University of Windsor

NOTICE OF MEETING
There will be a meeting of the
PROGRAM DEVELOPMENT COMMITTEE (PDC)
November 15, 2022 at 2:00pm-4:00pm
Location: MS Teams Virtual Meeting

AGENDA

Formal Business

1 **Approval of Agenda**

2 **Minutes of Meeting of October 22, 2021**

3 **Business Arising from the Minutes**

4 **Outstanding Business**

Items for Approval

5 **Reports/New Business**

5.1	**Indigenous Question – PDC Forms**	**Erika Kustra**
	5.1.1 Report on Refining the Indigenous Question on the Program/Course Course Change Forms	PDC211115-5.1
5.2	**Honours Certificate in Physics – New Program Proposal (Form A)**	**Steven J. Rehse**
		PDC211115-5.2
5.3	**Interdisciplinary Health Science (HIS) - Major Program Change (Form B)**	**Cheryl Collier/Chris Houser**
	5.3.1 IHS - New Course Proposals (Form D)	PDC211115-5.3
		PDC211115-5.3.1
5.4	**Human Kinetics – Degree Completion Program (Form C1)**	**Kevin Milne**
		PDC211115-5.4
*5.5	**Mathematics and Statistics – Minor Program Change (Form C)**	**Richard Caron**
		PDC211115-5.5
*5.6	**Music – Minor Program Change (Form C)**	**Nicolas Papador**
		PDC211115-5.6
*5.7	**Philosophy – Minor Program Change (Form C)**	**Philip Rose**
		PDC211115-5.7
*5.8	**Science – Minor Program Change (Form C)**	**Philip Dutton**
		PDC211115-5.8
*5.9	**Chemistry and Biochemistry – New Course Proposals (Form D)**	**James Gauld**
		PDC211115-5.9

*5.10 **Philosophy – New Course Proposal (Form D)**

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Sullivan-Clarke
PDC211115-5.10

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Item for Information

*5.11 **Human Kinetics – Summary of Minor Course and Calendar Changes (Form E)**

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Kevin Milne
PDC211115-5.11

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*5.12 **Science - Summary of Minor Course and Calendar Changes (Form E)**

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Philip Dutton
PDC211115-5.12

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*5.13 **Mathematics and Statistics - Summary of Minor Course and Calendar Changes (Form E)**

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Rick Caron
PDC211115-5.13

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*5.14 **Philosophy - Summary of Minor Course and Calendar Changes (Form E)**

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Philip Rose
PDC211115-5.14

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*5.15 **Psychology - Summary of Minor Course and Calendar Changes (Form E)**

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Ken Cramer
PDC211115-5.15

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*5.16 **Dramatic Art – Program Learning Outcomes**

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Tina Pugliese
PDC211115-5.16

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*5.17 **Chemistry and Biochemistry– Program Learning Outcomes**

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James Gauld
PDC211115-5.17

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*5.18 **Mathematics and Statistics – Course Learning Outcomes**

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Rick Caron
PDC211115-5.18

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*5.19 **Psychology – Course Learning Outcomes**

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Ken Cramer
PDC211115-5.19

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Item for Approval

*5.20 **Sociology, Anthropology, and Criminology Department Name Change**

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Shelagh Towson
PDC211115-5.20

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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:   **Report on Refining the Indigenous Question on the Program/Course Change Forms**

Item for: **Information**

Forwarded by: **Program Development Committee**

In Winter 2020, the PDC established a Subcommittee to refine the question wording and supports in the PDC form that asks *how* faculty have considered Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material in courses and programs. The Subcommittee held its first meeting in June 2020, met regularly throughout 2020-2021 and consulted broadly. The attached report was presented to PDC which voted to approve the changes to the PDC Forms and supported the short-term and long-term recommendations. The report went to Senate for information on June 21, 2021

See attached.

Recommendations for Revisions to the PDC Forms Indigenization Question

Report from the Program Development Committee (PDC) Subcommittee Refining the Indigenous Question on the Program/Course Change Forms

Subcommittee Members: Jaimie Kechego, Alison Zilli, Karen Pillon, Kevin Milne, Erika Kustra
April 12, 2021

With heartfelt thanks to the many people who shared their time and insight for consultations.

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Purpose

The Subcommittee was initiated to modify the question wording and supports in the PDC form that asks *how* faculty have considered Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material in courses and programs. The initiative was in response to concerns raised in Senate and by the campus community, and within a context where we do not have a larger guiding institutional plan. The PDC values the role this question has in helping people thinking about Indigenization, and hopes enhancements to the question will encourage and enable more people to be thoughtful and intentional in their approach, following a respectful process and respectful consultation. The goal was to follow a collaborative process, and the recommendations were developed through consultations with Indigenous faculty, staff, students, alumni and community members, as well as non-Indigenous allies engaged in supporting Indigenization in curriculum.

Context

Indigenization of curriculum takes place in a larger context, including a requirement to respond to the Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967).

December 8, 2017, Senate agreed PDC should include a question about Indigenizing curriculum in the PDC forms, in response to the Aboriginal Education Council Response to the Report of the Senate Working Group on Benchmarking the University of Windsor in Relation to Universities Canada 13 Principles on Indigenous Education. The final wording was approved on April 2018, following consultation: *"The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities. In developing or revising this program or course, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?"* However, faculty completing the PDC forms may not be aware of how to approach the PDC Indigenization question or may not have sufficient background or support. February 13, 2020, PDC created a Subcommittee to revise the wording of the PDC form question.

Enhancements to the PDC forms is seen as one step in a larger and ongoing process of Indigenizing curriculum and pedagogy and in the University of Windsor's engagement in Truth and Reconciliation Commissions (TRC) Calls to Action and legal requirements. Where we are now has been decades in the making, and will take time to address. Those we consulted have shared that the relationship of trust is essential, and this process needs to place emphasis on the journey and the growth during the journey.

Process:

A guiding principle used during the revisions was the importance of engaging in consultation throughout the process, consistent with the recommendation of the AEC. The recommendations in this document are a summary of the ideas shared through consultation. The process followed these steps:
1. Initial brainstorming meeting with PDC members
2. Additional braining storming within the sub-committee, building and summarizing the ideas from PDC to form the basis of a consultation document.
3. Consultation meetings both one-on-one and with groups.
4. A student hired through the Ignite work study program to help support the process and gather resources.
5. The document was iteratively refined during the consultation process. Following consultation, the draft document was shared with Aboriginal Education Council (AEC), PDC and those consulted with for further feedback.
6. The document will be shared with Senate for information and with the intent of continuing the conversation with initial recommendations for change.

Consultations: Consultations were held with Aboriginal Education Council (AEC), Turtle Island Aboriginal Education Centre, President's Indigenous Peoples Scholars, Program Development Committee, and any individuals identified as having an interest, including faculty, staff, students, alumni, Elders and Indigenous Knowledge Holders within the community. A total of 61 people was consulted.

The consultations revealed recommendations directly related to modifying the PDC form, and specific immediate resources that can be developed. Consultations also reinforced the understanding that Indigenizing curriculum is a complex process based within the larger university and community context. As a result, recommendations for larger context and change were shared that extend beyond the scope of the PDC sub-committee, but that are critical to share in order to help our institution continue to develop.   These recommendations are shared below in recommendations 1 and 2.

Recommendations for PDC Form Revisions

Immediate actions for PDC are focussed on revising the wording of the question within the PDC form to help people focus on the process they are using, and to share helpful resources.
(These recommendations will be supported by PDC, University Secretariat and CTL.)

1. **Modify question wording to emphasize process**, by bolding 'how' (Please see Appendix A for wording).
2. **Add a statement to the PDC question to clarify the larger context** beyond the University of Windsor. Add mention that this is an initiative based on the *TRC Calls to Action* and the *Universities Canada Principles on Indigenous Education* essential for universities to engage in, with legal requirements (See Appendix A).
3. **Add one link that will connect to resources** to support people as they engage in the process. This will link to information and resources that can be updated regularly (https://www.uwindsor.ca/ctl/513/indigenous-resources). Information being added will continually be enhanced, and based on the consultations feedback will include:
   a. Contact for the Indigenous Curriculum and Pedagogies Project Coordinator, Jaimie Kechego
   b. Short descriptions of the TRC Calls to Action and University Principles and Indian Act and legal requirements with highlights of the points relevant for course and program development and with links to the documents
   c. University context with a link to the Senate working document that held initial Recommendations for Changes, Aboriginal Education Council Response to the Report of the Senate Working Group(response to Senate report above, pp. 3-7), University of Windsor Indigenous Initiatives
   d. Foundational information about Indigenization of curriculum and pedagogy
   e. Foundational webinars developed in-house
   f. Sample disciplinary resources, syllabi, and content
4. **Add prompt questions to help people begin to approach the question**
   a. Based on consultations with instructors, prompts will be included within the form itself rather than as a footnote, appendix or external resource. The prompts will be piloted with faculty members (See Appendix A).
   b. Prompts related to reaching out to people with expertise are later in the list to encourage self-education first, and to decrease consultation fatigue and workload for Indigenous faculty, staff. Knowledge Holders and Elders.
5. **Include information that aligns within sections of the PDC documents:** When including Indigenization, we encourage faculty to include mention of Indigenization in other sections of the PDC documents where relevant (for example, the Indigenization may influence learning outcomes, assignments, etc.). A question has been added to the prompt questions to encourage this. Feedback can be provided through the PDC review.

