomedical Science be changed according to the program/course change form .^

**MOTION 2:** That the Honours Molecular Biology and Biotechnology program be renamed *Honours Biomedical Science*.

*^Subject to approval of the expenditures required.*

**Rationale/Approvals:**

- The Honours Biology and Biotechnology program is being renamed to reflect the name of the department in which it is housed, the Department of Biomedical Sciences. Minor program changes are also proposed.
- The proposal has been approved by the Department of Biomedical Sciences and SPDC as delegated by the Faculty of Science Coordinating Council.
- *See attached.*

**PROGRAM DEVELOPMENT COMMITTEE  
MINOR PROGRAM CHANGES  
FORM C**

<b>TITLE OF PROGRAM(S)/CERTIFICATE(S):</b>	Honours Molecular Biology and Biotechnology – Renamed: Honours Biomedical Science
<b>DEPARTMENT(S)/SCHOOL(S):</b>	Biomedical Sciences
<b>FACULTY(IES):</b>	Science

<b>Proposed change(s) effective as of*</b> [Fall, Winter, Spring]: <i>*(subject to timely and clear submission)</i>	Fall 2021
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**A.1 PROGRAM REQUIREMENT CHANGES**

*Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar ([www.uwindsor.ca/secretariat/calendars](http://www.uwindsor.ca/secretariat/calendars)) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining. Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the 3000-level or 4000-level.*

**Honours ~~Molecular Biology and Biotechnology~~ Biomedical Science**

***Degree Requirements:***

*Total courses: 40*

(a) ~~Biological Sciences:~~ BIOL-1101, BIOL-1111, ~~BIOL-2101~~, BIOL-2111, BIOL-2040, BIOL-2071, BIOM-2131, ~~BIOL-3142~~, BIOM-3500, BIOM-3530, ~~BIOM-3581\*~~, BIOM-4560, BIOL-4570, ~~BIOL-4904\*~~

**(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\* , at least 2 of which are at the 4000 level.**

~~(b)(c) Chemistry and Biochemistry:~~ CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010, BIOC-3100, BIOC-3110, BIOC-3130, ~~BIOC-4010~~.

~~(c)(d) COMP-1047 or COMP-2067, 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 (not pair PHYS-1300 and PHYS-1410)~~

~~(d) Five courses from the list of Molecular Biology and Biotechnology courses (see below)~~

;

(e) Three courses from: the list of ~~Chemistry and Biochemistry,~~ and other Biology Courses (*see below*); 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**

~~(fg) Four courses from any other area of study or, if taking MATH-1720 (or MATH-1760) and MATH-1730, three courses. (Recommended: at least one Arts course and one Social Science course).~~

~~Molecular Biology and Biotechnology Courses:~~ BIOL-3022, BIOM-3070 or BIOM-3071, BIOM-3550, BIOL-3571, BIOM-4530, BIOM-4540, BIOM-4590

~~Chemistry and Biochemistry and other Biology Courses:~~ BIOL-2480\*\*\*, BIOL-4008, BIOL-4232, BIOM-4440\*\*\*, BIOL-4450\*\*\*, BIOL-4481\*\*\*, CHEM-2200, CHEM-2500, CHEM-3210, BIOC-4030, and BIOC-4050.

**RECOMMENDED COURSE SEQUENCE**

*First Year:* ten courses, including BIOL-1101, BIOL-1111, CHEM-1100, CHEM-1110, ~~COMP-1047 (or COMP-2067),~~ MATH-1720 (or MATH-1760)\*\*\*, PHYS-1300 or PHYS-1400, PHYS-1310 or PHYS-1410, and STAT-2910.

*Second Year:* ten courses, including ~~BIOL-2101~~BIOL-2040, BIOL-2071, BIOL-2111, BIOM-2131, ~~BIOL-2071,~~CHEM-

# PROGRAM DEVELOPMENT COMMITTEE

## MINOR PROGRAM CHANGES

### FORM C

2300, and BIOC-2010.

*Third Year:* ~~nine~~ ten courses, including BIOL-3142, BIOM-3500, BIOM-3530, ~~BIOM-3581\*~~, BIOC-3100, BIOC-3110, and BIOC-3130.

*Fourth Year:* ~~nine~~ ten courses, including BIOL-4904\*, BIOL-4560, BIOL-4570, and BIOC-4010.

**\*BIOM-4440, BIOL-4450, and BIOL-4481 require the pre-requisite BIOL-2480**

**\*\*BIOM-3581 and BIOM-4904 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.**

~~\*\*It is recommended that students who have taken MATH-1720 (or MATH-1760) also take MATH-1730.~~

~~\*\*\*BIOM-4440, BIOL-4450, and BIOL-4481 require the pre-requisite BIOL-2480~~

*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~~

#### A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding and underlining**. Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E**.*

N/A

#### B. RATIONALE

*Please provide a rationale for the proposed change(s).*

The Biology and Biotechnology program is being renamed to reflect the name of the department in which it is housed. Course requirements are updated to reflect current offerings and to provide more flexibility to students.

#### B.1 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In revising this program(s), how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Course instructors will regularly review and revise course content with the aim of identifying and incorporating material that has specific relevance to indigenous communities.

#### C. RESOURCES

##### C.1 Available Faculty Expertise and Staff Resources (QAF sections 2.1.7, 2.1.8, 2.1.9 and 2.1.10)

*Describe, in general terms, all faculty expertise and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the program change(s). Please do not name specific individuals.*

N/A

##### C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program

*Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program.*

# PROGRAM DEVELOPMENT COMMITTEE

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### FORM C

N/A

**C.1.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY)**

*Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.*

N/A

**C.1.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY)**

*Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.*

N/A

**C.2 Other Available Resources (Ministry sections 3 and 4)**

*Provide evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities, including for example: staff support, library, teaching and learning support, student support services, space, equipment, facilities, GA/TA*

N/A

**C.3 Resource Implications for Other Campus Units (Ministry sections 3 and 4)**

*Describe the reliance of the proposed program revisions on existing resources from other campus units, including for example: existing courses, equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources. Provide relevant details.*

As the current enrollment in the Molecular Biology and Biotechnology program (year1-4) is around 20-30, there should not be major impacts on any existing courses or courses added to the new Biomedical Sciences program. The Department of Integrative Biology has been consulted with regard to the addition of BIOL-2040 as a required course.

**C.4 Anticipated New Resources (QAF sections 2.1.7, 2.1.8 and 2.1.9; Ministry section 4)**

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revisions to this program.*

N/A

**C.5 Planned Reallocation of Resources and Cost-Savings (QAF section 2.1.7 and 2.1.9; Ministry section 4)**

*Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revisions to this program. (e.g., streamlining existing programs and courses, deleting courses, etc.).*

N/A

**C.6 Additional Resources Required – Resources Requested (QAF section 2.1.7 and 2.1.9)**

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

<b>Faculty:</b>	N/A
<b>Staff:</b>	N/A
<b>GA/TAs:</b>	N/A

**PROGRAM DEVELOPMENT COMMITTEE  
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FORM C**

**C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments**

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

<b>Library Resources and Services:</b>	N/A
<b>Teaching and Learning Support:</b>	N/A
<b>Student Support Services:</b>	N/A
<b>Space and Facilities:</b>	N/A
<b>Equipment (and Maintenance):</b>	N/A

**University of Windsor  
Program Development Committee**

\*5.5: **Chemistry and Biochemistry/Biomedical Sciences - Minor Program Changes (Form C)**

Item for: **Approval**

**MOTION: That the degree requirements for the Honours Biochemistry and Biomedical Science (Health Stream) be changed according to the program/course change form.^**

*^Subject to approval of the expenditures required.*

**Rationale/Approvals:**

- The proposal has been approved by the Department of Chemistry/Biochemistry; the Department of Biomedical Sciences and SPDC as delegated by the Faculty of Science Coordinating Council.
- *See attached.*

# PROGRAM DEVELOPMENT COMMITTEE

## MINOR PROGRAM CHANGES

### FORM C

University policy states that students may follow the academic rules and program regulations set out in the calendar of the term in which they were first admitted to a program or any subsequent calendar. In light of this, students already in the program must be permitted to complete the degree requirements according to the calendar of the term in which they enrolled (or any subsequent calendar). If courses are no longer available, appropriate substitutes must be made.

TITLE OF PROGRAM(S)/CERTIFICATE(S):	Honours Biochemistry and Biomedical Science (Health Stream)
DEPARTMENT(S)/SCHOOL(S):	Chemistry and Biochemistry; Biomedical Sciences
FACULTY(IES):	Science

Proposed change(s) effective as of* [Fall, Winter, Spring]: <i>*(subject to timely and clear submission)</i>	Fall 2021
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#### A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar ([www.uwindsor.ca/secretariat/calendars](http://www.uwindsor.ca/secretariat/calendars)) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding and underlining**. Example: Degree requirements: WXYZ-1000, ~~WXYZ-1010~~, WXYZ-1100, WXYZ-2100, WXYZ-3100, WXYZ-4100, plus three additional courses at the **3000-level or** 4000-level.

#### 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, BIOM-4530, BIOM-4540, BIOM-4550, BIOM-4560, **BIOM-4590**, BIOL-4904\*\*, BIOM-3400, BIOM-3560, BIOM-3750, BIOM-3540, BIOM-4510, BIOM-4008, 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 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.

# PROGRAM DEVELOPMENT COMMITTEE

## MINOR PROGRAM CHANGES

### FORM C

Qualified students who find a supervisor may complete a thesis option (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.

#### A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding and underlining**. Examples of minor course changes include: deleting courses, course description changes, pre/anti/co- requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E**.*

N/A

#### B. RATIONALE

*Please provide a rationale for the proposed change(s).*

The Honours Biochemistry and Biomedical Sciences program was recently updated to reflect current course offerings. BIOM-4590 Epigenetics was mistakenly omitted from this recent update. Both the Departments of Biomedical Sciences and Chemistry/Biochemistry approve this minor change.

#### B.1 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In revising this program(s), how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

This minor revision does not impact on the incorporating of Indigenous content into the curriculum.

#### C. RESOURCES

##### C.1 Available Faculty Expertise and Staff Resources (QAF sections 2.1.7, 2.1.8, 2.1.9 and 2.1.10)

*Describe, in general terms, all faculty expertise and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the program change(s). Please do not name specific individuals.*

N/A

##### C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program

*Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program.*

N/A

##### C.1.2 Graduate Faculty Qualifications and Supervisory Loads (FOR GRADUATE PROGRAMS ONLY)

*Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.*

N/A

# PROGRAM DEVELOPMENT COMMITTEE

## MINOR PROGRAM CHANGES

### FORM C

**C.1.3 Financial Assistance for Graduate Students (where appropriate) (FOR GRADUATE PROGRAMS ONLY)**

*Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.*

N/A

**C.2 Other Available Resources (Ministry sections 3 and 4)**

*Provide evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities, including for example: staff support, library, teaching and learning support, student support services, space, equipment, facilities, GA/TA*

N/A

**C.3 Resource Implications for Other Campus Units (Ministry sections 3 and 4)**

*Describe the reliance of the proposed program revisions on existing resources from other campus units, including for example: existing courses, equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources. Provide relevant details.*

N/A

**C.4 Anticipated New Resources (QAF sections 2.1.7, 2.1.8 and 2.1.9; Ministry section 4)**

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revisions to this program.*

N/A

**C.5 Planned Reallocation of Resources and Cost-Savings (QAF section 2.1.7 and 2.1.9; Ministry section 4)**

*Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the revisions to this program. (e.g., streamlining existing programs and courses, deleting courses, etc.).*

N/A

**C.6 Additional Resources Required – Resources Requested (QAF section 2.1.7 and 2.1.9)**

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program. If not applicable, write n/a.*

<b>Faculty:</b>	N/A
<b>Staff:</b>	N/A
<b>GA/TAs:</b>	N/A

**C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments**

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

<b>Library Resources and Services:</b>	N/A
<b>Teaching and Learning Support:</b>	N/A
<b>Student Support Services:</b>	N/A
<b>Space and Facilities:</b>	N/A
<b>Equipment (and Maintenance):</b>	N/A

**University of Windsor  
Program Development Committee**

\*5.6: **Biomedical – New Course Proposals (Form D)**

Item for: **Approval**

**MOTION: That the following courses be approved: ^**  
**BIOM-4008. Special Topics in Biomedical Sciences**  
**BIOM-4904. Undergraduate Research in Biomedical Sciences I**  
**BIOM-4914. Undergraduate Research in Biomedical Sciences II**

*^Subject to approval of the expenditures required.*

**Rationale/Approvals:**

- The proposal has been approved by the Department of Chemistry and Biochemistry Council and SPDC as delegated by the Faculty of Science Coordinating Council.
- Students will normally only take one of the Undergraduate Research in Biomedical Sciences courses. The course BIOM 4904 (6.0 credits) is usually the only course that students take. It is taken over the duration of two semesters with 10 hours of lab per week - therefore 240 hours over the two semesters. In addition, there are also 10 lecture hours per semester. The course BIOM 4914 is the second course with the same structure as BIOM 4904.
- *See attached.*

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

<b>TITLE OF PROGRAM(S)/CERTIFICATE(S):</b>	Biomedical Sciences
<b>DEPARTMENT(S)/SCHOOL(S):</b>	Biomedical Sciences
<b>FACULTY(IES):</b>	Science

<b>Proposed change(s) effective as of*</b> [Fall, Winter, Spring]: <i>*(subject to timely and clear submission)</i>	Fall 2021
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**A. NEW COURSE PROFILE**

**Course # and Title: BIOM-4008. Special Topics in Biomedical Sciences**

**A.1 Calendar Description**

*Calendar descriptions should be written in the third person and should provide a general outline of the course material. Where appropriate, examples of topics or themes, which might be covered in the course, should also be provided.*

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)

**A.2 Other Course Information**

*Please complete the following tables.*

Credit weight	Total contact hours	Delivery format				Breakdown of contact hours/week			
		In-class	e-learning	Distance	Other flexible learning delivery <i>[please specify]</i>	Lecture	Lab/ Tutorial	Online	Co-op/ practicum/ experiential learning
3.0	36	X				3	0	0	0

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** <i>[provide old course number]</i>
BIOM 3530 or BIOM 3500				No	

**\*\*\*Replacing Old Course: this does not mean that the former course will be deleted from the calendar. If it is to be deleted, a Form E must be completed.**

<b>Will students be able to obtain credit for the new course and the course(s) that it is replacing?</b>	N/A
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**B. RATIONALE**

**B.1 Course Goal(s)**

*Please provide a statement about the purpose of the course within the program of study or as an option.*

As Biomedical Sciences is a fast-evolving science, new technologies and topics arise often that are not covered in other courses. The purpose of this course is to provide students with an understanding of recent advances, technologies and theory in Biomedical Science topics.

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### B.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In developing this course, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

The AAU will continue conversations with members of the university’s Aboriginal Education Council to create a knowledge base applicable to Biomedical Sciences courses at all levels concerning appropriate content/curriculum changes or recommendations that could be made in the future. These changes could include integration of real-world examples that are more relevant to modern Indigenous societies and also examples drawn from historical Indigenous knowledge of the natural world and their role in indigenous medicine and natural products, where applicable. The course instructor will review course materials and identify areas where indigenous content can be integrated to provide a holistic perspective of a topic.

#### B.3 LEARNING OUTCOMES (QAF section 2.1.1, 2.1.3, and 2.1.6)

*Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in “To Greater Heights” by listing them in the appropriate rows.*

*Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. **If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.***

*Information on learning outcomes is appended to this form (Appendix A). Proposers are also strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes.*

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i>	<b>Characteristics of a University of Windsor Graduate</b>
At the end of this course, the successful student will know and be able to:	A U of Windsor graduate will have the ability to demonstrate:
A. - identify and describe a wide range of biomedical science concepts, including (but not limited to): new molecular and cellular technology, new infectious diseases.	A. the acquisition, application and integration of knowledge
B.- collect, read, analyze, synthesize and evaluate information related to subject areas in Biomedical Sciences in reference books and primary research publications.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. - solve problems through application of scientific methods, analysis, and knowledge of the biomedical Science technologies and topics	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E.	E. responsible behaviour to self, others and society

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i>	<b>Characteristics of a University of Windsor Graduate</b>
<u>At the end of this course, the successful student will know and be able to:</u>	<u>A U of Windsor graduate will have the ability to demonstrate:</u>
F. - clearly and accurately communicate Biomedical Science based concepts in writing and orally.	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I.- identify and describe aspects of subjects based in Biomedical Sciences that are relevant for personal reasons and/or research, academic and professional goals and responsibilities.	I. the ability and desire for continuous learning

**B.4 Demand for Course**

*Please provide as much information on projected enrolment as possible.*

Projected enrolment levels for the first 5 years of the new course.	Year 1	Year 2	Year 3	Year 4	Year 5
	20-30	20-30	20-30	20-30	20-30

**B.4.1 Impact of New Course on Enrolment in Existing Courses**

*What will be the impact of offering the new course on enrolments in existing courses in the program or Department?*

None.