Recommendations Raised by Consultations Beyond the Scope of the Subcommittee

Consultations made it clear that Indigenizing curriculum is a complex process based within the larger university and community context, and as a result people raised recommendations that extended beyond the scope of the Subcommittee to change the PDC forms. These recommendations are important in the larger context to support Indigenization of curriculum at the University of Windsor and consequently, these recommendations are shared below.

1. Short-Term Recommendations beyond the PDC Forms
(Possible agents to support the recommendations and future follow-up are identified in brackets)

1. **Transparency for students** *(Associate Deans/Heads, University Secretariat, CTL):* When including Indigenization in the PDC form, help to share this intention with students, for example, including reference in the syllabi. One strategy to encourage this will be to **add reference to Indigenization in the Learning-Centred Syllabus Checklist** to encourage instructors to make the information public through their syllabus. Possible examples include:
   a. Instructor should inform students of their approach to Indigenizing Curriculum and Pedagogy where applicable. Instructors may consider including the wording that was submitted in the PDC form if it is worded appropriately for students.
   b. Add information to the syllabus such as their approach to Indigenizing curriculum and pedagogy as part of the course description.
   c. Have a statement and link to TRC and Universities Principles, with sample wording "The University of Windsor is committed to building stronger, more meaningful partnerships with Indigenous students, scholars and communities, as mandated by the Truth and Reconciliation Commission (TRC) and University Principles."
   d. Add specific resources and readings where appropriate.
2. **Gather PDC examples** *(University Secretariat, CTL)***:** Develop a resource that includes a variety of possible answers to the PDC form question, including examples that differ in their approach, and demonstrate how the answer can be contextualized within the discipline. Diversity in the examples will be important to avoid a cut-and-paste approach, and to encourage thoughtful engagement in Indigenization.
3. **Audio recording for the Land Acknowledgement** *(Turtle Island Aboriginal Education Centre, CTL)***:** Develop and link an audio recording for the University of Windsor's Land Acknowledgement to help people practice saying the names correctly to enhance the respect shown through Land Acknowledgements.
4. **Short learning modules** *(PDC, University Secretariat, CTL, OOL)***:** Develop short learning modules for the rationale and approach to the PDC forms, and to explain the PDC process (https://www.uwindsor.ca/qualityassurance/sites/uwindsor.ca.qualityassurance/files/pdc_forms_workflow_chart_feb2020.pdf)
5. **Extended professional development** *(Turtle Island Aboriginal Education Centre, Associate Deans/Heads/Faculty specific, CTL)***:** Continue to explore extended educational opportunities for faculty and students to learn about treaties, equity, and Indigenous ways of knowing. Build resources such as effective approaches to bring in the Indigenous voice without centring out a student as a representative of the Indigenous perspective, or placing undue burden on Indigenous faculty and staff. Explore opportunities to shadow and share resources.
6. **Promote awareness of process and resources** *(Turtle Island Aboriginal Education Centre, University Secretariat, CTL)***:** Share information through multiple avenues including Daily News, CTL Newsletter. Also ask to be invited to Department Council Meetings to give presentations and find out what help Departments might need.

2. Long-Term Strategic Recommendations

Several recommendations raised during consultation extend beyond the scope of the PDC sub-committee but are critical to Indigenizing curriculum and pedagogy. These relate to the larger institutional structures that will support the Indigenization work reported through the PDC forms.

1. **Build formal connections with the Indigenous Communities** *(President, Provost, Deans)*: Building relationships of trust with the Indigenous Communities is essential and will take several forms. Consultations indicated that it will be important for the President and upper administrators to play a key role in building community relationships. Relationship building may also include liaisons who are formally employed (full or part-time) and linked with the multiple communities. For example, GLIER has followed this model, but it could be conducted at the departmental, Faculty or institutional level. Consider the *Deepening Our Relationship Report* Ontario Universities August 2017. Also, recommendations were made to bring together an Elders Group, and Indigenous Knowledge Holders, including language speakers, for conversation.

2. **Promote awareness of the newly developed Indigenous courses and Minor** *(Executive Director, Academic Initiatives Indigenous Initiatives site, Dean of FAHSS)*: One strategy for this is to develop a resource page that will advertise all of the various Indigenous courses and the Minor offered at the University.

3. **Integrate opportunities across the curriculum** *(Program Coordinators, faculty members, CTL)*: Encourage curriculum refinement for continuous integration of Indigenization through each level of the program, rather than in a single chapter or module, so students demonstrate they understand and integrate the concepts with increasing complexity as they move forward. Encourage integration within core courses as well as the addition or new or link to existing elective courses or minors with a focus on relevant Indigenous content.

4. **Develop Program Statements** *(Heads, Program Coordinators)*: Encourage program committees to consider developing a program statement that is shared online, and that instructors could adapt to include on their course syllabus (refer to examples in Appendix B).

5. **Re-examine the Graduate Characteristics** *(Provost, PDC, Senate)*: Raise a recommendation to open and revise the "Characteristics of a University of Windsor Graduate" originally approved by Senate June 5, 2008 that all courses are structured and embedded within. This might be adding a new characteristic such as "respect for teaching and learning through diverse lenses" or "open to the awareness that there are other ways of thinking about things" but the wording would be part of a larger process, beyond the scope of this current sub-committee.

6. **Identify Faculty or Departmental Champions** *(Associate Deans/Heads, Provost)*: Raise the possibility of recognizing and working with an instructor in each AAU. This would be an instructor who has gone through a process of understanding Indigenizing curriculum and pedagogy and completing the PDC documents, and who could be a knowledgeable disciplinary resource within the AAU for those engaging in the process. It would be helpful for them to share reflections on their journey. An alternative might be a model in other institutions of an Associate Dean, Teaching and Learning who is responsible for teaching, and who can facilitate for colleagues their grasp of this perspective over time.

7. **Develop Student Champions and Partners** *(Native Student Alliance, Turtle Island Aboriginal Education Centre, Office of Student Experience, CTL)*: Some universities have developed partnerships with students, further than Indigenous student groups, and have created student societies with more support, more integration or student partnerships that can also help with recruiting and supporting students and providing feedback on course and curriculum initiatives.

8. **Hire Indigenous Employees** *(Executive Leadership Team)*: Increase Indigenous employees in critical areas of support for including the library and other units and provide opportunity for the individuals to work together. This recommendation from the consultation process is consistent with the Sisco 2021 report, *University of Windsor Indigenous Student Experience, Recruitment and Enrolment.*

9. **Developing an Indigenous Strategic Plan** *(Executive Leadership Team, Senate, Turtle Island Aboriginal Education Centre, with appropriate community consultation)*: Develop a coherent and comprehensive plan, through consultation, to explore the institutional strategic approach to the TRC for the whole campus. This

could include actions and the committees at the institutional, Faculty and unit levels to consider elements such as: how Indigenous people are present in the institution; how they are reflected in the space of the institution; what spaces are available for Indigenous learning; how is the curriculum Indigenized; how are learners supported; how are allies developed; how are relationships of trust developed with the Indigenous communities.

The TRC called us to "educate teachers on how to integrate Indigenous knowledge and teaching methods into classrooms" (TRC, 2015). The long-term strategic recommendations raised during the consultations clearly show that more steps are needed following the revision of the PDC forms. They are consistent with the current scholarly literature exploring Indigenization in higher education, exploring the complexity (such as Bopp, Brown & Robb, 2017) and include moving forward from inclusion to reconciliation and decolonial indigenization (Gaudry & Lorenzo, 2018). We hope that this will be part of a broader institutional conversation at the University of Windsor, and these recommendations will be shared with the President, Provost and Senate.

References

Bopp, M., Brown, L. & Robb, J. (2017). Reconciliation within the academy: Why is Indigenization so difficult? *Four Worlds for Development Learning*, 1-10. Retrieved from: http://www.fourworlds.ca/pdf_downloads/Reconciliation_within_the_Academy_Final.pdf

Gaudry, A. & Lorenz, D. (2018). Indigenization as inclusion, reconciliation, and decolonization: Navigating the different visions for indigenizing the Canadian Academy. *AlterNative: An International Journal of Indigenous Peoples, 14*(3), 218-227.

Truth and Reconciliation Commission of Canada. (2015). *Honouring the truth, reconciling for the future: Summary of the final report of the Truth and Reconciliation Commission of Canada.* Ottawa, ON. Retrieved from www.trc.ca

Universities Canada (2015). Universities Canada principles on Indigenous education. https://www.univcan.ca/media-room/media-releases/universities-canada-principles-on-indigenous-education/

Appendix A Modified PDC Indigenous Question Wording

Indigenous (First Nations, Métis, or Inuit) Content, Perspectives, or Material
FORM A (New Program) *NOTE: Any changes agreed to for Form A would then be integrated into the other forms*

The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967).

In developing this program, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?

Please consider these prompt questions and additional Resources including disciplinary examples:
- What **process** has your department/Faculty used to consider Indigenization?
- **How** have you considered the importance or relevance to the course/program?
- How has your department or faculty approached raising awareness for Indigenous knowledges in your area?
- What do the *TRC* and *University Principles* documents suggest relevant to your course?
- What have other similar courses/programs done that might be relevant to your course/program?
- In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?
- What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?
- Which literatures, sources, or Indigenous Knowledge Holders have you consulted? *(Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- Are you engaging in critical analysis of Settler Colonialism and/or Decolonization? Have you included the information in the other relevant areas in the PDC form such as learning outcomes and/or in the syllabus where appropriate?
- Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?

NOTE: Any changes agreed to for Form A would then be integrated into the other forms below.
FORM B (Major Program Changes)
FORM C (Minor Program Changes)
FORM C1 (Articulation Agreement/Degree Completion)
FORM C2 (Combined Program/Concurrent Offerings)
FORM D (New Course Proposal)
FORM E (Summary of Minor Course and Calendar Changes)

Appendix B: Encourage Programs to develop a coherent statement on Indigenization

The importance of having a public statement in courses and for the programs was raised, so faculty and students have context, and continue to think, ask questions, and keep the conversation and commitment public.

Example from History Program level - Preview for Decolonization, Indigenization and the History Department in Canada: Decolonization, Indigenization and the History Department in Canada

https://activehistory.ca/2017/09/decolonization-indigenization-and-the-history-department-in-canada/#_ftn6
One of the first projects of this Committee was to develop an optional statement that acknowledges Indigenous territory and history in department course syllabi. Devising this statement and sharing it with the department became an excellent opportunity for discussion among ourselves and with our students.[6] As a result of these discussions, and out of a desire to ensure that the statement does not become "pro- forma", the Committee is redrafting the statement. The provisional new statement is:

The department of history at the University of Winnipeg acknowledges that we live and work in the ancestral and traditional territories of the Anishinaabe, Assiniboine, Cree, Dakota, Métis and Oji-Cree Nations. We also acknowledge that the discipline of history has been used to support programs of dispossession and assimilation directed against Indigenous peoples. Teaching and learning Indigenous histories allows us to confront colonial history as well as honour and respect the people who have called this place home for millennia.

[This article was first published in the Canadian Historical Association Bulletin, 43.2, 2017, p. 32-33] By: Mary Jane Logan McCallum, Julie Nagam, James Hanley, Anne-Laurence Caudano and Delia Ga…
activehistory.ca

Human Kinetics Program University of Windsor for PDC 2021
A) Members of the program developed a statement and instructors are encouraged to include on course syllabus:

> The Faculty of Human Kinetics is committed to academic study about and engagement with the Indigenous community, while acknowledging that there is significant room for growth in this area within our unit. Indigenous (First Nations, Metis and/or Inuit) content, perspectives and materials are included in our curriculum as part of historical, social, and critical discussions, highlighting local, national, and/or international Indigenous communities and their cultural practices primarily in relation to sport, exercise, and health. While we have offered a course specific to Sport and Aboriginal peoples in Canada, several courses in our curriculum include the delivery of Indigenous-specific content in standard lecture format, and we also engage students in the following ways: instructor led discussions, assigned readings and exams, online engagement of Indigenous issues, assignments specific to the Truth and Reconciliation Commission of Canada (TRC), and by addressing calls to action through the TRC.

B) Sample PDC Course Statement developed from Program statement for a specific course – KINE-3500 (Patti Miller, 2021 permission to share)

> The Faculty of Human Kinetics is committed to academic study about and engagement with the Indigenous community. A broad goal of this course is for students to gain an understanding of how social, cultural, and historical perspectives influence how one acts within an organizational setting and how this might impact how organizations interact with their environments. This includes discussion of Indigenous Peoples and

traditions that might influence the functions of an organization. Additionally, the course instructor integrates examples from organizations such as the Aboriginal Sport Circle, the Aboriginal Sport and Wellness Council of Ontario, the Canada Games Council, North American Indigenous Games Council (NAIG) and community level organizations that provide sport and recreation opportunities for the Indigenous community. Lastly, one assignment in this course requires that students relate course content to an organizational event of their choosing. Students are encouraged to consider organizations with a targeted focus, such as those listed above.

Example from Odette School of Business:

All course outlines of the Odette School of Business recognize that the Odette School of Business and the University of Windsor sit on the Traditional territory of the Three Fires confederacy of First Nations, comprised of the Ojibway, the Odawa, and the Potawatomie. Odette has undertaken research to provide information upon which systematic Indigenization will proceed in a transparent, and collegial manner to meet the needs of the stakeholders. Odette School of Business encourages course developers and instructors to incorporate Indigenous content, perspectives, and materials into the curriculum. Further actions arising in due course from Indigenization will be appropriately incorporated in a sustainable manner into Odette's current structure, which includes a First Nations, Metis and Inuit Advisory Council to the Dean, formal policies, procedures and processes.
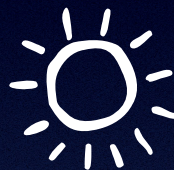
Indigenization
Next Steps in Planning and Consultation

Initial Working Group:

Rebecca Major, Jaimie Kechego, Erika Kustra, Patti Weir, Greg Chung-Yan

University of **Windsor**

Why are we considering this now?

- Current local and national issues and requests indicate a need for effective processes as part of our Duty to Consult and in our desire to self-educate

- TRC calls to action as part of a longer sustainable and ongoing commitment

- Three main areas of concern indicate a need for infrastructure, process and communication

- Need to learn to listen better

- Part of a living process, building reciprocal relationships

Duty to Consult

- At its heart, appropriate consultation is a dialogue between communities, a mutual engagement, rather than a mere notification of an external party's intention. In addition to protecting the Indigenous ranges of rights, appropriate consultation promotes and deepens the path of reconciliation that will ensure a healthier future for settler and Anishinaabe communities and relations.

    - differentiate between information sessions, informal discussions, and formal consultations

Ultimate goal: Indigenous members are legitimately part of the decision-making process

https://www.cottfn.com/wp-content/uploads/2015/11/Wiindmaagewin-CONSULTATION-PROTOCOL-website.pdf

Consultation and Engagement

Different levels of involvement

Being Informed   Consultation

Being Asked   Consultation

Developing Solutions   Engagement

Delivering Services   Partnership[2]

Context for Consultation

Institutional Strategic Planning
- Process beginning
- Consultative and transparent

Indigenous Strategic Planning
- Senior Position
- New hires
- Consultative and transparent long term development

Indigenous Curriculum Consultation
- Co-development of a structure
- Enhanced Indigenous community relationships
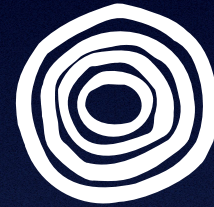- PDC Report and forms revisions

Seven Teachings Principles

1. Truth
2. Humility
3. Respect
4. Love
5. Honesty
6. Courage
7. Wisdom

Migizi (Eagle)

Niwing Wakakeia Wendanimak
(Four Winds)

Jijak (Crane)

Makwa (Bear)

Additional Principles for Approach

Take a consultative approach that follows the seven teachings in a way that that is:

- Collaborative

- Empowering

- Transparent

- Equally engaging

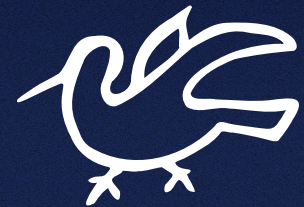- Patient – will take time to do well

- Sustained

Makinak (Turtle)

Mang (Loon)

Wawashkeshi (Deer)

Tchitehwisshiwe (Plover)

Approach to Consultation

Goals

- The goal of developing a consultation process is to establish trust, through an engaged process whereby engagement with stakeholders is done in a sustainable, transparent, and collaborative way.

- The duty to consult is inherent in working with Indigenous colleagues and communities and respects the over-arching goal of transparency and collaboration.

- We see this process becoming a model for other initiatives that will require consultation and may inform the broader strategic planning initiative.

Timeline

Summer 2021: Develop the Consultation plan

- Determine process for identifying stakeholders
- Work in partnership and engage meaningfully with the stakeholders to explore how to move forward
- Engage in phases to develop the consultation process
- Identify a process for initiating a formal consultation
- Develop appropriate ways to recognize and reward engagement

Fall 2021: Report Progress to Senate

Fall-Winter: Finalize and implement

Ongoing: Revise and update as needed, including updating documents

Report from the Program Development Committee (PDC) Subcommittee

- PDC Subcommittee and Sisco Reports highlight the need for a more wholistic consultation and approach

- In the short-term, PDC forms will focus on **how** people have engaged in self-education

- Moving forward now to develop a full Consultation process
  - We will strive to prioritize the levels of consultation and engagement required based on the nature of the curricular change being proposed.
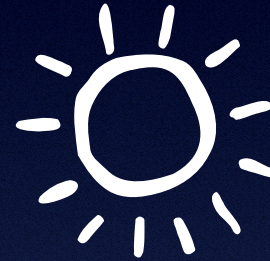
Wahan (Day)

Miskwanakwad (Cloud)

Mahingan (Wolf)

Refining the Indigenous Question on the Program/Course Change Forms

- Reason for initiating the PDC consultations

- Consultation process

- Short-Term Recommendations: Changed forms focus on Self-education

- Long-Term Recommendations: Strategic change

Acknowledging that we are all learning, but moving forward in a good way

Odjig (Fisher)

Ginooshe (Fish)

Jiiman (Canoe)

Kayanerenh-kowa (Trees of Peace)

University of Windsor
Program Development Committee

5.2:   **Honours Certificate in Physics – New Program Proposal (Form A)**

Item for: **Approval**

MOTION: That the Honours Certificate in Physics new program proposal be approved. ^

^Subject to approval of the expenditures required.