**B.5 Student Workload**

*Provide information on the expected workload per week of a student enrolled in this course.  
NOTE: Student workload should be consistent with the credit weight assigned to the course.*

<b>Average number of hours per week that the student will be expected to devote to:</b>	
3	Lectures
	Tutorials
	Labs
	Practical experience
	Independent Study
3	Reading for the course
1	Work for assessment (essays, papers, projects, laboratory work)
	Meeting with others for group work/project assignments
2	Studying for tests/examinations
	Other: <i>[specify]</i>
<b>How does the student workload for this course compare with other similar courses in the department/program area?</b>	Same as other 3000-4000 level courses in Biomedical Sciences

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### C. RESOURCES

##### C.1 Available Faculty Expertise and Staff Resources (QAF sections 2.1.7, 2.1.8, 2.1.9 and 2.1.10)

*Describe all faculty expertise and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the new course. Please do not name specific individuals.*

BIOM 4008 will be only taught when a new area within Biomedical Sciences is selected for instruction. This can occur upon hiring of a new faculty member with interests and specialization in novel areas of Biomedical Sciences not currently covered in existing courses.

##### C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program

*Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the new course.*

This course will be usually offered by a full-time faculty member. It is not a required course, so it does not need to be offered if the full-time faculty member is on sabbatical. As it is a Special Topics course, there may be some times that a sessional instructor would be hired to teach a course in their specific specialty that is not covered by existing faculty in the Department of Biomedical Sciences.

##### C.2 Resource Implications for Other Campus Units (Ministry sections 3 and 4)

*Describe the reliance of the proposed new course on existing resources from other campus units, including for example: faculty teaching, equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources. Provide relevant details.*

N/A

##### C.3 Anticipated New Resources (QAF sections 2.1.7, 2.1.8 and 2.1.9; Ministry section 4)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the new course.*

N/A

##### C.4 Planned Reallocation of Resources and Cost-Savings (QAF section 2.1.7 and 2.1.9; Ministry section 4)

*Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the new course. (e.g., streamlining existing programs and courses, deleting courses, etc.).*

N/A

##### C.5 Additional Resources Required – Resources Requested (QAF section 2.1.7 and 2.1.9)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to offer the new course. If not applicable, write n/a.*

<b>Faculty:</b>	None
<b>Staff:</b>	None
<b>GA/TAs:</b>	None

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

**C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments**

*Describe all **additional institutional resources and services** required by all affected areas or departments to offer the new course, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

<b>Library Resources and Services:</b>	None
<b>Teaching and Learning Support:</b>	None
<b>Student Support Services:</b>	None
<b>Space and Facilities:</b>	None
<b>Equipment (and Maintenance):</b>	None

**D.1 Form History** *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

Date of Modification	Approval Body Modifying	Reason for Modification

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### A. NEW COURSE PROFILE

**Course # and Title: BIOM-4904. Undergraduate Research in Biomedical Sciences**

##### A.1 Calendar Description

*Calendar descriptions should be written in the third person and should provide a general outline of the course material. Where appropriate, examples of topics or themes, which might be covered in the course, should also be provided.*

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)

##### A.2 Other Course Information

*Please complete the following tables.*

Credit weight	Total contact hours	Delivery format				Breakdown of contact hours/week			
		In-class	e-learning	Distance	Other flexible learning delivery <i>[please specify]</i>	Lecture	Lab/ Tutorial	Online	Co-op/ practicum/ experiential learning
6.0	260					10	250	0	0

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** <i>[provide old course number]</i>
BIOM 3530 or BIOM 3500	Major average over 70%			No	

**\*\*\*Replacing Old Course: this does not mean that the former course will be deleted from the calendar. If it is to be deleted, a Form E must be completed.**

**Will students be able to obtain credit for the new course and the course(s) that it is replacing?** N/A

#### B. RATIONALE

##### B.1 Course Goal(s)

*Please provide a statement about the purpose of the course within the program of study or as an option.*

The purpose of the Undergraduate Research in Biomedical Sciences is to provide senior students interested in obtaining research experience in the field of Biomedical Sciences. Students will work in the laboratory of a faculty member to design and perform experiments leading to the completion of an undergraduate thesis and presentation at a year-end colloquium. Students will also be given lectures in critical research study design, data analysis, writing a research article, and presentation skills.

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### B.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In developing this course, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

The AAU will continue conversations with members of the university's Aboriginal Education Council to create a knowledge base applicable to Biomedical Sciences courses at all levels concerning appropriate content/curriculum changes or recommendations that could be made in the future. These changes could include integration of real-world examples that are more relevant to modern Indigenous societies and also examples drawn from historical Indigenous knowledge of the natural world and their role in indigenous medicine and natural products, where applicable. The course instructor will review course materials and identify areas where indigenous content can be integrated to provide a holistic perspective of a topic.

#### B.3 LEARNING OUTCOMES (QAF section 2.1.1, 2.1.3, and 2.1.6)

*Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in "To Greater Heights" by listing them in the appropriate rows. Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. **If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.** Information on learning outcomes is appended to this form (Appendix A). Proposers are also strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes.*

Course Learning Outcomes <i>This is a sentence completion exercise.</i>	Characteristics of a University of Windsor Graduate
At the end of this course, the successful student will know and be able to:	A U of Windsor graduate will have the ability to demonstrate:
A. Research peer-reviewed published literature, interpret literature, and identify unresolved issues or gaps in our knowledge	B. the acquisition, application and integration of knowledge
B. Apply knowledge from published literature to formulate scientific questions and testable hypotheses related to a research project	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Design experiments to address hypotheses, conduct experiments, collect and analyze data using appropriate statistical analysis methods	C. critical thinking and problem-solving skills
D. - Disseminate knowledge through written work and presentation of research findings at scientific meetings	D. literacy and numeracy skills
E. - Employ ethical research standards, including honesty and integrity	E. responsible behaviour to self, others and society
F. - Express ideas and opinions in a logical and comprehensive manner	F. interpersonal and communications skills
G. - Lead a research project and be a productive member of a research team	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i>	<b>Characteristics of a University of Windsor Graduate</b>
<u>At the end of this course, the successful student will know and be able to:</u>	<u>A U of Windsor graduate will have the ability to demonstrate:</u>
I. - Contribute to the broader scientific community and apply scientific knowledge to every day issues	I. the ability and desire for continuous learning

**B.4 Demand for Course**

*Please provide as much information on projected enrolment as possible.*

Projected enrolment levels for the first 5 years of the new course.	Year 1	Year 2	Year 3	Year 4	Year 5
	20-30	20-30	20-30	20-30	20-30

**B.4.1 Impact of New Course on Enrolment in Existing Courses**

*What will be the impact of offering the new course on enrolments in existing courses in the program or Department?*

None.

**B.5 Student Workload**

*Provide information on the expected workload per week of a student enrolled in this course. NOTE: Student workload should be consistent with the credit weight assigned to the course.*

Average number of hours per week that the student will be expected to devote to:	
0.5	Lectures
	Tutorials
	Labs
10	Practical experience
	Independent Study
3	Reading for the course
1	Work for assessment (essays, papers, projects, laboratory work)
1	Meeting with others for group work/project assignments
	Studying for tests/examinations
	Other: <i>[specify]</i>
<b>How does the student workload for this course compare with other similar courses in the department/program area?</b>	<b>Same as other 3000-4000 level courses in Biomedical Sciences</b>

**C. RESOURCES**

**C.1 Available Faculty Expertise and Staff Resources (QAF sections 2.1.7, 2.1.8, 2.1.9 and 2.1.10)**

*Describe all faculty expertise and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the new course. Please do not name specific individuals.*

The BIOM 4904 course will be overseen by a Biomedical Sciences faculty member. They will be involved in both Fall and Winter semesters, and work with the students to organize the final year-end colloquium. They will also deliver the research lectures during both semesters.

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

**C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program**

*Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the new course.*

N/A

**C.2 Resource Implications for Other Campus Units (Ministry sections 3 and 4)**

*Describe the reliance of the proposed new course on existing resources from other campus units, including for example: faculty teaching, equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources. Provide relevant details.*

None

**C.3 Anticipated New Resources (QAF sections 2.1.7, 2.1.8 and 2.1.9; Ministry section 4)**

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the new course.*

None

**C.4 Planned Reallocation of Resources and Cost-Savings (QAF section 2.1.7 and 2.1.9; Ministry section 4)**

*Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the new course. (e.g., streamlining existing programs and courses, deleting courses, etc.).*

None

**C.5 Additional Resources Required – Resources Requested (QAF section 2.1.7 and 2.1.9)**

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to offer the new course. If not applicable, write n/a.*

<b>Faculty:</b>	None
<b>Staff:</b>	None
<b>GA/TAs:</b>	None

**C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments**

*Describe all **additional institutional resources and services** required by all affected areas or departments to offer the new course, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.*

<b>Library Resources and Services:</b>	None
<b>Teaching and Learning Support:</b>	None
<b>Student Support Services:</b>	None
<b>Space and Facilities:</b>	None
<b>Equipment (and Maintenance):</b>	None

**D.1 Form History** (Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)

Date of Modification	Approval Body Modifying	Reason for Modification

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### A. NEW COURSE PROFILE

**Course # and Title: BIOM-4914. Undergraduate Research in Biomedical Sciences**

##### A.1 Calendar Description

*Calendar descriptions should be written in the third person and should provide a general outline of the course material. Where appropriate, examples of topics or themes, which might be covered in the course, should also be provided.*

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%.)

##### A.2 Other Course Information

*Please complete the following tables.*

Credit weight	Total contact hours	Delivery format				Breakdown of contact hours/week			
		In-class	e-learning	Distance	Other flexible learning delivery <i>[please specify]</i>	Lecture	Lab/ Tutorial	Online	Co-op/ practicum/ experiential learning
6.0	260					10	250	0	0

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** <i>[provide old course number]</i>
BIOM 3530 or BIOM 3500	Major average over 70%			No	

**\*\*\*Replacing Old Course: this does not mean that the former course will be deleted from the calendar. If it is to be deleted, a Form E must be completed.**

**Will students be able to obtain credit for the new course and the course(s) that it is replacing?** N/A

#### B. RATIONALE

##### B.1 Course Goal(s)

*Please provide a statement about the purpose of the course within the program of study or as an option.*

The purpose of the Undergraduate Research in Biomedical Sciences is to provide senior students interested in obtaining research experience in the field of Biomedical Sciences. Students will work in the laboratory of a faculty member to design and perform experiments leading to the completion of an undergraduate thesis and presentation at a year-end colloquium. Students will also be given lectures in critical research study design, data analysis, writing a research article, and presentation skills. Students are required to complete BIOM 4904 prior to enrolling in BIOM 4914.

##### B.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In developing this course, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

The AAU will continue conversations with members of the university’s Aboriginal Education Council to create a knowledge base applicable to Biomedical Sciences courses at all levels concerning appropriate content/curriculum changes or recommendations that could be made in the future. These changes could include integration of real-world examples that are more relevant to modern Indigenous societies and also examples drawn from historical Indigenous knowledge of the natural world and their role in indigenous medicine and natural products, where applicable. The course instructor will review course materials and identify areas where indigenous content can be integrated to provide a holistic perspective of a topic.

#### **B.3 LEARNING OUTCOMES (QAF section 2.1.1, 2.1.3, and 2.1.6)**

*Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in “To Greater Heights” by listing them in the appropriate rows.*

*Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. **If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.***

*Information on learning outcomes is appended to this form (Appendix A). Proposers are also strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes.*

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i>	<b>Characteristics of a University of Windsor Graduate</b>
<u>At the end of this course, the successful student will know and be able to:</u>	<u>A U of Windsor graduate will have the ability to demonstrate:</u>
A. - Research peer-reviewed published literature, interpret literature, and identify unresolved issues or gaps in our knowledge	C. the acquisition, application and integration of knowledge
B. - Apply knowledge from published literature to formulate scientific questions and testable hypotheses related to a research project	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. - Design experiments to address hypotheses, conduct experiments, collect and analyze data using appropriate statistical analysis methods	C. critical thinking and problem-solving skills
D. - Write a dissertation, and disseminate knowledge through publication and presentation of research findings at scientific meetings	D. literacy and numeracy skills
E. - Employ ethical research standards, including honesty and integrity	E. responsible behaviour to self, others and society

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i>	<b>Characteristics of a University of Windsor Graduate</b>
<u>At the end of this course, the successful student will know and be able to:</u>	<u>A U of Windsor graduate will have the ability to demonstrate:</u>
F. - Express ideas and opinions in a logical and comprehensive manner	F. interpersonal and communications skills
G. - Lead a research project and be a productive member of a research team	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I. - Contribute to the broader scientific community and apply scientific knowledge to every day issues	I. the ability and desire for continuous learning

**B.4 Demand for Course**

*Please provide as much information on projected enrolment as possible.*

Projected enrolment levels for the first 5 years of the new course.	Year 1	Year 2	Year 3	Year 4	Year 5
	1-10	1-10	1-10	1-10	1-10

**B.4.1 Impact of New Course on Enrolment in Existing Courses**

*What will be the impact of offering the new course on enrolments in existing courses in the program or Department?*

None.

**B.5 Student Workload**

*Provide information on the expected workload per week of a student enrolled in this course.  
NOTE: Student workload should be consistent with the credit weight assigned to the course.*

<b>Average number of hours per week that the student will be expected to devote to:</b>	
0.5	Lectures
	Tutorials
	Labs
10	Practical experience
	Independent Study
3	Reading for the course
1	Work for assessment (essays, papers, projects, laboratory work)
1	Meeting with others for group work/project assignments
	Studying for tests/examinations
	Other: <i>[specify]</i>

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

<b>How does the student workload for this course compare with other similar courses in the department/program area?</b>	Same as other 3000-4000 level courses in Biomedical Sciences
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**C. RESOURCES**

**C.1 Available Faculty Expertise and Staff Resources (QAF sections 2.1.7, 2.1.8, 2.1.9 and 2.1.10)**

*Describe all faculty expertise and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the new course. Please do not name specific individuals.*

The BIOM 4914 course will be overseen by a Biomedical Sciences faculty member. They will be involved in both Fall and Winter semesters, and work with the students to organize the final year-end colloquium. They will also deliver the research lectures during both semesters.

**C.1.1 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program**

*Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the new course.*

N/A

**C.2 Resource Implications for Other Campus Units (Ministry sections 3 and 4)**

*Describe the reliance of the proposed new course on existing resources from other campus units, including for example: faculty teaching, equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources. Provide relevant details.*

None

**C.3 Anticipated New Resources (QAF sections 2.1.7, 2.1.8 and 2.1.9; Ministry section 4)**

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the new course.*

None

**C.4 Planned Reallocation of Resources and Cost-Savings (QAF section 2.1.7 and 2.1.9; Ministry section 4)**

*Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the new course. (e.g., streamlining existing programs and courses, deleting courses, etc.).*

None

**C.5 Additional Resources Required – Resources Requested (QAF section 2.1.7 and 2.1.9)**

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to offer the new course. If not applicable, write n/a.*

<b>Faculty:</b>	None
<b>Staff:</b>	None
<b>GA/TAs:</b>	None

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

**C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments**

Describe all **additional institutional resources and services** required by all affected areas or departments to offer the new course, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance. If not applicable, write n/a.