Rationale/Approvals:
- This program has been approved by the Department of Physics, the Science Program Development Committee (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)	Physics
Name of Program as it Will Appear on the Diploma (*e.g.*, Bachelor of Arts Honours Psychology with thesis)	Honours Certificate in Physics
Proposed Year of Offering* [Fall, Winter, Spring]: *(subject to timely and clear submission)*	Fall 2022
Mode of Delivery:	Face-to-face
Planned steady-state Student Enrolment (per section B.4.2)	12
Normal Duration for Completion:	1 year
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)*

Relevance and Importance: Physics plays an essential role in the science and engineering workforce, particularly as it relates to economic development, national security, medicine, education, transportation, and energy (Stith & Czujko, 2003). Unlike other degree programs (e.g., engineering) there is no physics industry so graduates often find themselves in a range of careers - from government, traditional academia, and public and private sectors. Degree programs in physics not only provide comprehensive training in the subject area, but also foster students' development of critical thinking, analytical thinking, problem solving, and technical skills (e.g., modeling, advanced mathematics) - skills needed to thrive as a scientist (Stith & Czujko, 2003). As detailed in section B.4.1, many physics-related occupations require graduate degrees, so clear pathways to graduate school are necessary to enhance the employability of students as well as their range of employment options.

Aim and Impact:
The Department of Physics is proposing an ***Honours Certificate in Physics*** with the primary goal to provide a pathway into physics graduate school for eligible students, including students with a three-year Bachelor of Science in Physics or students with a four-year Bachelor's degree in Chemistry, Electrical Engineering, Applied Mathematics or other fields related to Physics. While this program does not guarantee students' acceptance into a physics graduate program, it will provide students with fundamental knowledge needed to be successful upon acceptance into a graduate program and in doing so will provide UWindsor faculty with a new stream of potential graduate students (see sections C.1 and C.2 for details on entrance and course requirements). A secondary goal of this program is to offer the certificate to current third-and-fourth-year undergraduate science and engineering students at the University of Windsor that can be completed concurrently with their degree program.

The proposed program will recognize students who complete eight courses in areas of physics that will provide them with sufficient background knowledge to pursue a physics graduate degree. Students will engage in

experiential learning by completing either an internship (SCIE-3990), undergraduate research (SCIE-3900), or service learning (SCIE-3800) (see section E for a description of these courses). The courses included as part of this program are regularly taught by expert faculty and have sufficient capacity to accommodate enrollment growth without additional resources. We believe this new program will attract students who specifically want to pursue a graduate degree in physics but do not necessarily hold a degree in physics, or only have a three-year physics degree. We believe this program will be attractive to international students from commonwealth countries such as India, the UK, Australia, and New Zealand who typically earn three-year bachelor's degrees in physics. Currently, prospective students interested in completing a Master's degree in physics at the University of Windsor require a four-year bachelor's degree, so this certificate provides a transparent and consistent pathway for students to gain training in upper-level physics courses. From India, there has been a consistent influx of students pursuing education in Canada (see section B.4.4 for more information) and we anticipate a large pool of students to recruit from. To the best of our knowledge, there are no comparable certificates in Canada.

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 this certificate.

Consistency with Institutional Goals: The ***Honours Certificate in Physics*** program aligns with 'Engineering, Science, and Computing' (point three within program areas of expansion) within the SMA by offering new science programming. The Department of Physics is already teaching the courses needed to offer this certificate but has not previously formalized this program as a means to provide a pathway for students who want to attend graduate school in physics. Creating this new program will permit growth and increased enrollment within an existing program area of expansion in the SMA. Beyond contributing to this area of expansion, this new program will also provide faculty with a new stream of potential graduate students. Furthermore, many careers in physics require graduate degrees (Bureau of Labor Statistics, 2019; MTCU, n.d.-a; MTCU, n.d.-b) and therefore this certificate program will prepare individuals for graduate school, and in doing so also expand their employment prospects upon graduation. The proposed certificate also will contribute to the University of Windsor's mission, goals, and objectives by including a required experiential learning component.

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 physics are available at many institutions across Ontario (see the Duplication section for more details). There are currently no Honours Physics Certificates available to provide a pathway for students with three-year Bachelor of Science in Physics degrees or four-year Bachelor's degrees in Chemistry, Electrical Engineering, Applied Mathematics or other fields related to physics to pursue physics graduate school, nor does a certificate in physics exist that allows undergraduate students to complete a certificate concurrently with their undergraduate degree. Therefore, the proposed certificate program addresses a significant gap in curriculum.

While no other Honours Physics Certificates exist in Ontario, the curriculum within the proposed certificate program consists primarily of third-and-fourth-year physics courses that would typically be taken by students completing a four-year honours degree in physics. This was intentional given the focus of this program is to sufficiently prepare students for physics graduate school. As such, the proposed certificate program in ***consistent with the current state of the discipline***.

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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.

The proposed Honours Certificate in Physics is **unique in Ontario** as it offers a transparent pathway for three-year Bachelor of Science in Physics degree holders and four-year degree holders in Chemistry, Electrical Engineering, Applied Mathematics or other fields related to physics to obtain the necessary training to apply for graduate school. The proposed program is also available to current science and engineering undergraduate students at UWindsor, where students can complete the certificate while simultaneously completing their degree. The program delivery is also unique as it includes an opportunity for experiential learning where students will engage in undergraduate research, an internship, or service learning (see description of these courses in Section E). Undergraduate research offers a number of benefits to students including: increased disciplinary knowledge and skills (Crews, 2013; Lopatto, 2007), preparation for graduate/professional school (Crews, 2013; Lopatto, 2007), improved skills in problem-solving, critical thinking, synthesizing information, communication, and independent learning, (Lopatto, 2007; Miller et al., 2008) and enhanced employment prospects and experience for the workforce (Healey, Jordan, Pell & Short, 2010). Internship and service learning will offer an opportunity for work-integrated learning where students will make connections between academic learning and on-the-job training. This will allow students to further develop analytical and interpersonal skills along with an opportunity to practice skills needed for physics and build professional networks.

Beyond the aforementioned reasons, we believe this program will also be attractive to international students for the following reasons (Gu, 2017):
- Safety features: Canada is perceived among many international students as ethnically diverse and peaceful, with a quality education system
- Cost: For international students wanting education in North America, Canadian tuition is less expensive than tuition in the U.S.A and is considered more affordable
- Immigration polices: Canada offers specialized work permit of up to three years for qualified graduates and that experience can be applied to applications for permanent residence. Candidates who complete their education in Canada can earn additional points towards the *Express Entry Comprehensive Ranking System.*

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

The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the [Truth and Reconciliation Report](#) (2015) (page 1), the unique legal requirements of the [Constitution Act 1982](#) (Sections 25, 35), the provincial legal requirements of the [Ontario Human Rights Code](#), 1990, and provincial legislation [Bill Pr36](#) (1967).

*In revising this program, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Please consider these prompt questions and [additional Resources](#) including disciplinary examples:
- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the [TRC](#) and [University Principles](#) documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*

- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which [literatures](#), sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?*

The Department of Physics is committed to including Indigenous content, perspectives and/or material in the curriculum wherever possible and appropriate. Starting with a newly developed History of Astronomy course, we are adding Indigenous content and perspectives in the relevant places in the curriculum. The set of physics courses required for this Honours Certificate in Physics focusses on physics theories that were developed in the 19th century to model experiments that laid the foundations of current physics. To our knowledge, there are no Indigenous theories or experiments that are related to this content. The Service-Learning course may provide opportunities for students to explore Indigenous Content or perspectives. We will work with Indigenous Curriculum and Pedagogies Project Coordinator in the Centre for Teaching and Learning to ensure that this content is included in a respectful manner. We will continue to consult with the Outreach Committee of the Canadian Association of Physicists that is tasked with increasing the content from under-represented communities in Canadian physics curricula.

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 policy on certificate programs specifies, among other things, that a certificate is a non-degree program that recognizes a focus of learning distinct from a full degree. The Honours Certificate in Physics fits within the policy.

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.).

Physics-educated individuals play a crucial role in the science and engineering workforce, particularly as it relates to technical innovation needed for national security, medicine, education, transportation and energy (Stith & Czujko, 2003). One of the benefits of completing a degree in physics is the versatility in employment opportunities. While graduates may pursue employment in academia, there are also opportunities to work in science and technology, government, or private sector. Careers may include science writing, teaching, science policy, energy policy, management in technical fields, etc. Perhaps more importantly, a physics degree provides excellent preparation for most careers due to the focus on analyzing complete problems and strong skills in mathematics (Standford, n.d.). According to Stith and Czujko (2003), common paths following the completion of a physics bachelor's degree include attending graduate school in physics (32%), attending graduate school in another field (20%), and entering the workforce (48%). Unlike other disciplines (e.g., engineering) there is no physics industry; however, the majority of physics degree holders find employment within science and engineering related fields (Stith & Czujko, 2003).

The primary purpose of this certificate is to provide a pathway to graduate school for students from three-year physics degree programs and four-year degree programs in Chemistry, Electrical Engineering, Applied Mathematics or other fields related to Physics. As such, the market demand section detailed below describes positions that commonly require graduate degrees.

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The employment of physicists is anticipated to grow by 7% (faster than average) from 2019 to 2029. (Bureau of Labor Statistics; see Figure 1 and 2 more information). Similarly, data from the Government of Canada suggests that there are opportunities for individuals trained in physics to support occupations in the physical sciences (see Table 1 for a brief summary of employment statistics). As such, the proposed certificate will cater to the training of these highly specialized personnel.

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

Quick Facts: Physicists and Astronomers	
2019 Median Pay	$122,220 per year $58.76 per hour
Typical Entry-Level Education	Doctoral or professional degree
Work Experience in a Related Occupation	None
On-the-job Training	None
Number of Jobs, 2019	20,500
Job Outlook, 2019-29	7% (Faster than average)
Employment Change, 2019-29	1,400

Figure 2. (Reference: U.S. Bureau of Labor Statistics, Employment Projections program)

Quick Facts: Biochemists and Biophysicists	
2019 Median Pay	$94,490 per year $45.43 per hour
Typical Entry-Level Education	Doctoral or professional degree
Work Experience in a Related Occupation	None
On-the-job Training	None
Number of Jobs, 2019	34,600
Job Outlook, 2019-29	4% (As fast as average)
Employment Change, 2019-29	1,400

Table 1. Employment statistics

Job profile*	Median income	Projected number of job openings (2017-2021)	Number of Job Postings
Physicists and astronomers	$109,445	<=100	53
Natural and applied science policy researchers, consultants and program officers	$85,673	1,001-2,000	86
Other professional occupations in physical sciences	$88,349	401-500	22

*These data were gathered from the Ministry of Training, Colleges and Universities Ontario's labour market website for the aforementioned job profiles.
Physicists and astronomers: https://www.services.labour.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=2111
Natural and applied science policy researchers, consultants and program officers:
https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=4161#projJobOpeningsSection
Other professional occupations in physical sciences:
https://www.services.labour.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=2115

Given that this certificate is also open to third and fourth year science and engineering students at the University of Windsor, we felt it was beneficial to highlight course enrollment data to suggest that there is some interest among UWindsor students to complete the courses offered within the certificate program (see Table 2.).

Table 3. Course Enrollment Data

Course	Student Enrolment Units (SEU)[1]			
	2017	**2018**	**2019**	**2020**
PHYS-3115. Atomic and Molecular Spectra**	15 (Fall)	15 (Fall)	21 (Fall)	13 (Fall)
PHYS-3200. Electromagnetic Theory	-	33 (Fall)	12 (Fall)	16 (Fall)
PHYS-3500. Classical Mechanics	14 (Fall)	12 (Fall)	19 (Fall)	13 (Fall)
PHYS-4100. Quantum Mechanics I	10 (Winter)	16 (Winter)	17 (Winter)	17 (Winter)
PHYS-3210. Electromagnetic Waves	5 (Winter)	32 (Winter)	11 (Winter)	11 (Winter)
PHYS-4130. Introduction to Statistical Mechanics	9 (Winter)-	15 (Winter)	15 (Winter)	15 (Winter)
SCIE-3800. Service Learning	-	37 (Fall & Winter)	20 (Fall & Winter)	22 (Winter)
SCIE-3900 Undergrad Research Experience	-	3 (Fall & Winter)	17 (Fall & Winter)	9 (Winter)
SCIE-3990. Internship	7 (Fall)	41 (Fall & Winter)	29 (Fall & Winter)	17 (Winter)

*These data were gathered from the Office of Institutional Analysis at the University of Windsor.

**This course is the "non-lab" version of PHYS-3110 and is only open to non-physics majors. The lectures run concurrent with the 3110 lectures, so the enrolment of that course is provided.

Based upon the review of market demand, course enrolment data, and international pool of students available to recruit from (described in section B. 4.4), we believe there is sufficient market demand for this certificate, particularly given that there are no new resources required to offer this program.

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.

As this Honours Certificate will most likely be optimally useful and relevant to international students possessing a 3-year degree, we anticipate a composition of 20% domestic: 80% international.

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[1] Semester enrolment units (SEUs) are the numbers of students taking a course times the course value.

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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.

Projected enrolment levels for the first five years of operation. (If the program is in operation, use actual and projected data.)	First Year of Operation	Second Year of Operation	Third Year of Operation	Fourth Year of Operation	Fifth Year of Operation (Steady-state enrolment overall)
In the regular program (non-co-op)	3	5	7	10	12
In the co-op/experiential learning stream (if applicable)					
For co-op option: projected number of international students enrolled in the co-op stream					

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)	12
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)	

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.

Physics education programs play a critical role in training individuals for various sectors in the science and engineering workforce, which contributes to economic development and technological advances in medicine, transportation, energy etc. Beyond preparing students for employment, completing a physics education program allows students to develop sought-after skills such critical thinking, analytical thinking, problem solving, technical skills in mathematics,

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modeling and simulations, and the use of lab equipment (Stith & Czujko, 2003). Frequently graduates of physics undergraduate degrees choose to complete graduate studies. Currently within Canada and the United States, the vast majority of institutions require a four-year Bachelor of Science degree in Physics (or similar) to be admitted into a physics graduate program. This poses significant challenges for international students, particularly those from many Commonwealth countries whose bachelor degrees in physics are only three years in length. For example, within India, most degree programs are three years, therefore those wanting to pursue a graduate degree in Canada have a difficult, and often times unclear pathway into a graduate program. Within 2018, the number of Indian students attending Canadian institutions reached over 100,000 (World Education Services, n.d.) and there has been a continual increase in the number of Indian students attending Canadian Universities (i.e., from 7,456 to 48,633 from 2005/2016 to 2014-2015) (see Figure 3). As of 2014/2015 Canada was second of the top seven destinations for Indian students.

The primary purpose of this certificate is to provide a transparent pathway to graduate school for students from three-year degree programs in physics or four-year degree programs in chemistry, electrical engineering, applied mathematics or other fields related to physics. We believe our Honours Certificate will be an attractive option for these students given the consistent and appropriate training provided to be eligible for admissions into physics graduate school (providing all other admission requirements are met). Based on the growing influx of international students in Canada, particularly from India where three-year degrees are common, we believe there will be several opportunities to recruit students and meet our enrollment estimate, while requiring no additional resources to offer this certificate. As such, the benefits of offering this Honours Certificate far outweighs any potential risks.

Figure 3. Change in Indian Student Mobility by Receiving Country.
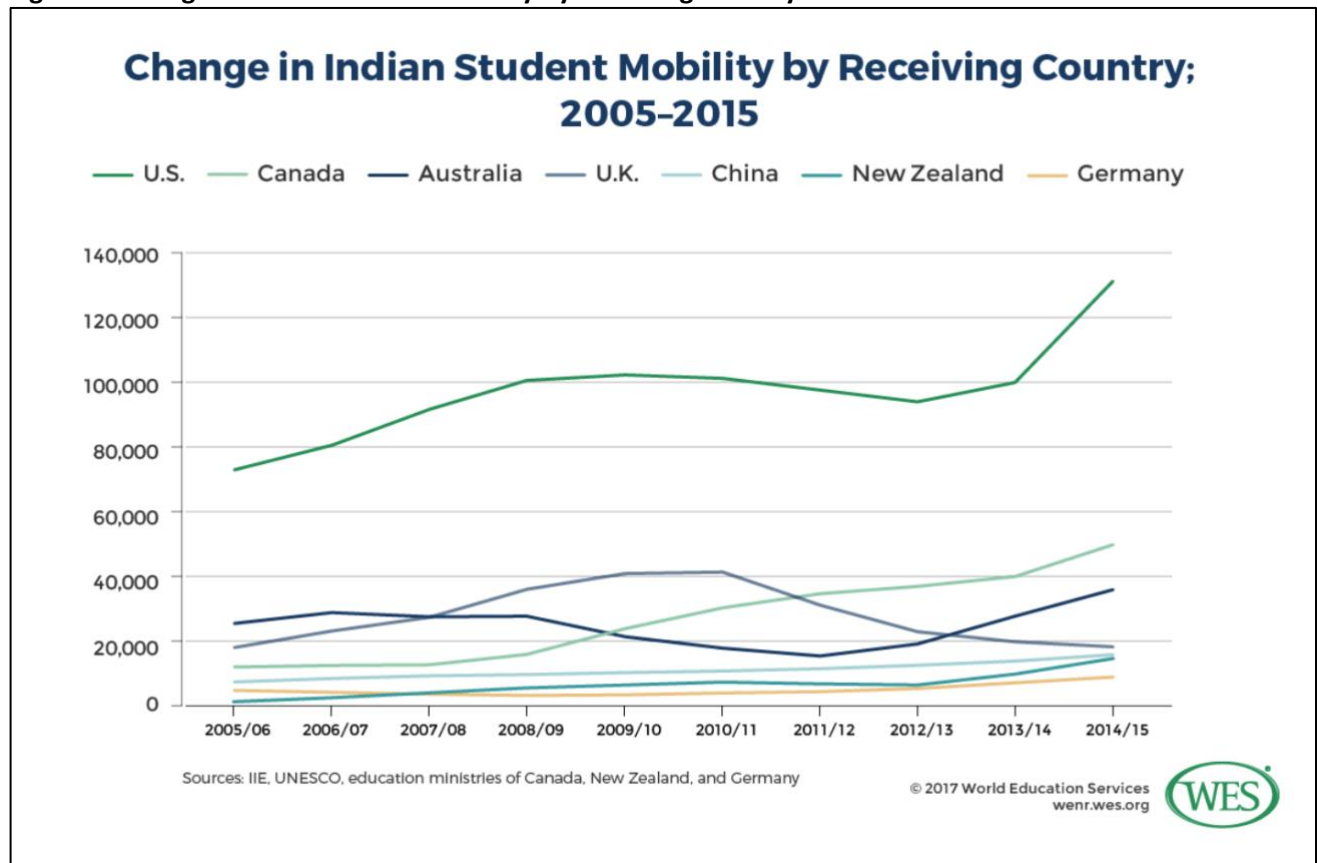
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B.4.4.1 Societal Need – Letters, Surveys, Statistics

• *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.*	___ Yes	_X__ No, explain below
• *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.*	___ Yes	_X_ No, explain below
• *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.)?*	___ Yes	_X__ No, explain below
• *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?*	___ Yes	_X__ No, explain below

If yes, append letters, survey or statistics to proposal.