<b>Library Resources and Services:</b>	None
<b>Teaching and Learning Support:</b>	None
<b>Student Support Services:</b>	None
<b>Space and Facilities:</b>	None
<b>Equipment (and Maintenance):</b>	None

**D.1 Form History** (Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)

<b>Date of Modification</b>	<b>Approval Body Modifying</b>	<b>Reason for Modification</b>

**University of Windsor  
Program Development Committee**

\*5.7: **Chemistry and Biochemistry - New Course Proposal (Form D)**

Item for: **Approval**

**MOTION: That the following course be approved:^  
CHEM-4528. Supramolecular Chemistry**

*^Subject to approval of the expenditures required.*

**Rationale/Approvals:**

- The proposal has been approved by the Department of Chemistry and Biochemistry Council and SPDC as delegated by the Faculty of Science Coordinating Council.
- Although the course CHEM-4528 will be cross-listed with graduate course CHEM-8528, there will be differences in learning outcomes for the courses.
- *See attached.*

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

<b>TITLE OF PROGRAM(S)/CERTIFICATE(S):</b>	BSc (all honor programs in the Department of Chemistry and Biochemistry)
<b>DEPARTMENT(S)/SCHOOL(S):</b>	Chemistry & Biochemistry
<b>FACULTY(IES):</b>	Science

<b>Proposed change(s) effective as of*</b> [Fall, Winter, Spring]:	Fall 2021
<i>*(subject to timely and clear submission)</i>	

**A. NEW COURSE PROFILE**

**Course # and Title: CHEM-4528. Supramolecular Chemistry**

**A.1 Calendar Description**

*Calendar descriptions should be written in the third person and should provide a general outline of the course material. Where appropriate, examples of topics or themes, which might be covered in the course, should also be provided.*

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. (Pre-requisite CHEM-2510.) (2 lecture hours a week.) (Cross listed with CHEM-8528.)

**A.2 Other Course Information**

*Please complete the following tables.*

Credit weight	Total contact hours	Delivery format				Breakdown of contact hours/week			
		In-class	e-learning	Distance	Other flexible learning delivery <i>[please specify]</i>	Lecture	Lab/ Tutorial	Online	Co-op/ practicum/ experiential learning
3.0	24	Yes	No	No	n/a	2	0	0	0

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** <i>[provide old course number]</i>
CHEM 2510	n/a	n/a	CHEM 8528	No	

**\*\*\*Replacing Old Course: this does not mean that the former course will be deleted from the calendar. If it is to be deleted, a Form E must be completed.**

<b>Will students be able to obtain credit for the new course and the course(s) that it is replacing?</b>	n/a
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**B. RATIONALE**

The materials of this course have previously been taught under CHEM-4510. Special Topics in Inorganic Chemistry (see Appendix for its syllabus) as its course code and title. We propose a new course code and number and aim to facilitate students in choosing the course with more accurate description of its content.

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### B.1 Course Goal(s)

*Please provide a statement about the purpose of the course within the program of study or as an option.*

Learn the basic concepts and real-world applications of supramolecular chemistry.

#### B.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In developing this course, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Course instructors will cyclically review course materials to identify aspects of the course which have direct application or relevance to indigenous communities. Where appropriate material directly relevant to these communities will be highlighted and presented in conjunction with material of a more generic nature.

#### B.3 LEARNING OUTCOMES (QAF section 2.1.1, 2.1.3, and 2.1.6)

*Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in "To Greater Heights" by listing them in the appropriate rows.*

*Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. **If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.***

*Information on learning outcomes is appended to this form (Appendix A). Proposers are also strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes.*

Course Learning Outcomes <i>This is a sentence completion exercise.</i>	Characteristics of a University of Windsor Graduate
<u>At the end of this course, the successful student will know and be able to:</u>	<u>A U of Windsor graduate will have the ability to demonstrate:</u>
A. classify different types of non-covalent bonding and describe how they can be used in molecular recognition and self-assembly events.	A. the acquisition, application and integration of knowledge
B. describe examples of how non-covalent bonds have been used to create abiotic and biological receptors, molecular devices and molecular machines.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. critically evaluate the current literature pertaining to molecular receptors for binding a designated analyte using non-covalent bonding.	C. critical thinking and problem-solving skills
D. quantify the interactions between molecules that result from non-covalent bonding.	D. literacy and numeracy skills
E. evaluate the potential applications of supramolecular materials and devices.	E. responsible behaviour to self, others and society

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i>	<b>Characteristics of a University of Windsor Graduate</b>
<u>At the end of this course, the successful student will know and be able to:</u>	<u>A U of Windsor graduate will have the ability to demonstrate:</u>
F. explain examples of supramolecular chemistry published in the recent scientific literature.	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H. describe the molecular structures and topologies of various self-assembled supramolecular systems.	H. creativity and aesthetic appreciation
I. identify applications for supramolecular materials, devices and molecular machines.	I. the ability and desire for continuous learning

**B.4 Demand for Course**

*Please provide as much information on projected enrolment as possible.*

Projected enrolment levels for the first 5 years of the new course.	Year 1	Year 2	Year 3	Year 4	Year 5
	6	10	10	10	10

**B.4.1 Impact of New Course on Enrolment in Existing Courses**

*What will be the impact of offering the new course on enrolments in existing courses in the program or Department?*

This course is multi-disciplinary (within chemistry) and should draw from various courses but not directly effect any single course in particular.

**B.5 Student Workload**

*Provide information on the expected workload per week of a student enrolled in this course.  
NOTE: Student workload should be consistent with the credit weight assigned to the course.*

<b>Average number of hours per week that the student will be expected to devote to:</b>	
2	Lectures
0	Tutorials
0	Labs
0	Practical experience
1	Independent Study
2	Reading for the course
2	Work for assessment (essays, papers, projects, laboratory work)
1	Meeting with others for group work/project assignments
1	Studying for tests/examinations
0	Other: <i>[specify]</i>

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

<b>How does the student workload for this course compare with other similar courses in the department/program area?</b>	The workload is expected to be similar to other 4th-year courses without a lab component.
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**C. RESOURCES**

**C.1 Available Faculty and Staff Resources (QAF sections 2.1.7, 2.1.8, 2.1.9 and 2.1.10)**

*Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the new course). Please do not name specific individuals.*

This course will be delivered by an existing faculty member in Chemistry & Biochemistry. A number of faculty members have the expertise to offer the course materials.

**C.1.1 Faculty Expertise in Support of the Revised Program**

*Provide an assessment of faculty expertise available and committed to actively support the new course. Please do not name specific individuals.*

n/a

**C.1.2 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program**

*Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the new course.*

No reliance on other faculty is planned or expected.

**C.2 Resource Implications for Other Campus Units (Ministry sections 3 and 4)**

*Describe the reliance of the proposed new course on existing resources from other campus units, including for example:*

- *faculty teaching,*
- *equipment or facilities outside the proposer's control,*
- *external resources requiring maintenance or upgrading using external resources*

*Provide relevant details.*

None.

**C.3 Anticipated New Resources (QAF sections 2.1.7, 2.1.8 and 2.1.9; Ministry section 4)**

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the new course.*

None.

**C.4 Planned Reallocation of Resources and Cost-Savings (QAF section 2.1.7 and 2.1.9; Ministry section 4)**

*Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the new course. (e.g., streamlining existing programs and courses, deleting courses, etc.).*

n/a

**C.5 Additional Resources Required – Resources Requested (QAF section 2.1.7 and 2.1.9)**

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to offer the new course.*

<b>Faculty:</b>	No
<b>Staff:</b>	No
<b>GA/TAs:</b>	No

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

**C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments**

Describe all **additional institutional resources and services** required by all affected areas or departments to offer the new course, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance.

<b>Library Resources and Services:</b>	Web of Science, SciFinder, access to chemistry literature.
<b>Teaching and Learning Support:</b>	No
<b>Student Support Services:</b>	No
<b>Space and Facilities:</b>	Lecture room.
<b>Equipment (and Maintenance):</b>	Data projector; laptop computer

**D.1 Form History** (Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)

Date of Modification	Approval Body Modifying	Reason for Modification

University of Windsor  
Program Development Committee

\*5.8 Faculty of Law– New Course Proposal (Form D)

Item for: Approval

**MOTION:** That the following course addition be made:\*  
LAWG-5707. Class Action Clinic

*\*Subject to approval of the expenditures required.*

**Rationale/Approvals:**

- The proposal has been approved by the Faculty of Law Council.
- *See attached.*

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

<b>TITLE OF PROGRAM(S)/CERTIFICATE(S):</b>	LAW
<b>DEPARTMENT(S)/SCHOOL(S):</b>	LAW
<b>FACULTY(IES):</b>	Faculty of Law

<b>Proposed change(s) effective as of*</b> [Fall, Winter, Spring]: <i>*(subject to timely and clear submission)</i>	Fall 2021
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**A. NEW COURSE PROFILE**

**Course # and Title:** LAWG-5707. Class Action Clinic

**A.1 Calendar Description**

*Calendar descriptions should be written in the third person and should provide a general outline of the course material. Where appropriate, examples of topics or themes, which might be covered in the course, should also be provided.*

The Clinic is the first of its kind in any jurisdiction focused on the needs of class members. The Clinic provides a range of services, from summary advice, public education and outreach, to assistance with filing claims in settlement distribution processes, and legal representation at court hearings. Students will provide legal information and services to clients, as well as participate in legal research projects related to class action practice and policy.

**A.2 Other Course Information**

*Please complete the following tables.*

Credit weight	Total contact hours	Delivery format				Breakdown of contact hours/week			
		In-class	e-learning	Distance	Other flexible learning delivery <i>[please specify]</i>	Lecture	Lab/ Tutorial	Online	Co-op/ practicum/ experiential learning
4	48	X				1			3

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** <i>[provide old course number]</i>
	LAWG5908-1				LAWG 5958-1

**\*\*\*Replacing Old Course: this does not mean that the former course will be deleted from the calendar. If it is to be deleted, a Form E must be completed.**

<b>Will students be able to obtain credit for the new course and the course(s) that it is replacing?</b>	No
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**B. RATIONALE**

**B.1 Course Goal(s)**

*Please provide a statement about the purpose of the course within the program of study or as an option.*

This course is an optional, upper year course. It is one of the Faculty's clinical/experiential learning opportunities.

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### B.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In developing this course, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

This Clinic routinely serves Indigenous clients in a number of class action settlements, including the Sixties Scoop and Day Schools. The required readings for the in-class portion of the course include the National Centre for Truth & Reconciliation’s *Lessons Learned Report* (2020) and Carrie Menkel-Meadow’s “Unsettling the Lawyers: Other Forms of Justice in Indigenous Claims of Expropriation, Abuse, and Injustice” (2014) 64:4 UTLJ 620.

#### B.3 LEARNING OUTCOMES (QAF section 2.1.1, 2.1.3, and 2.1.6)

*Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in “To Greater Heights” by listing them in the appropriate rows. Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. **If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.** Information on learning outcomes is appended to this form (Appendix A). Proposers are also strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes.*

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i>	<b>Characteristics of a University of Windsor Graduate</b>
<u>At the end of this course, the successful student will know and be able to:</u>	<u>A U of Windsor graduate will have the ability to demonstrate:</u>
A. Read and critically evaluate class action settlement agreements, academic journal articles and press articles, and apply to client’s circumstances. (Also relevant to C and I)	A. the acquisition, application and integration of knowledge
B. Investigate facts and evaluate legal sources on behalf of clients and for larger projects to be published by the Clinic on matters of general importance to all class members (ie: litigants in class actions).	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Identify legal problems and entitlements of class members by reference to legal documents and court decisions.	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E. plan and strategize cases on behalf of clients. Manage competing client deadlines, limitation periods, and other client requirements. Address ethical issues and dilemmas as they arise throughout the life of client matters. Identify and discuss systemic challenges and ethical issues in class action settlements and litigation.	E. responsible behaviour to self, others and society
F. Conduct factual investigations of client problems. Advocate on behalf of clients through written and oral communications. Communicate legal information to clients using plain and culturally appropriate language.	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i> <u>At the end of this course, the successful student will know and be able to:</u>	<b>Characteristics of a University of Windsor Graduate</b> <u>A U of Windsor graduate will have the ability to demonstrate:</u>
H.	H. creativity and aesthetic appreciation
I.	I. the ability and desire for continuous learning

**B.4 Demand for Course**

*Please provide as much information on projected enrolment as possible.*

Projected enrolment levels for the first 5 years of the new course.	Year 1	Year 2	Year 3	Year 4	Year 5
	8	8	8	8	8

**B.4.1 Impact of New Course on Enrolment in Existing Courses**

*What will be the impact of offering the new course on enrolments in existing courses in the program or Department?* N/A – we have deleted many courses that are no longer offered.

None. This course has been previously offered. We are requesting a permanent course code.

**B.5 Student Workload**

*Provide information on the expected workload per week of a student enrolled in this course. NOTE: Student workload should be consistent with the credit weight assigned to the course.*

Average number of hours per week that the student will be expected to devote to:	
2	Lectures
	Tutorials
	Labs
4	Practical experience
2	Independent Study
2	Reading for the course
2	Work for assessment (essays, papers, projects, laboratory work)
2	Meeting with others for group work/project assignments
	Studying for tests/examinations
	Other: <i>[specify]</i>
<b>How does the student workload for this course compare with other similar courses in the department/program area?</b>	
	Similar

**C. RESOURCES**

**C.1 Available Faculty and Staff Resources (QAF sections 2.1.7, 2.1.8, 2.1.9 and 2.1.10)**

*Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the new course). Please do not name specific individuals.*

The Class Action Clinic has a director (full-time tenured faculty member) who is responsible for the legal pedagogy of the Clinic and a part-time staff lawyer who oversees the students' legal services to clients.

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

**C.1.1 Faculty Expertise in Support of the Revised Program**

*Provide an assessment of faculty expertise available and committed to actively support the new course. Please do not name specific individuals.*

The Law Faculty has expertise in this area.

**C.1.2 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program**

*Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the new course.*

No changes to existing faculty and adjunct personnel.

**C.2 Resource Implications for Other Campus Units (Ministry sections 3 and 4)**

*Describe the reliance of the proposed new course on existing resources from other campus units, including for example: faculty teaching, equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources. Provide relevant details.*

None.

**C.3 Anticipated New Resources (QAF sections 2.1.7, 2.1.8 and 2.1.9; Ministry section 4)**

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the new course.*

None.

**C.4 Planned Reallocation of Resources and Cost-Savings (QAF section 2.1.7 and 2.1.9; Ministry section 4)**

*Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the new course. (e.g., streamlining existing programs and courses, deleting courses, etc.).*

None.

**C.5 Additional Resources Required – Resources Requested (QAF section 2.1.7 and 2.1.9)**

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to offer the new course.*

<b>Faculty:</b>	N/A
<b>Staff:</b>	N/A
<b>GA/TAs:</b>	N/A

**C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments**

*Describe all **additional institutional resources and services** required by all affected areas or departments to offer the new course, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance.*

<b>Library Resources and Services:</b>	N/A
<b>Teaching and Learning Support:</b>	N/A
<b>Student Support Services:</b>	N/A
<b>Space and Facilities:</b>	N/A
<b>Equipment (and Maintenance):</b>	N/A

University of Windsor  
Program Development Committee

\*5.9:        **Nursing – New Course Proposals (Form D)**

Item for:    **Approval**

**MOTION: That the following courses be approved: ^**  
**NURS-3551. Course Title: Experiential Learning Lab V**  
**NURS-3830. Adult Health and Health Alterations III**  
**NURS-3940. Nursing Care of Infants, Children, and Youth**  
**NURS-3950. Course Title: Nursing Research**  
**NURS-3960. Community Health Nursing**

*^Subject to approval of the expenditures required.*

**Rationale/Approvals:**

- The new course has been approved by the Faculty of Nursing Council.
- *See attached.*

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

<b>TITLE OF PROGRAM(S)/CERTIFICATE(S):</b>	Collaborative Honours Bachelor of Science in Nursing
<b>DEPARTMENT(S)/SCHOOL(S):</b>	Faculty of Nursing
<b>FACULTY(IES):</b>	Faculty of Nursing

<b>Proposed change(s) effective as of*</b> [Fall, Winter, Spring]: <i>*(subject to timely and clear submission)</i>	Fall 2021
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**A. NEW COURSE PROFILE**

**Course # and Title:** NURS-3551. Experiential Learning Lab V

**A.1 Calendar Description**

*Calendar descriptions should be written in the third person and should provide a general outline of the course material. Where appropriate, examples of topics or themes, which might be covered in the course, should also be provided.*

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.)