If no, explain:
We have not undertaken a full consultation with industry and community partners regarding this certificate. Given that this certificate is dependent on existing courses that have the capacity to accommodate the growth in enrollment, a full external review of societal need was not required. However, based upon the review of the labour market 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, www.electronicinfo.ca/einfo.php, and www.oraweb.aucc.ca/showdcu.html. Also, list similars program in the geographically contiguous area, e.g., Michigan/Detroit.

Degree programs in physics are available at most institutions across Ontario. Minors in physics and graduate programs are also available at many institutions. Within Canada, there are post-graduate certificate programs in Medical Physics offered a Dalhousie University, McGill University, University of Calgary- Tom Baker Cancer Centre, University of Victoria-Southwestern Medical Centre, and Western University. These certificates are typically CAMPEP-accredited graduate or residency programs intended for individuals with a doctoral degree in physics (or a related discipline) to meet the didactic requirements needed to enter a CAMPEP-accredited residency program. Therefore, the post-graduate Medical Physics certificate does not pose any competition to the proposed Honours certificate as it is intended for a different audience.

To the best of our knowledge an Honours Certificate in Physics does not exist in Ontario, thereby making the proposed certificate program unique in Ontario.

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.

To the best of our knowledge an Honours Certificate in Physics that is designed to create a pathway to graduate school, but also be available to undergraduate students to complete concurrently with their degree does not exist. Therefore, the proposed certificate program addresses a significant gap in curricula and will be an attractive option to students, particularly international students from commonwealth countries.

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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 and Department of Physics are committed to supporting this certificate. All courses within this certificate program are offered on a regular basis and have the capacity to accommodate the potential growth in enrollment. 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 Undergraduate Counselor and the Department Head will advise students interested in this certificate. The certificate is intended as a value-added opportunity and we believe this new program will attract students who specifically want to pursue a graduate degree in physics but who do not necessarily have hold a degree in physics or only have a three-year physics degree.

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.

This certificate program is comprised of pre-existing courses and therefore have appropriate faculty expertise. The faculty members who teach the common core required courses are listed in the table below. All optional courses are also pre-existing courses offered by existing faculty. Only the common required course faculty has been listed below. No instructor was listed for SCIE-3900. Undergraduate Research Experience as faculty members will vary considerably. Faculty members affiliations will not change.

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
Category 1: Tenured Professors teaching exclusively in the AAU offering the program			
Dr. Steven Rehse, Department Head & Professor		Physics	Physics
Dr. Chitra Rangan, Professor		Physics	Physics
Dr. Elena Maeva, Professor		Physics	Physics
Dr. Roman Maev, Professor		Physics	Physics

Category 2: Tenure-track Professors teaching exclusively in this AAU			
Dr. Thomas (TJ) Hammond, Assistant Professor		Physics	Physics
Dr. Jeffrey Rau, Assistant Professor		Physics	Physics
Dr. Dan Xiao, Assistant Professor		Physics	Physics
Category 3: Ancillary Academic Staff such as Learning Specialists Positions			
Ms. Michelle Bondy, AAS Learning Specialist		Dean's office, School of the Environment	Dean's office, School of the Environment
Category 4: Limited-term Appointments teaching exclusively in this AAU			
…			
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			
…			
Category 6: Sessionals and other non-tenure track faculty			
…			
Category 7: Others			
…			

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 and the Department of Physics are committed to supporting this certificate. The Faculty of Science and the Department of Physics offer all courses listed in the program and these courses are led by specialists in the area who have expertise in the subjects that are central to this program. Given that all courses are already listed within the current academic calendar, there are enough highly qualified faculty to support this proposed certificate program. These expert faculty have active research programs and publish in high quality peer-reviewed journals.

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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 offered within the current undergraduate academic calendar. As such, there is no anticipated additional reliance on adjunct, limited-term, or sessional faculty.

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. As such, there is already adequate resources available and commitment to sustaining the educational experience of undergraduate students. There are no anticipated new resources required to offer this certificate program.

• staff support- no change
• library- no change
• teaching and learning support- no change
• student support services- no change
• space- no change (students are not currently assigned office or study space, so an increase in enrolment does not effect space utilization
• equipment- no change (students will not be enrolled in classes with laboratory apparatus). No new equipment required.
• facilities- no change
• GA/TA- no change (GA/TA support is not now regularly provided to assist in the delivery of the lecture components of these upper year classes. It is not expected that the increase of enrollment will initially be so large as to require new/additional GA/TA support. GA/TA are used in the laboratory sections, but these additional students will not be enrolled in those lab sections.)

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 <u>other</u> 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. All courses within the program are offered within the Faculty of Science and Department of Physics so there are no anticipated reliance on existing resources from other campus units. It is anticipated that the

incoming certificate students will have all necessary prerequisite knowledge to enter immediately into the prescribed physics classes and will not require any additional courses from outside the Department.

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.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	N/A

Note: There are no anticipated additional personnel resources required outside of what is currently being used.

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.*

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

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.*

A candidate for the Honours Certificate in Physics shall hold a degree in:
(i)   Bachelor of Science (B.Sc) in Physics with a minimum CGPA of 65% or

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(ii)   A four-year Bachelor's degree in Chemistry, Electrical Engineering, Applied Mathematics or other fields related to Physics with a minimum CGPA of 65%.

The program can also be taken concurrently by third and fourth year students at the University of Windsor in Engineering and Science Fields.

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.

Students entering this certificate with a Bachelor of Science in Physics or a four-year Bachelor's degree in Chemistry, Electrical Engineering, Applied Mathematics will have sufficient background knowledge to complete the courses included in this certificate program and will be well prepared to meet the intended learning outcomes pending that they have completed prior course work in PHYS-2210 (modern physics or equivalent); PHYS-2500 (Mechanics or equivalent); MATH-2780 (vector calculus or equivalent); Math-2790 (differential equations or equivalent); MATH-3550 (special functions or equivalent). Any missing courses will need to be completed as pre-requisites.

For the third- and fourth-year students at the University of Windsor who choose to complete this certificate concurrently with their degree, proper completion of pre-requisite courses and sequencing of courses will ensure these students will be prepared for the successful attainment of the intended learning outcomes. The Academic Advisor within the Departments of Physics 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 Physics

Total courses: 8

Degree requirements:
- PHYS-3115. Atomic and Molecular Spectra
- PHYS-3200. Electromagnetic Theory
- PHYS-3500. Classical Mechanics
- One 3000 or 4000 level course in Science. It is recommended that students complete either PHYS-3900. Techniques in Experimental Physics I, PHYS-3600. Computational Physics, or PHYS-3610. The Mathematics of Physics.
- PHYS-4100. Quantum Mechanics I
- PHYS-3210. Electromagnetic Waves
- PHYS-4130. Introduction to Statistical Mechanics
- One of SCIE-3800, SCIE-3900, or SCIE-3990. Students intending to proceed to a graduate program in Physics are encouraged to take SCIE-3900, and work in a research group to acquire research skills.

Notes:
- Students without prior course work in PHYS-2210 (modern physics or equivalent); PHYS-2500 (Mechanics or

equivalent); MATH-2780 (vector calculus or equivalent); Math-2790 (differential equations or equivalent); MATH-3550 (special functions or equivalent) must complete these courses (or their equivalents) to allow enrolment in the required certificate courses named above as they are the necessary pre-requisites.

- To qualify for the certificate, students will be required to successfully complete all eight courses at the University of Windsor. No transfer credit will be considered for this certificate.
- No courses taken as part of the Honours Certificate in Physics can count towards a graduate degree.

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]***:**

Students must complete one experiential learning course as part of this certificate. Students can choose to complete an undergraduate research course (SCIE-3900), an internship (SCIE-3990), or service learning (SCIE-3800).

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

SCIE-3900 (Undergraduate Research Experience):
In SCIE 3900 students will participate in discipline specific research activities under the direction of a faculty member in the Faculty of Science. Students will gain experience in the methods, techniques and ethical conduct of research. Student will complete a research project which includes an oral presentation and submission of a written final report. Students will be assessed on the aforementioned components of their research and this course is graded 'Pass' or 'Fail'. This course will occur over one academic semester (12 weeks). (3.0 credits).