**A.2 Other Course Information**

*Please complete the following tables.*

Credit weight	Total contact hours	Delivery format				Breakdown of contact hours/week			
		In-class	e-learning	Distance	Other flexible learning delivery <i>[please specify]</i>	Lecture	Lab/Tutorial	Online	Co-op/practicum/experiential learning
0.5 credit	12 hours	X	N/A	N/A	N/A	N/A	N/A	N/A	1 (2 hr every other wk)

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** <i>[provide old course number]</i>
Successful completion of all year two winter required courses	Registration in all courses required for third year fall semester	N/A	N/A	Yes	NA

**\*\*\*Replacing Old Course: this does not mean that the former course will be deleted from the calendar. If it is to be deleted, a Form E must be completed.**

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

Will students be able to obtain credit for the new course and the course(s) that it is replacing?	NA
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**B. RATIONALE**

**B.1 Course Goal(s)**

*Please provide a statement about the purpose of the course within the program of study or as an option.*

The goal of Experiential Learning Lab V is to provide students with the opportunity to apply their nursing knowledge and skills to clinical scenarios in a safe (i.e., simulated) environment as preparation for working in clinical settings with actual patients/clients.

**B.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material**

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In developing this course, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

As a required competency of the BScN program, students must show cultural competence. Indigenous content, perspectives, and material will be included in this course within the context of simulated scenarios.

**B.3 LEARNING OUTCOMES (QAF section 2.1.1, 2.1.3, and 2.1.6)**

*Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in "To Greater Heights" by listing them in the appropriate rows. Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. **If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.** Information on learning outcomes is appended to this form (Appendix A). Proposers are also strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes.*

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i> <u>At the end of this course, the successful student will know and be able to:</u>	<b>Characteristics of a University of Windsor Graduate</b> <u>A U of Windsor graduate will have the ability to demonstrate:</u>
A. Apply principles of safety that protect self, patients/clients, families, and communities from harm. (Also applies to E)  Evaluate personal performance of selected psychomotor skills based on evidence informed practice. (Also applies to E)  Correlate assessments with laboratory/diagnostic tests for patients/clients within specialty populations across the lifespan (Also applies to E)  Critique plans of care for patients/clients within speciality populations across the lifespan. (Also applies to C, E)  Use critical thinking, clinical reasoning and clinical judgement during complex medication procedures in various simulated settings across the lifespan. (Also applies to C, D, E)	1. the acquisition, application and integration of knowledge

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i> <u>At the end of this course, the successful student will know and be able to:</u>	<b>Characteristics of a University of Windsor Graduate</b> <u>A U of Windsor graduate will have the ability to demonstrate:</u>
Evaluate professional communication skills when interacting with specialty populations across the lifespan. (Also applies to E, F, G)  Assess patients'/clients' health literacy and implement priority health education with specialty populations across the lifespan. (Also applies to E, F, G)	
B.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C.	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E. Demonstrate accountability and responsibility for their own learning needs, decisions, and actions.  Engage in reflective practice and self-care activities to promote personal and professional self-development and well-being.	E. responsible behaviour to self, others and society
F.	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I.	I. the ability and desire for continuous learning

**B.4 Demand for Course**

*Please provide as much information on projected enrolment as possible.*

Projected enrolment levels for the first 5 years of the new course.	Year 1	Year 2	Year 3	Year 4	Year 5
	300	300	300	300	300

**B.4.1 Impact of New Course on Enrolment in Existing Courses**

*What will be the impact of offering the new course on enrolments in existing courses in the program or Department?*

There will be no expected impact on enrolment.

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### B.5 Student Workload

*Provide information on the expected workload per week of a student enrolled in this course.  
NOTE: Student workload should be consistent with the credit weight assigned to the course.*

**Average number of hours per week that the student will be expected to devote to:**

N/A	Lectures
0	Tutorials
1	Labs
N/A	Practical experience
N/A	Independent Study
0.5	Reading for the course
0.5	Work for assessment (essays, papers, projects, laboratory work)
N/A	Meeting with others for group work/project assignments
0.25	Studying for tests/examinations
	Other: <i>[specify]</i>

<b>How does the student workload for this course compare with other similar courses in the department/program area?</b>	We anticipate that the workload for this course will be substantially lower than that of other courses in the third year.
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#### C. RESOURCES

##### C.1 Available Faculty and Staff Resources (QAF sections 2.1.7, 2.1.8, 2.1.9 and 2.1.10)

*Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the new course). Please do not name specific individuals.*

We anticipate that two full time faculty members will collaborate to develop this course, which will be delivered by members of our pool of sessional lectures and/or contract sessional instructors. We also have a full complement of administrative and support staff who will support the course as needed (I.T support technician, Laboratory Manager, Secretary to the Dean, Student Success Coordinator, Clinical Therapist, secretarial staff).

##### C.1.1 Faculty Expertise in Support of the Revised Program

*Provide an assessment of faculty expertise available and committed to actively support the new course. Please do not name specific individuals.*

The Faculty of Nursing has sufficient faculty and part time/contract sessional instructors with expertise in the area of the proposed course to support this course.

##### C.1.2 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program

*Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the new course.*

Full time faculty will develop and oversee this course; it will be delivered primarily by part time/contract sessional instructors.

##### C.2 Resource Implications for Other Campus Units (Ministry sections 3 and 4)

*Describe the reliance of the proposed new course on existing resources from other campus units, including for example: faculty teaching, equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources. Provide relevant details.*

None anticipated

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

**C.3 Anticipated New Resources (QAF sections 2.1.7, 2.1.8 and 2.1.9; Ministry section 4)**

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the new course.*

None anticipated

**C.4 Planned Reallocation of Resources and Cost-Savings (QAF section 2.1.7 and 2.1.9; Ministry section 4)**

*Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the new course. (e.g., streamlining existing programs and courses, deleting courses, etc.).*

None anticipated

**C.5 Additional Resources Required – Resources Requested (QAF section 2.1.7 and 2.1.9)**

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to offer the new course.*

<b>Faculty:</b>	N/A
<b>Staff:</b>	N/A
<b>GA/TAs:</b>	N/A

**C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments**

*Describe all **additional institutional resources and services** required by all affected areas or departments to offer the new course, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance.*

<b>Library Resources and Services:</b>	N/A
<b>Teaching and Learning Support:</b>	N/A
<b>Student Support Services:</b>	N/A
<b>Space and Facilities:</b>	N/A
<b>Equipment (and Maintenance):</b>	N/A

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### A. NEW COURSE PROFILE

**Course # and Title:** NURS-3830: Adult Health and Health Alterations III

##### A.1 Calendar Description

*Calendar descriptions should be written in the third person and should provide a general outline of the course material. Where appropriate, examples of topics or themes, which might be covered in the course, should also be provided.*

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.)

##### A.2 Other Course Information

*Please complete the following tables.*

Credit weight	Total contact hours	Delivery format				Breakdown of contact hours/week			
		In-class	e-learning	Distance	Other flexible learning delivery <i>[please specify]</i>	Lecture	Lab/Tutorial	Online	Co-op/practicum/experiential learning
3 credits	36 hours	X	N/A	N/A	N/A	3 hours	N/A	N/A	N/A

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** <i>[provide old course number]</i>
Successful completion of all year two winter required courses	Registration in all courses required for third year fall semester	N/A	N/A	yes	NURS 3730 Nursing Care of Clients with Complex Health Problems I

**\*\*\*Replacing Old Course: this does not mean that the former course will be deleted from the calendar. If it is to be deleted, a Form E must be completed.**

**Will students be able to obtain credit for the new course and the course(s) that it is replacing?** No.

#### B. RATIONALE

##### B.1 Course Goal(s)

*Please provide a statement about the purpose of the course within the program of study or as an option.*

The goal of this course is to facilitate development of knowledge that will enable the learner to address the health and nursing care for individuals experiencing complex acute and chronic health alterations.

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### B.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In developing this course, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Where indigenous peoples are at higher risk for specific illnesses, this will be included in the course content, as will the need for culturally sensitive care.

#### B.3 LEARNING OUTCOMES (QAF section 2.1.1, 2.1.3, and 2.1.6)

*Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in "To Greater Heights" by listing them in the appropriate rows. Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. **If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.** Information on learning outcomes is appended to this form (Appendix A). Proposers are also strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes.*

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i>	<b>Characteristics of a University of Windsor Graduate</b>
<p>At the end of this course, the successful student will know and be able to:</p>	<p>A U of Windsor graduate will have the ability to demonstrate:</p>
<p>A. Integrate foundational knowledge-based concepts into the assessment and care of adults experiencing selected complex acute and chronic health alterations (Also applies to C, E)</p> <p>Apply relevant knowledge from nursing, the sciences, and other disciplines (e.g., nutrition, pharmacy) to assess, plan, prioritize, and evaluate care for adults experiencing selected complex acute and chronic health alterations. (Also applies to B, C, E)</p> <p>Apply critical thinking, clinical reasoning, and clinical judgement to interpret assessment data derived from a variety of sources. (Also applies to B, C)</p> <p>Determine interprofessional and transitional care needs that would promote patient and family centered care for adults experiencing selected complex acute and chronic health alterations. (Also applies to C, E, F, G)</p> <p>Analyze factors that influence adult health (e.g. social determinants of health, culture, spirituality) and their relevance to planning and delivering person and family-centred care. (Also applies to C, E)</p> <p>Apply principles and methods of health promotion, teaching/learning, and evidence-informed decision-making that would facilitate positive outcomes for adults experiencing selected complex acute and chronic health alterations. (Also applies to E, F).</p>	<p>A. the acquisition, application and integration of knowledge</p>

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i>	<b>Characteristics of a University of Windsor Graduate</b>
<u>At the end of this course, the successful student will know and be able to:</u>	<u>A U of Windsor graduate will have the ability to demonstrate:</u>
B.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E. Apply ethical and legal principles that impact the care of adults transitioning to end of life care (e.g., hospice, palliative care, medically assisted intentional death) (Also applies to A, I).	E. responsible behaviour to self, others and society
F.	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I.	I. the ability and desire for continuous learning

**B.4 Demand for Course**

*Please provide as much information on projected enrolment as possible.*

Projected enrolment levels for the first 5 years of the new course.	Year 1	Year 2	Year 3	Year 4	Year 5
	300	300	300	300	300

**B.4.1 Impact of New Course on Enrolment in Existing Courses**

*What will be the impact of offering the new course on enrolments in existing courses in the program or Department?*

There will be no expected change in enrollment.

**B.5 Student Workload**

*Provide information on the expected workload per week of a student enrolled in this course.  
NOTE: Student workload should be consistent with the credit weight assigned to the course.*

<b>Average number of hours per week that the student will be expected to devote to:</b>	
3 hours	Lectures
N/A	Tutorials
N/A	Labs
N/A	Practical experience
N/A	Independent Study

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

3 hours	Reading for the course	
0.5-1	Work for assessment (essays, papers, projects, laboratory work)	
N/A	Meeting with others for group work/project assignments	
1-2	Studying for tests/examinations	
	Other: <i>[specify]</i>	
<b>How does the student workload for this course compare with other similar courses in the department/program area?</b>		The workload in the proposed course will be similar to that of other courses in third year of the program and will be similar to that of the course that it will replace.

#### C. RESOURCES

##### C.1 Available Faculty and Staff Resources (QAF sections 2.1.7, 2.1.8, 2.1.9 and 2.1.10)

*Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the new course). Please do not name specific individuals.*

The available Faculty Staff and Resources are as follows: 16 full time faculty (tenured, tenured-track, limited term) 4 academic ancillary staff, 3 sessional lectures, and a full complement of administrative and support staff (IT support technician, secretarial staff, Student Success Coordinator, Clinical Therapist, Laboratory Manager)

##### C.1.1 Faculty Expertise in Support of the Revised Program

*Provide an assessment of faculty expertise available and committed to actively support the new course. Please do not name specific individuals.*

The Faculty of Nursing has sufficient faculty with expertise in the area of the proposed course, who can support the learner in this course.

##### C.1.2 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program

*Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the new course.*

Full time faculty will be relied upon for the development and delivery of this proposed theory course.

##### C.2 Resource Implications for Other Campus Units (Ministry sections 3 and 4)

*Describe the reliance of the proposed new course on existing resources from other campus units, including for example: faculty teaching, equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources. Provide relevant details.*

None anticipated

##### C.3 Anticipated New Resources (QAF sections 2.1.7, 2.1.8 and 2.1.9; Ministry section 4)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the new course.*

None anticipated

##### C.4 Planned Reallocation of Resources and Cost-Savings (QAF section 2.1.7 and 2.1.9; Ministry section 4)

*Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the new course. (e.g., streamlining existing programs and courses, deleting courses, etc.).*

No reallocation or cost-savings are anticipated.

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

**C.5 Additional Resources Required – Resources Requested (QAF section 2.1.7 and 2.1.9)**

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to offer the new course.*

<b>Faculty:</b>	N/A
<b>Staff:</b>	N/A
<b>GA/TAs:</b>	N/A

**C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments**

*Describe all **additional institutional resources and services** required by all affected areas or departments to offer the new course, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance.*

<b>Library Resources and Services:</b>	N/A
<b>Teaching and Learning Support:</b>	N/A
<b>Student Support Services:</b>	N/A
<b>Space and Facilities:</b>	N/A
<b>Equipment (and Maintenance):</b>	N/A

**D.1 Form History** *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

<b>Date of Modification</b>	<b>Approval Body Modifying</b>	<b>Reason for Modification</b>

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### A. NEW COURSE PROFILE

**Course # and Title:** NURS-3940: Nursing Care of Infants, Children, and Youth

##### A.1 Calendar Description

*Calendar descriptions should be written in the third person and should provide a general outline of the course material. Where appropriate, examples of topics or themes, which might be covered in the course, should also be provided.*

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.)

##### A.2 Other Course Information

*Please complete the following tables.*

Credit weight	Total contact hours	Delivery format				Breakdown of contact hours/week			
		In-class	e-learning	Distance	Other flexible learning delivery <i>[please specify]</i>	Lecture	Lab/ Tutorial	Online	Co-op/ practicum/ experiential learning
3 credits	36 hours	X	N/A	N/A	N/A	3 hours	N/A	N/A	N/A

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** <i>[provide old course number]</i>
Successful completion of all year two winter required courses	Registration in all courses required for third year fall semester	N/A	N/A	yes	NURS 2770 Nursing Care of Children and Youth with Episodic and Long-Term Health Needs

**\*\*\*Replacing Old Course: this does not mean that the former course will be deleted from the calendar. If it is to be deleted, a Form E must be completed.**

<b>Will students be able to obtain credit for the new course and the course(s) that it is replacing?</b>	No.
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#### B. RATIONALE

##### B.1 Course Goal(s)

*Please provide a statement about the purpose of the course within the program of study or as an option.*

The goal of this course is to facilitate development of knowledge that will enable the learner to use the nursing process to promote the health of, and meet the care needs of infants, children, and youth.

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### B.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In developing this course, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Where Indigenous infants, children, and youth are at higher risk for specific illnesses, this will be included in the course content, as will the need for culturally sensitive care.