Internship (SCIE 3990):
Students will participate a 12-week work placement, complete bi-weekly assignments, and write a final internship report on their experience. This course is graded on a pass/fail basis where the pass level is set at 70%. To pass students must complete 108 hours (~9 hours/week over 12 weeks) at their placement, complete and submit the bi-weekly assignments and final internship report (detailed below), and receive a pass on their final evaluation from their employer. Students will earn three credits for competing this internship. Since there is no set class time, assignments are submitted via Blackboard. Specific details and weighting of the assignments can be seen in 'guidelines for experiential learning reports'.

Service Learning (SCIE 3800):
Participation in experiential learning with community partners to provide students direct experience with the subject matter they are studying in the curriculum. Students are given an opportunity to enhance their academic learning by engaging with community partners to analyze and address community needs and solve problems related to social issues and community needs. Students will also reflect on their service experiences, and personal growth. May be repeated 2 times for credit. Prerequisite: Approval from the Course Instructor and the Dean of Science (or designate). This course will be graded Pass or Fail (3 credits)

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

SCIE-3900 (Undergraduate Research Experience):
In SCIE 3900 students will participate in discipline specific research activities under the direction of a faculty member in the Faculty of Science. Students will gain experience in the methods, techniques and ethical conduct of research. Student will complete a research project which includes an oral presentation and submission of a written final report.

Internship (SCIE-3990):
As part of the course, students will submit the following documents to the course instructor. These documents are also considered assignments within the course:
1) Internship Learning Goals Document and Safety Checklist (worth 4%)
2) Mid-term Performance Appraisal (worth 15%)
3) Bi-Weekly Assignments (weekly time logs, along with a written reflection, the topic of which will be posted on Blackboard) (worth 4% each; 16% total)
4) Final Performance Appraisal (mid-term and final Employer Performance Appraisal) (worth 35%)
5) Final Reflective Report (meaningful and deep reflection on internship experience which will contain: job description, knowledge gained, skills learned, attitudes/values, learning outcomes) (worth 30%)

Service Learning (SCIE-3800):
As part of the course, students will submit the following documents to the course instructor. These documents are also considered assignments within the course:
1) 5 Short Bi-Weekly Assignments (5% each, 25% total): Submission of weekly time logs, along with a written reflection, topic to be provided by the instructor.
2) Mid-term Performance Evaluation (15%).
3) Final Performance Evaluation (30%).
4) Final Reflective Journal (30%)

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

SCIE-3900 (Undergraduate Research Experience):
Participation in discipline-specific research activities. This course will occur over one academic semester (12 weeks). As per the SCIE-3900 syllabus, the student total hours must be at least 96 to pass the course.   (3 credits)

Internship:
The internship (SCIE-3990) is a 12-week work placement, where students complete 108 hours (~9 hours/week over 12 weeks) at their placement. The internship will occur over one academic semester.

Service Learning (SCIE-3800):
The service learning placement is 12-weeks where students complete 96 hours (~8 hours/week over 12 weeks) at their placement. The internship will occur over one academic semester.

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

Students must complete one experiential learning course but may choose from a variety of options (undergraduate research, internship, or service learning). These are described above.

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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 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]*

N/A

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.*

A cumulative average of 65% is required for continuation in the program.

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.*

Students who achieve a cumulative average of 70% or higher will receive the Honours Physics Certificate.

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).*

Fall
- PHYS-3115. Atomic and Molecular Spectra
- PHYS-3200. Electromagnetic Theory
- PHYS-3500. Classical Mechanics

- One 3000 or 4000 level course in Science. It is recommended that students complete either PHYS-3900. Techniques in Experimental Physics I, PHYS-3600. Computational Physics, or PHYS-3610. The Mathematics of Physics.

Winter

- PHYS-4100. Quantum Mechanics I
- PHYS-3210. Electromagnetic Waves
- PHYS-4130. Introduction to Statistical Mechanics
- One of SCIE-3800, SCIE-3900, or SCIE-3990

Students without prior course work in PHYS-2210 (modern physics or equivalent); PHYS-2500 (Mechanics or equivalent); MATH-2780 (vector calculus or equivalent); Math-2790 (differential equations or equivalent); MATH-3550 (special functions or equivalent) must complete these courses (or their equivalents) to allow enrolment in the required certificate courses named above as they are the necessary pre-requisites.

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 <u>Characteristics of a University of Windsor Graduate"</u> 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.

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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A UWindsor graduate will have the ability to demonstrate:	COU-approved Undergraduate Degree Level Expectations
A. Integrate and utilize concepts and techniques learned in Physics (e.g., essentials of mechanics, electromagnetic theory, quantum mechanics, and statistical mechanics) to solve theoretical and applied problems (also relevant to D). Apply physical and mathematical principles to describe and explain phenomena in the fundamental and applied sciences.	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
B. Retrieve, review, and critically evaluate scientific literature (also relevant to C). Formulate mathematical models for physical problems (also relevant to D)	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
C. Apply mathematical and physical concepts and skills to solve theoretical and applied problems.	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
D. Utilize concepts and techniques to obtain quantitative solutions to complex problems in Physics (also relevant to C).	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge
E. Provide accurate analysis of solutions to theoretical and applied problems, including accurate descriptions and honest attributions of sources of information utilized in the solutions (also relevant to I). Use evidence-informed approaches when applying physics principles to solve theoretical and applied problems.	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Communicate effectively and professionally in both written, and oral formats to a wide range of audiences (also relevant to D).	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity

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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	Characteristics of a University of Windsor Graduate <u>A UWindsor graduate will have the ability to demonstrate:</u>	COU-approved Undergraduate Degree Level Expectations
G. Work constructively with others to solve applied problems.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Use multiple approaches to solve complex physical problems in applied settings (also relevant to I).	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
I. See above.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

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 the completion of this certificate, students will be equipped with the fundamental skills needed to pursue a graduate degree in physics. Students will graduate with extensive scientific understanding of mathematical and physics principles, including the ability to apply these principles to solve applied problems. The Department of Physics will ensure that program requirements are being met and students are achieving the learning outcomes.

Course specific assessments will be used to evaluate students' mastery of the program learning outcomes. These assessments may include, though are not limited to: examinations (e.g., tests, quizzes, and midterms), assignments, and lab exercises. The structure of the degree program is scaffolded to ensure students can meet the learning outcomes as well as progress from 'reinforcement' to 'mastery'. There will also be many opportunities for students to practice and reinforce these skills.

Within Appendix C is the curriculum map for this program. Given the admissions requirements of this certificate, students will enter the certificate at the 'reinforcement' level for the program learning outcomes as they will have some background knowledge in physics or similar subject areas. The certificate consists of upper year courses so they will provide additional opportunities to reinforce and master the certificate learning outcomes. The undergraduate research/service learning/internship will allow students to master the certificate learning outcomes.

Table 4. in 'Section D. Monitoring and Evaluation' includes a detailed breakdown of how course specific assessments align with the program learning outcomes.

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.*

The internship and service learning courses are intended to ensure students integrate learning from multiple on-campus opportunities in applied or community settings and that they master the certificate learning outcomes. This course will provide students with hands-on work experience where they can demonstrate connections between their academic learning, industry, and/or the community. Emphasis will be placed on students' capacity to analyze, solve problems, and reflecting on outcomes in real time. The undergraduate research course also provides experiential learning and will facilitate students' mastery of certificate learning outcomes. These courses allow students to apply scientific knowledge to theoretical and applied problems through hands-on laboratory-based learning.

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.*

Certificate 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, homework assignments, research projects, presentations, and written assignments.

SCIE-3900 is a 12-week undergraduate research course and there will be no formal class time; however, students will be required to complete a research project. Students will be responsible for devoting approximately 8 hours/week (total of 96 hours over 12 weeks) to their research project. This includes any essential training, laboratory (experimental, theoretical or computational) work, meetings with supervisor and research group, attendance at relevant seminars, presentations, and or written reports. 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 certificate learning outcomes.

Service learning (SCIE-3800) consists of a 12-week experiential learning opportunity with community partner(s) which will provide students with direct experience of the subject matter they are studying in other courses. Due to the experiential learning nature of this course, there is no set class time. Student will be responsible for devoting 8 hours per week (96 hours total over the course of the semester) to their service learning placement. This includes all placement-related duties, such as work in-person or virtually/remotely. Performance appraisals, assignments, and reflective reports will be used to facilitate the acquisition of specific skills, knowledge, and attitudes during the service learning placement. 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 certificate learning outcomes.

The Internship course (SCIE-3990) will consist of a 12-week workplace (~9 hours/week) and there will be no set class time. Students will be responsible for devoting 9 hours/week (total of 108 hours; 9 hours/week x 12 weeks) to their internship placement (six of these hours must be spent working at the placement, with their internship supervisor (or designate), or on placement related duties, and the remaining three hours can be spent on completing assignments, research, or preparations for the course and/or placement. Task and modes of delivery may vary depending on the location of placements. Performance appraisals, assignments, and reflective reports will be used to facilitate the acquisition of specific skills, knowledge, and attitudes during the internship. 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 certificate learning outcomes.

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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 *per week* the Student is Expected to Devote to Each Component Over the Course of the Program
Lectures	3
Tutorials	0-1
Practical experience	
Service or experiential learning	8-9
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: *[specify]*	
Compare the student workload for this program with other similar programs in the AAU: Some of the 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.