#### B.3 LEARNING OUTCOMES (QAF section 2.1.1, 2.1.3, and 2.1.6)

*Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in "To Greater Heights" by listing them in the appropriate rows.*

*Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. **If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.***

*Information on learning outcomes is appended to this form (Appendix A). Proposers are also strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes.*

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i>	<b>Characteristics of a University of Windsor Graduate</b>
<u>At the end of this course, the successful student will know and be able to:</u>	<u>A U of Windsor graduate will have the ability to demonstrate:</u>
<p>A. Apply theoretical concepts and principles of growth and development to inform nursing care of infants, children, youth, and their families (e.g., therapeutic communication adaptations, nutritional needs). (Also applies to B, C, F)</p> <p>Adapt assessment and intervention approaches to determine and meet the biological, sociocultural, psychological, learning, and spiritual needs of infants, children, youth, and their families. (Also applies to B, C)</p> <p>Use a family-centered approach to apply knowledge from nursing, the sciences, and other disciplines to assess, plan, prioritize, and evaluate care for infants, children and youth experiencing acute and chronic health alterations at home, in the community, and across a variety of care settings. (Also applies to C, E, F, G)</p> <p>Assess and integrate the unique contextual factors (e.g., culture, societal trends, social determinants of health, crises, risk factors, family structure and roles, trauma and family violence) that affect healthy infant, child and youth development. (Also applies to B, C, E)</p> <p>Apply principles and methods of health promotion, teaching/learning, and evidence-informed decision-making that would facilitate positive</p>	<p>A. the acquisition, application and integration of knowledge</p>

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i>	<b>Characteristics of a University of Windsor Graduate</b>
<u>At the end of this course, the successful student will know and be able to:</u>	<u>A U of Windsor graduate will have the ability to demonstrate:</u>
outcomes for infants, children, youth, and their families. (Also applies to B, C, E, G)	
B.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Apply critical thinking, clinical reasoning, and clinical judgement to interpret assessment data derived from a variety of sources. (Also applies to A, B, E)	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E. Apply ethical and legal principles that impact the care of infants, children and youth (e.g., capacity to provide informed consent, rights of the child, rights of the parents, confidentiality, duty to report). (Also applies to A, C, E, I)	E. responsible behaviour to self, others and society
F. Determine interprofessional and transitional care needs that would promote infant, child, youth and family-centered care. (Also applies to C, G)	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I.	I. the ability and desire for continuous learning

**B.4 Demand for Course**

*Please provide as much information on projected enrolment as possible.*

Projected enrolment levels for the first 5 years of the new course.	Year 1	Year 2	Year 3	Year 4	Year 5
	300	300	300	300	300

**B.4.1 Impact of New Course on Enrolment in Existing Courses**

*What will be the impact of offering the new course on enrolments in existing courses in the program or Department?*

There will be no expected change in enrollment.

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### B.5 Student Workload

*Provide information on the expected workload per week of a student enrolled in this course.  
NOTE: Student workload should be consistent with the credit weight assigned to the course.*

Average number of hours per week that the student will be expected to devote to:	
3 hours	Lectures
N/A	Tutorials
N/A	Labs
N/A	Practical experience
N/A	Independent Study
3 hours	Reading for the course
0.5-1	Work for assessment (essays, papers, projects, laboratory work)
N/A	Meeting with others for group work/project assignments
1-1.5	Studying for tests/examinations
	Other: <i>[specify]</i>
<b>How does the student workload for this course compare with other similar courses in the department/program area?</b>	The workload in the proposed course will be similar to other course workloads in the second year of the program and will not change from that of the current curriculum.

#### C. RESOURCES

##### C.1 Available Faculty and Staff Resources (QAF sections 2.1.7, 2.1.8, 2.1.9 and 2.1.10)

*Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the new course). Please do not name specific individuals.*

The available Faculty Staff and Resources are as follows: 17 full time faculty (tenured, tenured-track, limited term) 4 academic ancillary staff, 3 sessional lectures, and a full complement of administrative and support staff (IT support technician, secretarial staff, Student Success Coordinator, Clinical Therapist, Laboratory Manager)

##### C.1.1 Faculty Expertise in Support of the Revised Program

*Provide an assessment of faculty expertise available and committed to actively support the new course. Please do not name specific individuals.*

The Faculty of Nursing has sufficient faculty with expertise in the area of the proposed course who can support the learner in this course.

##### C.1.2 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program

*Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the new course.*

Full time faculty will be relied upon for the development and delivery of this proposed theory course.

##### C.2 Resource Implications for Other Campus Units (Ministry sections 3 and 4)

*Describe the reliance of the proposed new course on existing resources from other campus units, including for example: faculty teaching, equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources. Provide relevant details.*

None anticipated

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

**C.3 Anticipated New Resources (QAF sections 2.1.7, 2.1.8 and 2.1.9; Ministry section 4)**

List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the new course.

None anticipated

**C.4 Planned Reallocation of Resources and Cost-Savings (QAF section 2.1.7 and 2.1.9; Ministry section 4)**

Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the new course. (e.g., streamlining existing programs and courses, deleting courses, etc.).

No reallocation or cost-savings are anticipated.

**C.5 Additional Resources Required – Resources Requested (QAF section 2.1.7 and 2.1.9)**

Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to offer the new course.

<b>Faculty:</b>	N/A
<b>Staff:</b>	N/A
<b>GA/TAs:</b>	N/A

**C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments**

Describe all **additional institutional resources and services** required by all affected areas or departments to offer the new course, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance.

<b>Library Resources and Services:</b>	N/A
<b>Teaching and Learning Support:</b>	N/A
<b>Student Support Services:</b>	N/A
<b>Space and Facilities:</b>	N/A
<b>Equipment (and Maintenance):</b>	N/A

**D.1 Form History** (Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)

Date of Modification	Approval Body Modifying	Reason for Modification

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### A. NEW COURSE PROFILE

**Course # and Title:** NURS-3950. Nursing Research

##### A.1 Calendar Description

*Calendar descriptions should be written in the third person and should provide a general outline of the course material. Where appropriate, examples of topics or themes, which might be covered in the course, should also be provided.*

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

##### A.2 Other Course Information

*Please complete the following tables.*

Credit weight	Total contact hours	Delivery format				Breakdown of contact hours/week			
		In-class	e-learning	Distance	Other flexible learning delivery <i>[please specify]</i>	Lecture	Lab/ Tutorial	Online	Co-op/ practicum/ experiential learning
3 credits	36 hours	X	N/A	N/A	N/A	3 hours	N/A	N/A	N/A

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** <i>[provide old course number]</i>
Successful completion of all year two winter required courses	Registration in all courses required for third year fall	N/A	N/A	Yes	NURS-3770 Nursing Research

**\*\*\*Replacing Old Course: this does not mean that the former course will be deleted from the calendar. If it is to be deleted, a Form E must be completed.**

**Will students be able to obtain credit for the new course and the course(s) that it is replacing?** No.

#### B. RATIONALE

Students cannot obtain credit for the new and the course its replacing because there would be too much redundancy between the two courses to warrant crediting both.

##### B.1 Course Goal(s)

*Please provide a statement about the purpose of the course within the program of study or as an option.*

The purpose of this course is to prepare the learner critically appraise various types of research to facilitate their ability to make sound decisions to support evidence-based nursing practice.

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### B.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In developing this course, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

The study of Indigenous research methodologies will be a component of this course, as will issues related to equity, diversity and inclusion (including Indigenous populations)

#### B.3 LEARNING OUTCOMES (QAF section 2.1.1, 2.1.3, and 2.1.6)

*Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in "To Greater Heights" by listing them in the appropriate rows. Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. **If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.** Information on learning outcomes is appended to this form (Appendix A). Proposers are also strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes.*

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise. At the end of this course, the successful student will know and be able to:</i>	<b>Characteristics of a University of Windsor Graduate</b>
<p><u>A U of Windsor graduate will have the ability to demonstrate:</u></p>	<p><u>A U of Windsor graduate will have the ability to demonstrate:</u></p>
<p>A. Formulate research questions and apply advanced information literacy strategies to construct and implement effective searches (synonyms, related terms, commands). (Also applies to B, C, D, E)</p> <p>Interpret research findings to determine statistical and clinical significance. (Also applies to B, C, D, E)</p> <p>Assess various knowledge translation strategies for their effectiveness in facilitating and sustaining evidence-based nursing practice. (Also applies to B, C, E)</p> <p>Critically evaluate the usefulness of research findings in clinical practice. (Also applies to B, C, E)</p>	<p>5. the acquisition, application and integration of knowledge</p>
<p>B. Differentiate among assumptions, concepts and steps of the research process.</p> <p>Discriminate among various research designs and classify them within the hierarchy of evidence.</p> <p>Critically appraise the rigor of qualitative and quantitative research and systematic reviews. (Also applies to C)</p> <p>Appraise current issues relevant to nursing research within an equity, diversity and inclusion lens (e.g., cultural and gender diversity; Indigenous methodologies). (Also applies to C, E)</p>	<p>B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)</p>

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise. At the end of this course, the successful student will know and be able to:</i>	<b>Characteristics of a University of Windsor Graduate</b> <i>A U of Windsor graduate will have the ability to demonstrate:</i>
Analyze the ethical strategies in published reports of qualitative and quantitative research (Also applies to C, E)	
C.	C. critical thinking and problem-solving skills
D	D. literacy and numeracy skills
E.	E. responsible behaviour to self, others and society
F.	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I.	I. the ability and desire for continuous learning

**B.4 Demand for Course**

*Please provide as much information on projected enrolment as possible.*

Projected enrolment levels for the first 5 years of the new course.	Year 1	Year 2	Year 3	Year 4	Year 5
	300	300	300	300	300

**B.4.1 Impact of New Course on Enrolment in Existing Courses**

*What will be the impact of offering the new course on enrolments in existing courses in the program or Department?*

There will be no expected change on enrollment.

**B.5 Student Workload**

*Provide information on the expected workload per week of a student enrolled in this course.  
NOTE: Student workload should be consistent with the credit weight assigned to the course.*

Average number of hours per week that the student will be expected to devote to:	
3	Lectures
N/A	Tutorials
N/A	Labs
N/A	Practical experience
N/A	Independent Study
2	Reading for the course

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

1	Work for assessment (essays, papers, projects, laboratory work)
N/A	Meeting with others for group work/project assignments
2	Studying for tests/examinations
	Other: <u>[specify]</u>
<b>How does the student workload for this course compare with other similar courses in the department/program area?</b>	
	The workload in the proposed course will be similar to other course workloads in the first year of the program and will not increase or decrease from the current curriculum.

#### C. RESOURCES

##### C.1 Available Faculty and Staff Resources (QAF sections 2.1.7, 2.1.8, 2.1.9 and 2.1.10)

*Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the new course. Please do not name specific individuals.*

We have 17 full time faculty (tenured, tenure-track, and limited term) who have the expertise to teach this course. Our administrative and support staff are also available to support the course/students/professors as needed (I.T support technician, Secretary to the Dean, Student Success Coordinator, Clinical Therapist, secretarial staff).

##### C.1.1 Faculty Expertise in Support of the Revised Program

*Provide an assessment of faculty expertise available and committed to actively support the new course. Please do not name specific individuals.*

The Faculty of Nursing has several faculty with expertise in the area of the proposed course who can support/deliver this course

##### C.1.2 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program

*Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the new course.*

Full time faculty will be relied upon for the development and delivery of this proposed theory course.

##### C.2 Resource Implications for Other Campus Units (Ministry sections 3 and 4)

*Describe the reliance of the proposed new course on existing resources from other campus units, including for example: faculty teaching, equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources. Provide relevant details.*

The Faculty of Nursing will require the Leddy Library Services to support students (e.g. library scientist assigned to Faculty of Nursing assisting student with searching literature databases). No other campus units will be needed for this course.

##### C.3 Anticipated New Resources (QAF sections 2.1.7, 2.1.8 and 2.1.9; Ministry section 4)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the new course.*

There are no anticipated new resources for this proposed course.

##### C.4 Planned Reallocation of Resources and Cost-Savings (QAF section 2.1.7 and 2.1.9; Ministry section 4)

*Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the new course. (e.g., streamlining existing programs and courses, deleting courses, etc.).*

We do not anticipate reallocation or resources or cost savings associated with delivering this course

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

**C.5 Additional Resources Required – Resources Requested (QAF section 2.1.7 and 2.1.9)**

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to offer the new course.*

<b>Faculty:</b>	N/A
<b>Staff:</b>	N/A
<b>GA/TAs:</b>	N/A

**C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments**

*Describe all **additional institutional resources and services** required by all affected areas or departments to offer the new course, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance.*

<b>Library Resources and Services:</b>	N/A
<b>Teaching and Learning Support:</b>	N/A
<b>Student Support Services:</b>	N/A
<b>Space and Facilities:</b>	N/A
<b>Equipment (and Maintenance):</b>	N/A

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### A. NEW COURSE PROFILE

**Course # and Title:** NURS-3960. Community Health Nursing

##### A.1 Calendar Description

*Calendar descriptions should be written in the third person and should provide a general outline of the course material. Where appropriate, examples of topics or themes, which might be covered in the course, should also be provided.*

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.)

##### A.2 Other Course Information

*Please complete the following tables.*

Credit weight	Total contact hours	Delivery format				Breakdown of contact hours/week			
		In-class	e-learning	Distance	Other flexible learning delivery <i>[please specify]</i>	Lecture	Lab/ Tutorial	Online	Co-op/ practicum/ experiential learning
3 credits	36 hours	X	N/A	N/A	N/A	3 hours	N/A	N/A	N/A

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** <i>[provide old course number]</i>
Successful completion of all year two winter required courses	Registration in all courses required for third year semester	N/A	N/A	yes	NURS 3890 Community as Client

**\*\*\*Replacing Old Course: this does not mean that the former course will be deleted from the calendar. If it is to be deleted, a Form E must be completed.**

<b>Will students be able to obtain credit for the new course and the course(s) that it is replacing?</b>	No.
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#### B. RATIONALE

##### B.1 Course Goal(s)

*Please provide a statement about the purpose of the course within the program of study or as an option.*

The goal of this course is to facilitate development of knowledge and skills that will enable the learner to use the nursing care process to advocate for and promote the health of communities.

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

#### B.2 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In developing this course, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Cultural considerations are a significant component of working with communities – specific attention will be paid to indigenous peoples in this course.

#### B.3 LEARNING OUTCOMES (QAF section 2.1.1, 2.1.3, and 2.1.6)

*Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in “To Greater Heights” by listing them in the appropriate rows. Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. **If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.** Information on learning outcomes is appended to this form (Appendix A). Proposers are also strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes.*

Course Learning Outcomes <i>This is a sentence completion exercise.</i>	Characteristics of a University of Windsor Graduate
<p><u>At the end of this course, the successful student will know and be able to:</u></p>	<p><u>A U of Windsor graduate will have the ability to demonstrate:</u></p>
<p>A. Examine the Canadian Community Health Nursing Standards of Practice, and the different roles that registered nurses participate in when caring for the community and in addressing health inequities for populations under threat. (Also applies to C, E)</p> <p>Apply evidence, knowledge, experience, client preferences, and skills (nurse and client) in all aspects of community nursing practice. (Also applies to B, C, E, F)</p> <p>Analyze the intersection of various issues in society, peoples, and human experiences in relation to age, culture, class, gender, history, race, and sexuality on a variety of community health issues, as well as the registered nurse’s role in addressing these issues. (Also applies to C)</p> <p>Differentiate various strategies for health and safety promotion as well as disease, injury, and trauma prevention within the context of community health nursing (Also applies to B).</p> <p>Explore and evaluate the impact of the social determinants of health in working with clients in the community. (Also applies to C, E)</p>	<p>A. the acquisition, application and integration of knowledge</p>
<p>B.</p>	<p>B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)</p>

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i> <u>At the end of this course, the successful student will know and be able to:</u>	<b>Characteristics of a University of Windsor Graduate</b> <u>A U of Windsor graduate will have the ability to demonstrate:</u>
C	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E. Explore and apply the theoretical, ethical, and legal foundations, as well as professional regulatory requirements, that guide community health nursing practice in Canada.  Appraise personal values/behaviours and their relationship to providing culturally safe and trauma-informed approaches in caring for communities. (Also applies to C, F)	E. responsible behaviour to self, others and society
F.	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I.	I. the ability and desire for continuous learning

**B.4 Demand for Course**

*Please provide as much information on projected enrolment as possible.*

Projected enrolment levels for the first 5 years of the new course.	Year 1	Year 2	Year 3	Year 4	Year 5
	300	300	300	300	300

**B.4.1 Impact of New Course on Enrolment in Existing Courses**

*What will be the impact of offering the new course on enrolments in existing courses in the program or Department?*

There will be no expected change on enrollment.

**B.5 Student Workload**

*Provide information on the expected workload per week of a student enrolled in this course.  
NOTE: Student workload should be consistent with the credit weight assigned to the course.*

<b>Average number of hours per week that the student will be expected to devote to:</b>	
3 hours	Lectures
N/A	Tutorials
N/A	Labs
N/A	Practical experience
N/A	Independent Study

# PROGRAM DEVELOPMENT COMMITTEE

## NEW COURSE PROPOSALS

### FORM D

3 hours	Reading for the course	
0.5-1	Work for assessment (essays, papers, projects, laboratory work)	
N/A	Meeting with others for group work/project assignments	
1-1.5	Studying for tests/examinations	
	Other: <i>[specify]</i>	
<b>How does the student workload for this course compare with other similar courses in the department/program area?</b>		The workload in the proposed course will be similar to other course workloads in the third year of the program and will not change from that of the course that it is replacing.

#### C. RESOURCES

##### C.1 Available Faculty and Staff Resources (QAF sections 2.1.7, 2.1.8, 2.1.9 and 2.1.10)

*Describe, in general terms, all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the new course). Please do not name specific individuals.*

The available Faculty Staff and Resources are as follows: 16 full time faculty (tenured, tenured-track, limited term) 4 academic ancillary staff, 3 sessional lectures, and a full complement of administrative and support staff (IT support technician, secretarial staff, Student Success Coordinator, Clinical Therapist, Laboratory Manager)

##### C.1.1 Faculty Expertise in Support of the Revised Program

*Provide an assessment of faculty expertise available and committed to actively support the new course. Please do not name specific individuals.*

The Faculty of Nursing has sufficient faculty with expertise in the area of the proposed course who can support the development and delivery of this course.

##### C.1.2 Extent of Reliance on Adjunct, Limited-term, and Sessional Faculty in Delivering the Revised Program

*Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the new course.*

Full time faculty will be relied upon for the development and delivery of this proposed theory course.

##### C.2 Resource Implications for Other Campus Units (Ministry sections 3 and 4)

*Describe the reliance of the proposed new course on existing resources from other campus units, including for example: faculty teaching, equipment or facilities outside the proposer's control, external resources requiring maintenance or upgrading using external resources. Provide relevant details.*

None anticipated

##### C.3 Anticipated New Resources (QAF sections 2.1.7, 2.1.8 and 2.1.9; Ministry section 4)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the new course.*

None anticipated

##### C.4 Planned Reallocation of Resources and Cost-Savings (QAF section 2.1.7 and 2.1.9; Ministry section 4)

*Describe all opportunities for internal reallocation of resources and cost savings identified and pursued by the area/department in support of the new course. (e.g., streamlining existing programs and courses, deleting courses, etc.).*

No reallocation or cost-savings are anticipated.

**PROGRAM DEVELOPMENT COMMITTEE  
NEW COURSE PROPOSALS  
FORM D**

**C.5 Additional Resources Required – Resources Requested (QAF section 2.1.7 and 2.1.9)**

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to offer the new course.*

<b>Faculty:</b>	N/A
<b>Staff:</b>	N/A
<b>GA/TAs:</b>	N/A

**C.6.1 Additional Institutional Resources and Services Required by all Affected Areas or Departments**

*Describe all **additional institutional resources and services** required by all affected areas or departments to offer the new course, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance.*

<b>Library Resources and Services:</b>	N/A
<b>Teaching and Learning Support:</b>	N/A
<b>Student Support Services:</b>	N/A
<b>Space and Facilities:</b>	N/A
<b>Equipment (and Maintenance):</b>	N/A

**D.1 Form History** *(Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)*

<b>Date of Modification</b>	<b>Approval Body Modifying</b>	<b>Reason for Modification</b>

**University of Windsor  
Program Development Committee**

**\*5.10 Master of Human Kinetics (Applied Human Performance and Sport Management) – Degree Parchment**

Item for: **Approval**

**MOTION: That the Master of Human Kinetics (MHK) Applied Human Performance and Sport Management fields be added to the degree parchment.**

**Rationale/Approvals:**

- The proposed change to include the major fields in the Convocation booklet and on the Degree Parchment was approved at the Faculty of Human Kinetics Council (February 26, 2021).
- Currently, students can specialize in either Applied Human Performance or Sport Management field. However, these distinct specializations are not being recognized on the student's degree parchment.
- Students prefer to have their specialization clearly included in the title of their degree as it indicates that they have a strong knowledge base and expertise in that particular field of study.
- The reason this issue was brought forward to Kinesiology was that a student was trying to get a work permit in the United States and when they showed their degree, the adjudicating officer would not accept MHK for the work they were doing. The designation of the distinct fields would likely have helped the student secure employment.
- The MHK *Applied Human Performance* field focusses on the application of movement science in sport, the workplace, and activities of daily living whereas the MHK *Sport Management* field focusses on components of organization studies in the context of sport.

University of Windsor  
Program Development Committee

\*5.11: **Biomedical Sciences – Summary of Minor Course and Calendar Changes (Form E)**

Item for: **Information**

Forwarded by: **Faculty of Science**

**Form History** (Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)

Date of Modification	Approval Body Modifying	Reason for Modification

**INSTRUCTIONS ARE PROVIDED IN SHADED AREAS. DO NOT WRITE IN SHADED AREAS.**

ALL SECTIONS OF THIS FORM **MUST** BE COMPLETED. LEARNING OUTCOMES MUST BE PROVIDED FOR LISTED COURSES WHERE:

I. THERE ARE **NO OFFICIAL LEARNING OUTCOMES FOR THE COURSE** IN THE PDC/SENATE RECORD (check the CuMA database at <https://ctl2.uwindsor.ca/cuma/public/>)

OR

II. THERE ARE **CHANGES TO THE COURSE LEARNING OUTCOMES**

OR

III. IT HAS **BEEN 5 YEARS SINCE LEARNING OUTCOMES FOR THE COURSE WERE LAST SUBMITTED TO PDC/SENATE** (check the CuMA database for the date of last submission at <https://ctl2.uwindsor.ca/cuma/public/>)

**Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes**

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No

Please specify to which calendar [Undergraduate or Graduate] the changes will be made. Fall 2021  
 Include the effective date\* [Fall, Winter, Spring, 20XX]. \*(subject to timely and clear submission) These changes require no new resources.

**A. Proposed Course Calendar Revisions**

Please provide the current and the proposed new course information by cutting and pasting from the current undergraduate or graduate online calendar ([www.uwindsor.ca/secretariat/calendars](http://www.uwindsor.ca/secretariat/calendars)) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding and underlining**. For contact hour/laboratory requirement changes which do not always appear in the calendar, please type in the current information and clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding and underlining**. Example: CHEM-1001. University Senates ~~—Role and Power—~~ This course explores the history, role, and power of Senates in Canadian universities. (Also offered as BIOC 1001.) (Prerequisite: CHEM-1000.) ~~2 lecture hours and 1 tutorial hour per week~~ **3 lecture hours/week**

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: ~~any two first-year biology courses.~~ **BIOL 1101 or KINE 1650**) (3 lecture, 2 laboratory hours a week.) (Open to semester 3 and above.)

# PROGRAM DEVELOPMENT COMMITTEE

## SUMMARY OF MINOR COURSE AND CALENDAR CHANGES

### FORM E

#### A.1 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In revising this/these course(s), how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

The AAU will continue conversations with members of the university’s Aboriginal Education Council to create a knowledge base applicable to Biomedical Sciences courses at all levels concerning appropriate content/curriculum changes or recommendations that could be made in the future. These changes could include integration of real-world examples that are more relevant to modern Indigenous societies and also examples drawn from historical Indigenous knowledge of the natural world and their role in indigenous medicine and natural products, where applicable. The course instructor will review course materials and identify areas where indigenous content can be integrated to provide a holistic perspective of a topic. Where appropriate, indigenous discovery of natural based compounds used to treat human infections and disease will be highlighted and described.

#### B. Learning Outcomes for the Courses Listed Above

*Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in “To Greater Heights” by listing them in the appropriate rows. Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. **If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.** Proposers are strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes. **Where there are changes to the learning outcomes, please clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.** COPY AND PASTE THE FOLLOWING ROW and TABLE, AND COMPLETE THEM FOR EACH COURSE LISTED ABOVE.*

COMPLETE THIS TABLE FOR EACH COURSE LISTED IN SECTION “A” ABOVE.	
<b>COURSE NUMBER AND TITLE:</b>	<b>BIOM-2021.</b> Human Anatomy
<b>SELECT ONE OF THE FOLLOWING:</b>	
I. There are no official learning outcomes for the course in the PDC/Senate record. (check the CuMA database at <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )	<input type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
II. There are changes to the course learning outcomes	<input type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
III. It has been 5 years since learning outcomes for the course were last submitted to PDC/Senate. (check the CuMA database for the date of last submission at <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )	<input type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
IV. Learning Outcomes have been reviewed in the past 5 years and no revisions are being proposed.	<input checked="" type="checkbox"/> Learning outcomes need not be submitted. PROVIDE DATE LAST REVIEWED BY PDC/SENATE then go to the next course: <b>May 11, 2020</b> (check CUMA database at: <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )

University of Windsor  
Program Development Committee

\*5.12: Chemistry and Biochemistry (Graduate) – Summary of Minor Course and Calendar Changes (Form E)

Item for: Information

Forwarded by: Faculty of Graduate Studies

**Form History** (Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)

Date of Modification	Approval Body Modifying	Reason for Modification
Sept 21, 2020		Minor changes in title and graduate course description

**INSTRUCTIONS ARE PROVIDED IN SHADED AREAS. DO NOT WRITE IN SHADED AREAS. N/A**

ALL SECTIONS OF THIS FORM **MUST** BE COMPLETED. LEARNING OUTCOMES MUST BE PROVIDED FOR LISTED COURSES WHERE:

I. THERE ARE **NO OFFICIAL LEARNING OUTCOMES FOR THE COURSE** IN THE PDC/SENATE RECORD (check the CuMA database at <https://ctl2.uwindsor.ca/cuma/public/>)

OR

II. THERE ARE **CHANGES TO THE COURSE LEARNING OUTCOMES**

OR

III. IT HAS **BEEN 5 YEARS SINCE LEARNING OUTCOMES FOR THE COURSE WERE LAST SUBMITTED TO PDC/SENATE** (check the CuMA database for the date of last submission at <https://ctl2.uwindsor.ca/cuma/public/>)

**Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes**

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No
Chemistry	Dr. James Gauld	March 21, 2020	X	

Please specify to which calendar [Undergraduate or Graduate] the changes will be made. Include the effective date\* [Fall, Winter, Spring, 20XX].

\*(subject to timely and clear submission) These changes require no new resources.

Graduate Calendar  
Spring 2021

**A. Proposed Course Calendar Revisions**

Please provide the current and the proposed new course information by cutting and pasting from the current ~~undergraduate or graduate~~ online calendar ([www.uwindsor.ca/secretariat/calendars](http://www.uwindsor.ca/secretariat/calendars)) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding and underlining**. For contact hour/laboratory requirement changes which do not always appear in the calendar, please type in the current information and clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding and underlining**. Example: CHEM-1001. University Senates – ~~Role and Power~~ This course explores the history, role, and power of Senates in Canadian universities. (~~Also offered as BIOC 1001.~~) (Prerequisite: CHEM-1000.) ~~2 lecture hours and 1 tutorial hour per week~~ **3 lecture hours/week**

**BIOC-8684: Cell death, ~~and diseases and~~ Natural Health Products**

**This course will cover** a detailed biochemical study of physiological (apoptosis and autophagy) and pathological (necrotic) cell death in mammalian systems, and how these cellular processes play important role of physiological cell death (~~apoptosis~~) during the development of various diseases, including ~~and tissue homeostasis~~ **viral infection**,

# PROGRAM DEVELOPMENT COMMITTEE

## SUMMARY OF MINOR COURSE AND CALENDAR CHANGES

### FORM E

cardiovascular diseases, neurodegenerative disorders and cancers. immune system and cancer. Various inducers of cell death and mechanism of apoptotic cell death. Role of cell death in disease development: viral infections, stroke, and neurodegenerative disorders, oxidative stress, cell death and aging, **It will also present and discuss various preventative and therapeutic developments and practices using natural health products and purified natural compounds that specifically target biochemical pathways of cell death.** based on the biochemistry of cell death. Developing new therapeutic approaches e.g. combinatorial treatment for systemic diseases. new vaccine approaches and gene therapy. (2 **3 lecture hours per week**). One hour discussion as office as group discussion hour. (open to all the students in the course, any time by appointment).

#### A.1 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In revising this/these course(s), how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Introduction of Traditional medicine of Canada's First People will be included in the Natural Health Products.

#### Learning Outcomes for the Courses Listed Above

*Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in "To Greater Heights" by listing them in the appropriate rows. Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. **If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.** Proposers are strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes. **Where there are changes to the learning outcomes, please clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.** COPY AND PASTE THE FOLLOWING ROW and TABLE, AND COMPLETE THEM FOR EACH COURSE LISTED ABOVE.*

#### COMPLETE THIS TABLE FOR EACH COURSE LISTED IN SECTION "A" ABOVE.

<b>COURSE NUMBER AND TITLE:</b>	<b>BIOC-8684: Cell death, <del>and</del> diseases and Natural Health Products</b> (Note: These are new learning outcomes)
<b>SELECT ONE OF THE FOLLOWING:</b>	
I. There are no official learning outcomes for the course in the PDC/Senate record. (check the CuMA database at <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )	<input checked="" type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
II. There are changes to the course learning outcomes	<input type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
III. It has been 5 years since learning outcomes for the course were last submitted to PDC/Senate. (check the CuMA database for the date of last submission at <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )	<input type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
IV. Learning Outcomes have been reviewed in the past 5 years and no revisions are being proposed.	<input type="checkbox"/> Learning outcomes need not be submitted. PROVIDE DATE LAST REVIEWED BY PDC/SENATE then go to the next course: _____ (check CUMA database at: <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )

**PROGRAM DEVELOPMENT COMMITTEE**  
**SUMMARY OF MINOR COURSE AND CALENDAR CHANGES**  
**FORM E**

**LEARNING OUTCOMES TABLE**

<p><b>Course Learning Outcomes</b>  <i>This is a sentence completion exercise.</i></p> <p><u>At the end of the course, the successful student will know and be able to:</u></p>	<p><b>Characteristics of a University of Windsor Graduate</b></p> <p><u>A U of Windsor graduate will have the ability to demonstrate:</u></p>
<p>A.            Inspect the existing knowledge on various cell death pathways, natural extracts, purified natural compounds and effects of these compounds/extracts on different targets of cell death pathways.</p>	<p>A. the acquisition, application and integration of knowledge</p>
<p>B.            Perform literature research and design experiments for investigating etiology of systematic diseases and evaluating therapeutic effects of natural compounds and extracts.</p>	<p>B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)</p>
<p>C.            Discuss and analyze various biochemical inducers or inhibitors of cell death, their role in disease development, health benefits and medicinal applications of traditionally-used natural extracts based on scientific principles. Propose solution to some of the most challenging health problems including chronic diseases (cancer and neurodegenerative diseases)</p>	<p>C. critical thinking and problem-solving skills</p>
<p>D.            Illustrate and interpret scientific findings relevant to cell death, disease, and natural health products.</p>	<p>D. literacy and numeracy skills</p>
<p>E.            Explain the importance of new cell death process and its role in disease development, and the importance of botanical extracts, traditional medicine (that are scientifically proven), natural compounds and cultural knowledges from different traditions including First Nation's, and Ayurvedic practices.</p>	<p>E. responsible behaviour to self, others and society</p>
<p>F.</p>	<p>F. interpersonal and communications skills</p>
<p>G.</p>	<p>G. teamwork, and personal and group leadership skills</p>
<p>H.</p>	<p>H. creativity and aesthetic appreciation</p>
<p>I.            Address, criticize and integrate scientific knowledge regarding role of cell death in disease development and use of natural compounds and botanical extracts with medicinal properties.</p>	<p>I. the ability and desire for continuous learning</p>

University of Windsor  
Program Development Committee

\*5.13: Engineering (Graduate) – Summary of Minor Course and Calendar Changes (Form E)

Item for: Information

Forwarded by: Faculty of Engineering

**Form History** (Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)

Date of Modification	Approval Body Modifying	Reason for Modification

**INSTRUCTIONS ARE PROVIDED IN SHADED AREAS. DO NOT WRITE IN SHADED AREAS.**

ALL SECTIONS OF THIS FORM ***MUST*** BE COMPLETED. LEARNING OUTCOMES MUST BE PROVIDED FOR LISTED COURSES WHERE:

I. THERE ARE **NO OFFICIAL LEARNING OUTCOMES FOR THE COURSE** IN THE PDC/SENATE RECORD (check the CuMA database at <https://ctl2.uwindsor.ca/cuma/public/>)

OR

II. THERE ARE **CHANGES TO THE COURSE LEARNING OUTCOMES**

OR

III. IT HAS **BEEN 5 YEARS SINCE LEARNING OUTCOMES FOR THE COURSE WERE LAST SUBMITTED TO PDC/SENATE** (check the CuMA database for the date of last submission at <https://ctl2.uwindsor.ca/cuma/public/>)

**Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes**

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No

Please specify to which calendar [Undergraduate or Graduate] the changes will be made. Graduate  
 Include the effective date\* [Fall, Winter, Spring, 20XX]. Spring 2021  
 \*(subject to timely and clear submission) These changes require no new resources.

**A. Proposed Course Calendar Revisions**

Please provide the current and the proposed new course information by cutting and pasting from the current undergraduate or graduate online calendar ([www.uwindsor.ca/secretariat/calendars](http://www.uwindsor.ca/secretariat/calendars)) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding and underlining**. For contact hour/laboratory requirement changes which do not always appear in the calendar, please type in the current information and clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding and underlining**. Example: CHEM-1001. University Senates ~~—Role and Power—~~ This course explores the history, role, and power of Senates in Canadian universities. (Also offered as BIOC 1001.) (Prerequisite: CHEM-1000.) ~~2 lecture hours and 1 tutorial hour per week~~ **3 lecture hours/week**

ENVE-8410. Air Pollution from Mobile Sources

Air pollutants; emissions from vehicles; testing vehicles for emissions; combustion thermodynamics; thermodynamics and kinetics of pollutant formation; measures to reduce emissions; modeling. (3 lecture hours a week.)

**PROGRAM DEVELOPMENT COMMITTEE  
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES  
FORM E**

**A.1 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material**

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In revising this/these course(s), how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

N/A. This course is being deleted

**B. Learning Outcomes for the Courses Listed Above**

*Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in "To Greater Heights" by listing them in the appropriate rows. Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. **If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.** Proposers are strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes. **Where there are changes to the learning outcomes, please clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding and underlining**.** COPY AND PASTE THE FOLLOWING ROW and TABLE, AND COMPLETE THEM FOR EACH COURSE LISTED ABOVE.*

N/A

University of Windsor  
Program Development Committee

\*5.14: English – Summary of Minor Course and Calendar Changes (Form E)

Item for: Information

Forwarded by: Faculty of Arts, Humanities and Social Sciences

**Form History** (Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)

Date of Modification	Approval Body Modifying	Reason for Modification
November 9, 2020	FAHSS	The course is in the Minor in Race and Ethnicity Studies which will allow more students to take this course

**INSTRUCTIONS ARE PROVIDED IN SHADED AREAS. DO NOT WRITE IN SHADED AREAS.**

ALL SECTIONS OF THIS FORM **MUST** BE COMPLETED. LEARNING OUTCOMES MUST BE PROVIDED FOR LISTED COURSES WHERE:

I. THERE ARE **NO OFFICIAL LEARNING OUTCOMES FOR THE COURSE** IN THE PDC/SENATE RECORD (check the CuMA database at <https://ctl2.uwindsor.ca/cuma/public/>)

OR

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OR

III. IT HAS **BEEN 5 YEARS SINCE LEARNING OUTCOMES FOR THE COURSE WERE LAST SUBMITTED TO PDC/SENATE** (check the CuMA database for the date of last submission at <https://ctl2.uwindsor.ca/cuma/public/>)

**Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes**

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No
English	Joanna Luft	November 9, 2020	x	

Please specify to which calendar [Undergraduate or Graduate] the changes will be made. Include the effective date\* [Fall, Winter, Spring, 20XX]. \*(subject to timely and clear submission) These changes require no new resources.

Fall 2021

**A. Proposed Course Calendar Revisions**

Please provide the current and the proposed new course information by cutting and pasting from the current undergraduate or graduate online calendar ([www.uwindsor.ca/secretariat/calendars](http://www.uwindsor.ca/secretariat/calendars)) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding and underlining**. For contact hour/laboratory requirement changes which do not always appear in the calendar, please type in the current information and clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding and underlining**. Example: CHEM-1001. University Senates – ~~Role and Power~~ This course explores the history, role, and power of Senates in Canadian universities. (~~Also offered as BIOC 1001.~~) (Prerequisite: CHEM-1000.) ~~2 lecture hours and 1 tutorial hour per week~~ **3 lecture hours/week**

**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

# PROGRAM DEVELOPMENT COMMITTEE

## SUMMARY OF MINOR COURSE AND CALENDAR CHANGES

### FORM E

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.)

#### A.1 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In revising this/these course(s), how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Literature from the African Diaspora relies upon African-continent traditions, histories and epistemologies; Black peoples living on the African continent are Indigenous.

#### B. Learning Outcomes for the Courses Listed Above

*Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in "To Greater Heights" by listing them in the appropriate rows. Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. **If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.** Proposers are strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes. **Where there are changes to the learning outcomes, please clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.***

**COPY AND PASTE THE FOLLOWING ROW and TABLE, AND COMPLETE THEM FOR EACH COURSE LISTED ABOVE.**

COMPLETE THIS TABLE FOR EACH COURSE LISTED IN SECTION "A" ABOVE.	
<b>COURSE NUMBER AND TITLE:</b>	<b>ENGL-3320: Literature of the African Diaspora</b> <i>(Learning Outcomes last updated December 15, 2017)</i>
<b>SELECT ONE OF THE FOLLOWING</b>	
I. There are no official learning outcomes for the course in the PDC/Senate record. (check the CuMA database at <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )	<input type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
II. There are changes to the course learning outcomes	<input type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
III. It has been 5 years since learning outcomes for the course were last submitted to PDC/Senate. (check the CuMA database for the date of last submission at <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )	<input type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
IV. Learning Outcomes have been reviewed in the past 5 years and no revisions are being proposed.	<input checked="" type="checkbox"/> Learning outcomes need not be submitted. PROVIDE DATE LAST REVIEWED BY PDC/SENATE then go to the next course: <b>December 15, 2017</b> (check CUMA database at: <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )

**University of Windsor  
Program Development Committee**

\*5.15: **Nursing – Summary of Minor Course and Calendar Changes (Form E)**

Item for: **Information**

Forwarded by: **Faculty of Nursing**

**Form History** (Leave blank if there have been no changes. Changes can also be noted directly in the Workflow)

Date of Modification	Approval Body Modifying	Reason for Modification

**INSTRUCTIONS ARE PROVIDED IN SHADED AREAS. DO NOT WRITE IN SHADED AREAS.**

ALL SECTIONS OF THIS FORM **MUST** BE COMPLETED. LEARNING OUTCOMES MUST BE PROVIDED FOR LISTED COURSES WHERE:

I. THERE ARE **NO OFFICIAL LEARNING OUTCOMES FOR THE COURSE** IN THE PDC/SENATE RECORD (check the CuMA database at <https://ctl2.uwindsor.ca/cuma/public/>)

OR

II. THERE ARE **CHANGES TO THE COURSE LEARNING OUTCOMES**

OR

III. IT HAS **BEEN 5 YEARS SINCE LEARNING OUTCOMES FOR THE COURSE WERE LAST SUBMITTED TO PDC/SENATE** (check the CuMA database for the date of last submission at <https://ctl2.uwindsor.ca/cuma/public/>)

**Confirmation of Consultation with AAUs That Will Be Affected, in Major Ways, by the Changes**

AAU Consulted	AAU Head/Directors	Date Consulted	Supportive	
			Yes	No

Please specify to which calendar [Undergraduate or Graduate] the changes will be made. Fall 2021  
 Include the effective date\* [Fall, Winter, Spring, 20XX].  
 \*(subject to timely and clear submission) These changes require no new resources.

**A. Proposed Course Calendar Revisions**

Please provide the current and the proposed new course information by cutting and pasting from the current undergraduate or graduate online calendar ([www.uwindsor.ca/secretariat/calendars](http://www.uwindsor.ca/secretariat/calendars)) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding and underlining**. For contact hour/laboratory requirement changes which do not always appear in the calendar, please type in the current information and clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding and underlining**. Example: CHEM-1001. University Senates ~~—Role and Power—~~This course explores the history, role, and power of Senates in Canadian universities. (~~Also offered as BIOC-1001.~~) (Prerequisite: CHEM-1000.) ~~2 lecture hours and 1 tutorial hour per week~~ **3 lecture hours/week**

# PROGRAM DEVELOPMENT COMMITTEE

## SUMMARY OF MINOR COURSE AND CALENDAR CHANGES

### FORM E

#### NURS 1120. Professional Nursing II

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** Successful completion of all year one fall required courses) (~~Co-requisites: Registration in all courses required for first year winter semester~~) (3 Lecture hours per week) 3 credits

#### NURS 1220 Human Anatomy and Physiology II

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** Successful completion of all year one fall required courses) (~~Corequisite: Registration in all courses required for first year fall semester~~) (3 lecture hours per week; 2 lab hours every other week) 3 credits

#### NURS-~~2520~~ **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-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/~~communities~~ **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).

#### 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/~~communities~~ **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

# PROGRAM DEVELOPMENT COMMITTEE

## SUMMARY OF MINOR COURSE AND CALENDAR CHANGES

### FORM E

#### A.1 Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material

*The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In revising this/these course(s), how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

As a required competency of the BScN program, students must show cultural competence, and students may encounter Indigenous clients within the context of the Nursing course. In addition, the development of cultural competence/safety is a focus of course NURS-2520 which will include that of indigenous peoples

#### B. Learning Outcomes for the Courses Listed Above

*Please complete the following table. State the specific learning outcomes that make up the goal of the course (what will students know and be able to do at the end of this course?) and link the learning outcomes to the Characteristics of a University of Windsor Graduate outlined in "To Greater Heights" by listing them in the appropriate rows. Please note that a learning outcome may link to more than one of the specified Characteristics of a University of Windsor Graduate, and that a single course might not touch on each of the Characteristics. **If a specific learning outcome is not applicable for the course, please enter N/A or not applicable.** Proposers are strongly encouraged to contact the Centre for Teaching and Learning for assistance with the articulation of learning outcomes. **Where there are changes to the learning outcomes, please clearly mark deletions with strikethrough (~~strikethrough~~) and additions/new information with bolding and underlining.** COPY AND PASTE THE FOLLOWING ROW and TABLE, AND COMPLETE THEM FOR EACH COURSE LISTED ABOVE.*

**COMPLETE THIS TABLE FOR EACH COURSE LISTED IN SECTION "A" ABOVE.**

<b>COURSE NUMBER AND TITLE:</b>	NURS 1120 Professional Nursing II <i>(Learning Outcomes last updated: Feb 8, 2019)</i>	
<b>SELECT ONE OF THE FOLLOWING:</b>		
I. There are no official learning outcomes for the course in the PDC/Senate record. (check the CuMA database at <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )	___	Provide learning outcomes for the course by completing the Learning Outcomes Table below.
II. There are changes to the course learning outcomes	___	Provide learning outcomes for the course by completing the Learning Outcomes Table below.
III. It has been 5 years since learning outcomes for the course were last submitted to PDC/Senate. (check the CuMA database for the date of last submission at <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )	___	Provide learning outcomes for the course by completing the Learning Outcomes Table below.
IV. Learning Outcomes have been reviewed in the past 5 years and no revisions are being proposed.	<u><b>X</b></u>	Learning outcomes need not be submitted. PROVIDE DATE LAST REVIEWED BY PDC/SENATE then go to the next course: <b><u>Feb 8, 2019</u></b> (check CUMA database at: <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )

**PROGRAM DEVELOPMENT COMMITTEE  
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES  
FORM E**

COMPLETE THIS TABLE FOR EACH COURSE LISTED IN SECTION "A" ABOVE.	
<b>COURSE NUMBER AND TITLE:</b>	<b>NURS 1220 Human Anatomy and Physiology II</b> <i>(Learning Outcomes last updated: Feb 8, 2019)</i>
<b>SELECT ONE OF THE FOLLOWING:</b>	
I. There are no official learning outcomes for the course in the PDC/Senate record. (check the CuMA database at <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )	<input type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
II. There are changes to the course learning outcomes	<input type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
III. It has been 5 years since learning outcomes for the course were last submitted to PDC/Senate. (check the CuMA database for the date of last submission at <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )	<input type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
IV. Learning Outcomes have been reviewed in the past 5 years and no revisions are being proposed.	<input checked="" type="checkbox"/> Learning outcomes need not be submitted. PROVIDE DATE LAST REVIEWED BY PDC/SENATE then go to the next course: <b>Feb 8, 2019</b> (check CUMA database at: <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )

COMPLETE THIS TABLE FOR EACH COURSE LISTED IN SECTION "A" ABOVE.	
<b>COURSE NUMBER AND TITLE:</b>	<b>NURS-<del>2520</del> 2930. Mental Health Nursing</b> <i>(Learning Outcomes last updated: May 8, 2020)</i>
<b>SELECT ONE OF THE FOLLOWING:</b>	
I. There are no official learning outcomes for the course in the PDC/Senate record. (check the CuMA database at <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )	<input type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
II. There are changes to the course learning outcomes	<input type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
III. It has been 5 years since learning outcomes for the course were last submitted to PDC/Senate. (check the CuMA database for the date of last submission at <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )	<input type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
IV. Learning Outcomes have been reviewed in the past 5 years and no revisions are being proposed.	<input checked="" type="checkbox"/> Learning outcomes need not be submitted. PROVIDE DATE LAST REVIEWED BY PDC/SENATE then go to the next course <b>May 8, 2020</b> (check CUMA database at: <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )

**PROGRAM DEVELOPMENT COMMITTEE  
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES  
FORM E**

COMPLETE THIS TABLE FOR EACH COURSE LISTED IN SECTION "A" ABOVE.	
<b>COURSE NUMBER AND TITLE:</b>	<b>NURS-2532. Clinical Practicum III</b> <i>(Learning Outcomes last updated: October 9, 2020)</i> <i>Revisions are being made to the learning outcomes</i>
<b>SELECT ONE OF THE FOLLOWING:</b>	
I. There are no official learning outcomes for the course in the PDC/Senate record. (check the CuMA database at <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )	<input type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
II. There are changes to the course learning outcomes	<input checked="" type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
III. It has been 5 years since learning outcomes for the course were last submitted to PDC/Senate. (check the CuMA database for the date of last submission at <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )	<input type="checkbox"/> Provide learning outcomes for the course by completing the Learning Outcomes Table below.
IV. Learning Outcomes have been reviewed in the past 5 years and no revisions are being proposed.	<input type="checkbox"/> Learning outcomes need not be submitted. PROVIDE DATE LAST REVIEWED BY PDC/SENATE then go to the next course: <b>_Oct 9, 2020_</b> (check CUMA database at: <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )

**NURS-2532. Clinical Practicum III**

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i> <u>At the end of the course, the successful student will know and be able to:</u>	<b>Characteristics of a University of Windsor Graduate</b> <u>A U of Windsor graduate will have the ability to demonstrate:</u>
<p>A. Apply principles of safety that protect self, patients/clients, families, and the environment from harm. (Also applies to C, E, F, G)</p> <p>Explore ethical and legal issues in the clinical setting and apply the steps of ethical decision making (Also applies to C, E)</p> <p>Apply the nursing process to the care of clients/patients/families/<del>communities</del> using evidence-informed decision making (Also applies to B, C, E, F, G)</p> <p>Apply principles of teaching and learning and health literacy to plan, implement, and evaluate interventions that promote health and well-being in <del>of</del> individuals/<del>families, and communities</del> <b>within the context of their community (i.e. hospital, home)</b> (Also applies to C, E, F, G)</p>	<p>A. the acquisition, application and integration of knowledge</p>

**PROGRAM DEVELOPMENT COMMITTEE**  
**SUMMARY OF MINOR COURSE AND CALENDAR CHANGES**  
**FORM E**

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i> <u>At the end of the course, the successful student will know and be able to:</u>	<b>Characteristics of a University of Windsor Graduate</b> <u>A U of Windsor graduate will have the ability to demonstrate:</u>
Perform selected clinical skills safely, competently, and within required time frames. (Also applies to C, D, E)	
B. Apply selected information and communication technology (ICTs) safely and professionally for patient/client/family/ <del>community</del> care. (Also applies to E)	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Use critical thinking to identify and prioritize patient/client/family/ <del>community</del> care needs <b><u>within the context of their community (i.e. hospital, home)</u></b> . (Also applies to E)	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E. Be accountable and responsible for one's own learning needs, decisions, and actions (Also relates to I). Engage in reflective practice and self-care activities to promote personal and professional self-development and well-being (Also applies to I)	E. responsible behaviour to self, others and society
F. Demonstrate effective therapeutic and intra- and inter-professional communication (Also applies to A, E, G)	F. interpersonal and communications skills
G. Apply appropriate leadership/followership behaviours in the intra/ <del>and</del> inter- professional team setting. (Also applies to F)  Implement strategies to promote intra- and inter-professional collaboration, safety, and quality in the clinical setting. (Also applies to E, F).	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I.	I. the ability and desire for continuous learning

**COMPLETE THIS TABLE FOR EACH COURSE LISTED IN SECTION "A" ABOVE.**

<b>COURSE NUMBER AND TITLE:</b>	<b>NURS 2622 Consolidated Practicum II</b> <i>Learning Outcomes last updated: October 9, 2020</i> <i>Revisions are being made to the learning outcomes</i>
<b>SELECT ONE OF THE FOLLOWING:</b>	
I. There are no official learning outcomes for the course in the PDC/Senate record. (check the CuMA database at <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )	_____ Provide learning outcomes for the course by completing the Learning Outcomes Table below.

**PROGRAM DEVELOPMENT COMMITTEE  
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES  
FORM E**

II. There are changes to the course learning outcomes	____ Provide learning outcomes for the course by completing the Learning Outcomes Table below.
III. It has been 5 years since learning outcomes for the course were last submitted to PDC/Senate. (check the CuMA database for the date of last submission at <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )	____ Provide learning outcomes for the course by completing the Learning Outcomes Table below.
IV. Learning Outcomes have been reviewed in the past 5 years and no revisions are being proposed.	____ Learning outcomes need not be submitted. PROVIDE DATE LAST REVIEWED BY PDC/SENATE then go to the next course: _____ (check CUMA database at: <a href="https://ctl2.uwindsor.ca/cuma/public/">https://ctl2.uwindsor.ca/cuma/public/</a> )

<b>Course Learning Outcomes NURS 2622 Consolidated Practicum II</b> <i>This is a sentence completion exercise. At the end of the course, the successful student will know and be able to:</i>	<b>Characteristics of a University of Windsor Graduate</b> <u>A U of Windsor graduate will have the ability to demonstrate:</u>
<p>A.</p> <p>Evaluate and revise the nursing care of clients/patients/families/<del>communities</del> using evidence-informed decision making. (Also applies to C, E, F, G)</p> <p>Implement and evaluate a teaching plan to promote health and well-being <del>in</del> <b>of</b> individuals, families, <del>and communities</del> <b>within the context of their community (i.e. hospital, home)</b> using a variety of resources including ICTs. (Also applies to C, D, E, F, G)</p> <p>Consistently perform clinical skills safely, competently and within required time frames for more than one patient/client. (Also applies to C, D, E, F, G)</p> <p>Apply selected information and communication technologies safely and professionally for patient/client/family/<del>community</del> care. (Also applies to E, F)</p>	<p>A. the acquisition, application and integration of knowledge</p>
<p>B.</p>	<p>B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)</p>
<p>C.</p> <p>Engage in reflective practice and self-care activities to promote personal and professional self-development and well-being. (Also applies to E an I.)</p> <p>Use critical thinking to identify and prioritize the care needs of more than one patient/client <b>within the context of their community</b>. (Also applies to E)</p>	<p>C. critical thinking and problem-solving skills</p>

**PROGRAM DEVELOPMENT COMMITTEE**  
**SUMMARY OF MINOR COURSE AND CALENDAR CHANGES**  
**FORM E**

<b>Course Learning Outcomes NURS 2622 Consolidated Practicum II</b> <i>This is a sentence completion exercise. At the end of the course, the successful student will know and be able to:</i>	<b>Characteristics of a University of Windsor Graduate</b> <u>A U of Windsor graduate will have the ability to demonstrate:</u>
D.	D. literacy and numeracy skills
E. Be accountable and responsible for their own learning needs, decisions, and actions (Also relates to I)	E. responsible behaviour to self, others and society
F. Demonstrate effective therapeutic and intra- and inter-professional communication. (Also applies to E, G)	F. interpersonal and communications skills
G. Analyze leadership/followership behaviours in the intra/inter professional team setting. (Also applies to F) Implement strategies to promote intra- and inter-professional collaboration, safety, and quality in the clinical setting. (Also applies to E)	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I.	I. the ability and desire for continuous learning

University of Windsor  
Program Development Committee

\*5.16      **Music – Program Learning Outcomes**

Item for:      **Information**

This package contains the following learning outcomes:

BA Music

Combined BA Music

### Honours Bachelor of Arts in Music Program Learning Outcomes

<b>Learning Outcomes</b> At the end of the course, the successful student will know and be able to:	<b>Characteristics of a University of Windsor Graduate</b> The University of Windsor graduate will have the ability to demonstrate:	<b>COU-approved Undergraduate Degree Level Expectations</b>
Recognize and describe a wide range of melodic, harmonic, rhythmic and formal structures in diverse music styles and time periods. <p style="text-align: right;">(Also applies to E.)</p>	<b>A.</b> the acquisition, application and integration of knowledge	<ol style="list-style-type: none"> <li>1. Depth and breadth of knowledge</li> <li>2. Knowledge of methodologies</li> <li>3. Application of knowledge</li> <li>5. Awareness of limits of knowledge</li> </ol>
Access, retrieve, and evaluate information through written analysis and criticism as well as through independent, collaborative work and presentations. <hr/> Define technical and analytical problems in musical culture, performances and ensemble rehearsals settings.	<b>B.</b> research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	<ol style="list-style-type: none"> <li>1. Depth and breadth of knowledge</li> <li>2. Knowledge of methodologies</li> <li>3. Application of knowledge</li> <li>5. Awareness of limits of knowledge</li> </ol>
Integrate musical theory, historical, and philosophical approaches to articulate technical and analytical components of culture as seen through a musical lens and musical performances. <hr/> Practice individually and rehearse in an ensemble setting to identify techniques and approaches to improve performance.	<b>C.</b> critical thinking and problem-solving skills	<ol style="list-style-type: none"> <li>1. Depth and breadth of knowledge</li> <li>2. Knowledge of methodologies</li> <li>3. Application of knowledge</li> <li>5. Awareness of limits of knowledge</li> </ol>

<p>Develop integral and theoretical methodologies to analyze musical texts and scores.</p> <hr/> <p>Employ applied musical literacy/numeracy skills to the student's voice/instrument to develop performance practice in an independent and ensemble setting.</p>	<p><b>D.</b> literacy and numeracy skills</p>	<p>4. Communication skills</p> <p>5. Awareness of limits of knowledge</p>
<p>Proficiently engage in group activities such as music ensembles and collaborative research projects to cultivate team building and experiential learning for professional music career settings.</p> <hr/> <p>Identify and apply models of professional responsibility in rehearsal, performance, and academic settings.</p>	<p><b>E.</b> responsible behaviour to self, others and society</p>	<p>5. Awareness of limits of knowledge</p> <p>6. Autonomy and professional capacity</p>
<p>Effectively communicate both verbally and musically in ensemble settings and academic musical environments.</p> <p style="text-align: right;"><b>(Also applies to G.)</b></p>	<p><b>F.</b> interpersonal and communications skills</p>	<p>4. Communication skills</p> <p>6. Autonomy and professional capacity</p>
<p>Develop leadership and mentoring skills through in-course settings such as conducting and ensemble sectionals.</p>	<p><b>G.</b> teamwork, and personal and group leadership skills</p>	<p>4. Communication skills</p> <p>6. Autonomy and professional capacity</p>
<p>Demonstrate musicianship and technical proficiency as well as interpretive and understanding through performance and academic research.</p>	<p><b>H.</b> creativity and aesthetic appreciation</p>	<p>2. Knowledge of methodologies</p> <p>3. Application of knowledge</p> <p>6. Autonomy and professional capacity</p>
<p>Learn independently through performance and research to meet individual professional goals.</p>	<p><b>I.</b> the ability and desire for continuous learning</p>	<p>6. Autonomy and professional capacity</p>

### Combined Honours Bachelor of Arts in Music Program Learning Outcomes

<b>Learning Outcomes</b> At the end of the course, the successful student will know and be able to:	<b>Characteristics of a University of Windsor Graduate</b> The University of Windsor graduate will have the ability to demonstrate:	<b>COU-approved Undergraduate Degree Level Expectations</b>
<p>Recognize and describe a range of melodic, harmonic, rhythmic and formal structures in diverse music styles and time periods.</p> <p style="text-align: right;">(Also applies to E.)</p> <hr/> <p>Assess formal and conceptual materials from Music and another discipline.</p>	<b>A.</b> the acquisition, application and integration of knowledge	<ol style="list-style-type: none"> <li>1. Depth and breadth of knowledge</li> <li>2. Knowledge of methodologies</li> <li>3. Application of knowledge</li> <li>5. Awareness of limits of knowledge</li> </ol>
<p>Demonstrate ability to access, retrieve, and evaluate information through written analysis and criticism in Music and the students' other field of concentration.</p> <hr/> <p>Define technical and analytical problems in musical culture, performances and ensemble rehearsals settings.</p>	<b>B.</b> research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	<ol style="list-style-type: none"> <li>1. Depth and breadth of knowledge</li> <li>2. Knowledge of methodologies</li> <li>3. Application of knowledge</li> <li>5. Awareness of limits of knowledge</li> </ol>
<p>Critically evaluate and apply relevant theory in Music and another field of study</p> <hr/> <p>Demonstrate problem-solving skills through effective practice and rehearsal in performance settings such as ensemble concerts and solo performance juries.</p>	<b>C.</b> critical thinking and problem-solving skills	<ol style="list-style-type: none"> <li>1. Depth and breadth of knowledge</li> <li>2. Knowledge of methodologies</li> <li>3. Application of knowledge</li> <li>5. Awareness of limits of knowledge</li> </ol>

<p>Apply relevant vocabulary, techniques, and methods from both Music and another discipline.</p> <hr/> <p>Employ applied musical literacy/numeracy skills to the student's voice/instrument to develop performance practice in an independent and ensemble setting.</p>	<p><b>D.</b> literacy and numeracy skills</p>	<p>4. Communication skills</p> <p>5. Awareness of limits of knowledge</p>
<p>Proficiently engage in group activities such as music ensembles and collaborative research projects to cultivate team building and experiential learning for professional music career settings.</p> <hr/> <p>Identify and apply models of professional responsibility in rehearsal, performance, and academic settings.</p>	<p><b>E.</b> responsible behaviour to self, others and society</p>	<p>5. Awareness of limits of knowledge</p> <p>6. Autonomy and professional capacity</p>
<p>Develop interpersonal and communication skills through collaborative research and group presentations in music and another major study concentration.</p> <p style="text-align: right;"><b>(Also applies to G.)</b></p>	<p><b>F.</b> interpersonal and communications skills</p>	<p>4. Communication skills</p> <p>6. Autonomy and professional capacity</p>
<p>Effectively communicate both verbally, non-verbally, and musically in ensemble settings.</p>	<p><b>G.</b> teamwork, and personal and group leadership skills</p>	<p>4. Communication skills</p> <p>6. Autonomy and professional capacity</p>
<p>Demonstrate musicianship and technical proficiency as well as interpretive and understanding through performance and academic research.</p>	<p><b>H.</b> creativity and aesthetic appreciation</p>	<p>2. Knowledge of methodologies</p> <p>3. Application of knowledge</p> <p>6. Autonomy and professional capacity</p>
<p>Learn independently through performance and study/research to meet individual professional goals in music and another major study concentration.</p>	<p><b>I.</b> the ability and desire for continuous learning</p>	<p>6. Autonomy and professional capacity</p>

**University of Windsor  
Program Development Committee**

\*5.17:           **Nursing – Course Learning Outcomes**  
                       *[NURS-1900 Writing for the Professional Nurse]*

Item for:           **Information**

Forwarded by: **Faculty of Nursing**

**COURSE NUMBER AND TITLE: NURS 1900. Writing for the Professional Nurse**

<p><b>Learning Outcomes</b>  <i>This is a sentence completion exercise.</i>  <u>At the end of this course, the successful student will know and be able to:</u></p>	<p><b>Characteristics of a University of Windsor Graduate</b>  <u>A U of Windsor graduate will have the ability to demonstrate:</u></p>
<p>A.                      Identify the purpose and diverse types of written communication required in the nursing profession (e.g., scholarly, correspondence by email, medical terminology and <b>short forms</b>) (Also applies to G).  <u>Identify the purpose and the value of scholarship in nursing (Also applies to B, E).</u>  <u>Demonstrate the appropriate and safe use of medical terminology and short forms in written communication (Also applies to E)</u></p>	<p>A. the acquisition, application and integration of knowledge</p>
<p>B.                      Conduct effective scholarly literature searches, <u>using academic databases, for a variety of nursing topics</u></p>	<p>B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)</p>
<p>C. Evaluate the quality and appropriateness of scholarly and other resources that are relevant to nursing (Also applies to D, E).  <u>Compare information from multiple sources in written communication</u></p>	<p>C. critical thinking and problem-solving skills</p>
<p>D.                      Identify the common <b>grammatical</b> errors that are made when communicating in writing and edit documents to correct them.  <u>Demonstrate scholarly communication, in a variety of formats (e.g., emails, discussion posts, expository reports, infographics), that is clear, concise, accurate, and organized (Also applies to H).</u>                      Distinguish between content that is plagiarized and that which is properly sourced (Also applies to E)</p>	<p>D. literacy and numeracy skills</p>

<b>Learning Outcomes</b> <i>This is a sentence completion exercise.</i> <u>At the end of this course, the successful student will know and be able to:</u>	<b>Characteristics of a University of Windsor Graduate</b> <u>A U of Windsor graduate will have the ability to demonstrate:</u>
<u>Demonstrate proper citation, referencing, and integration of scholarly sources into written assignments using correct APA style.</u>  <u>Disseminate scholarly work through written assignments (e.g., papers, infographics, posters, pamphlets, or other written materials)</u>	
E.	E. responsible behaviour to self, others and society
F.	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I.	I. the ability and desire for continuous learning

**University of Windsor  
Program Development Committee**

\*5.18: **Computer Science (Graduate) Course Learning Outcomes**  
[COMP-8390. Emerging Non-traditional Database Systems]

Item for: **Information**

Forwarded by: **School of Computer Science**

**COURSE NUMBER AND TITLE: COMP-8390. Emerging Non-traditional Database Systems**

<b>Course Learning Outcomes</b> <i>This is a sentence completion exercise.</i>	<b>Characteristics of a University of Windsor Graduate</b>
<u>At the end of the course, the successful student will know and be able to:</u>	<u>A U of Windsor graduate will have the ability to demonstrate:</u>
A. Design normalized databases and data warehouses for real life applications, appropriately incorporating theories of database management systems, relational data model, database definition and query languages, indexes, database transaction management and query optimization techniques, as well as apply data mining methods (also relevant to H).	A. the acquisition, application and integration of knowledge
B. Create and solve original research problems in databases, data warehousing and mining.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. analyze and review different warehousing and mining solutions through complexity and/or experimental analysis.	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E. Prepare research and project reports following professional principles of protection of intellectual property.	E. responsible behaviour to self, others and society
F.	F. interpersonal and communications skills
G.	G. teamwork, and personal and group leadership skills
H. Document and comment (i.e., add explanatory non-computational comments) a database system for future maintenance (also relevant to D and F).	H. creativity and aesthetic appreciation
I. Solve a variety of problems with warehouse integration and mining approaches.	I. the ability and desire for continuous learning