Planned assessment activities are intended to focus on achievement of knowledge and skills in physics. The assessments within the undergraduate research, service learning and internship give students an opportunity to apply this knowledge to real problems in laboratory, workplace, or community settings. This is consistent with the certificate learning outcomes. Assessments may take different forms, including though not limited to: examinations, laboratory reports, and/or assignments, research projects, written documents (e.g., research papers, literature reviews, reflective reports), presentations, and performance appraisals. Assignments may vary across courses as students have some flexibility in the courses they enroll in as part of the certificate program, particularly as this relates to their elective and the internship, or service learning, or research course. For an overview of assessment methods that may be used to evaluate students' achieving certificate learning outcomes please see Table 4: Alignment of assessments & learning outcomes.

The overarching goal of this certificate program is to provide a pathway for students who have an interest in pursuing physics graduate school to earn an Honours Certificate. It will provide students with core knowledge needed to be successful upon acceptance into a graduate program, if they choose to pursue this route and are accepted into the program. Given the admissions requirements of this certificate, students will enter the program at the 'reinforcement' level for the program learning outcomes as they will have some background knowledge in physics or similar subject areas. The certificate consists of upper-year courses so they will provide additional opportunities to reinforce and master the certificate learning outcomes. The undergraduate research/service learning/internship will allow students to master the certificate learning outcomes.

The Academic Advisor in the Department of Physics will be responsible for overseeing that certificate requirements are being met as well as how student process through the program.

For more information, please see the curriculum map in Appendix C.

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Table 4. Alignment of assessments & learning outcomes

Courses	Assessments*	Alignment with Learning Outcomes (LO)	Sequence
PHYS-3115. Atomic and Molecular Spectra	• Examinations • Graded homework	LO1-LO13	Semester 1
PHYS-3200. Electromagnetic Theory	• Examinations • Graded homework	LO1-LO13	Semester 1
PHYS-3500. Classical Mechanics	• Examinations • In class assignments • Assignments	LO1-LO13	Semester 1
PHYS-4100. Quantum Mechanics I	• Examinations • Quizzes • Graded homework	LO1-LO13	Semester 2
PHYS-3210. Electromagnetic Waves	• Examinations • Labs • Assignments	LO1-LO13	Semester 2
PHYS-4130. Introduction to Statistical Mechanics	• Examinations • Assignments	LO1-LO13	Semester 2
SCIE-3800. Service Learning	• Bi-weekly assignments, time logs, written reflections, final reflective report, performance appraisal	LO1, LO2, LO5, LO6, LO7, LO9, LO10, LO11, LO12,	Semester 2
SCIE-3990. Internship	• Bi-weekly assignments, time logs, written reflections, final reflective report, performance appraisal	LO1, LO2, LO5, LO6, LO7, LO9, LO10, LO11, LO12,	Semester 2
SCIE-3900. Undergraduate research	• Written reflection, oral presentation and written reports	LO1-LO13	Semester 2

*Note: This is not a comprehensive list of assessments as there may be additional assessments used within courses that test students' achievement of certificate LOs. Students have the option of completing one 3000 or 4000 level course in science which was not included given the range of courses available for students to select.

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 are intended to focus on achievement of knowledge and skills in physics. The undergraduate research, service learning or internship that students must take, and their corresponding assessments, will give students an opportunity to apply this knowledge to real problems. This is consistent with the certificate learning outcomes. Please see Appendix C for the curriculum map and Table 4 for how course assessments may align with certificate learning outcomes.

The key component to this certificate is the experience students will have with undergraduate research, service learning, or an internship (students select one of these options to complete for course credit). These courses provide experiential learning opportunities. Students who decide to complete undergraduate research (SCIE-3900) will gain experience in the methods, techniques and ethical conduct of research in the area of physics. Within SCIE-3900 students will complete an undergraduate research project which includes an oral presentation at an annual colloquium and submission of a written final report. Students who decide to complete an internship (SCIE-3990) will participate in a 12-week work placement at a relevant agency (e.g., any national lab, NRC, research hospitals, IDIR). Due to the experiential learning nature of this course, there is no set class time. Students will be responsible for devoting 9 hours/week (total of 108 hours; 9 hours/week x 12 weeks) to their

internship placement (six of these hours must be spent working at the placement, with their internship supervisor (or designate), or on placement related duties, and the remaining three hours can be spent on completing assignments, research, or preparations for the course and/or placement).

Within service learning (SCIE-3800) students will complete a 12-week placement with community partner(s) and be response for devoting 8 hours per week (96 hours total over the course of the semester) to their service learning placement. This includes all placement-related duties, such as work in-person or virtually/remotely. The internship and service learning courses provide opportunities for work-integrated learning where students will make connections between academic learning and on-the-job training in both industry and the community. This will allow them to further develop analytical and interpersonal skills along with an opportunity to practice skills needed in physics and build professional networks. As part of these courses, students will complete bi-weekly assignments (time logs, written reflections) and a final reflective report on their experience. This report will allow students to reflect on their experience in real time (e.g., projects/tasks completed, challenges, etc.), knowledge gained, and skills learned. Following the successful completion of the undergraduate research experience, service learning, or internship, students will have mastered all certificate learning outcomes.

As the program evolves, student success will be tracked through consultation, student feedback, and grade achievement data. The Academic Advisor in the Department of Physics will be responsible for monitoring student progression and responding to student questions regarding the certificate.

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.]

E.1 **Experiential Learning Component and Nature of Experience**

Describe the experiential learning component and the nature of the experience (field placement, required professional practice, service-learning, internship, etc.)

Students must complete one experiential learning course as part of this certificate. Students can choose to complete an undergraduate research course (SCIE-3900), service learning (SCIE-3800) or an internship (SCIE-3990).

Undergraduate Research (SCIE-3900):
Within SCIE-3900 students will complete an undergraduate research project which includes an oral presentation and submission of a written final report. Through these courses, students will participate in discipline specific research activities under the direction of a faculty member in the Faculty of Science. SCIE 3900 will occur over one academic semester (12 weeks).

Internship (SCIE-3990)
The internship course consists of a 12-week work placement within a related field (e.g., any national lab, NRC, research hospitals, IDIR). Students will complete a total of 108 hours at their placement (~9 hours/week for 12 weeks). Of the nine hours devoted to their placement, six of these hours must be spent working at the placement, with their internship supervisor (or designate), or on placement related duties, and the remaining three hours can be spent on completing assignments, research, or preparations for the course and/or placement.

Service Learning (SCIE-3800)
Service learning (SCIE-3800) consists of a 12-week experiential learning opportunity with community partner(s) which will provide students with direct experience of the subject matter they are studying in other courses. Due to the experiential learning nature of this course, there is no set class time. Student will be response for devoting 8 hours per week (96 hours total over the course of the semester) to their service learning placement. This includes all placement-related duties, such as work in-person or virtually/remotely.

Students completing this certificate will bring a range of skills to their research, service learning, or internship. This includes technical and scientific knowledge as well as interpersonal skills (e.g., teamwork, collaboration, etc.). Through completing the certificate courses, student will gain an in-depth understanding on topics related classical mechanics, quantum mechanics, atomic and molecular spectra, and electromagnetic waves. This foundational knowledge will ensure students are well equipped to complete the tasks assigned by their faculty or internship/community supervisor, or course instructor. Students will also gain hands-on experiences in many of the aforementioned topics through laboratories and in-class learning experiences associated with the certificate courses. These experiences will ensure students have adequate technical skills which they can apply to help solve physics-related problems. Many of certificate courses have research components, written assessments, oral assignments (e.g., research paper, presentation) and require students to work collaboratively. Therefore, students will develop skills related to communication, critical thinking, problem solving, and the ability to collaborate with others. These skills can be directly translated and used in any experiential learning course.

E.2 Knowledge and Skills Brought to the Workplace

Provide a description of the knowledge and skills that students will be bringing to the workplace/placement based on the curriculum.

Students completing the certificate will bring a range of skills to their research, service learning, or internship. This includes technical and scientific knowledge as well as interpersonal skills (e.g., teamwork, collaboration, etc.). Through completing the certificate courses, student will gain an in-depth understanding of building theoretical models of physical phenomena and problem-solving in physics topics (e.g., Electromagnetic Theory, Quantum Mechanics, etc.). This foundational knowledge will ensure students are well equipped to complete the tasks assigned by their faculty and internship supervisor, or course instructor. Students will also gain hands-on experiences in many of the aforementioned topics through laboratories associated with the certificate courses. These experiences will ensure students have adequate technical skills which they can apply to physics related tasks. Some of the certificate courses have research components, computer simulations, written assessments, oral assignments and require students to work collaboratively. Therefore, students will develop skills related to communication, critical thinking, problem solving, and the ability to collaborate with others. These skills can be directly translated and used in any experiential learning course.

E.3 Evidence of Availability of Placements

Provide evidence of the availability of an adequate number of positions of good quality both inside and outside the Windsor area (including names and contact information of potential employers, written statements or surveys from potential employers; and employer feedback concerning the hiring of graduates).

Provide a summary of the types of positions that would be suitable at each level of work-term.

How will these placements/opportunities be developed?

[NB: For co-op programs, the majority of Ontario placements should qualify for the Co-op Education tax credit. See Policy on Co-op Programs for more details.]

There are a number of faculty member within Science who supervise undergraduate research students. As such, there is a sufficient number of faculty available and willing to mentor and supervise students in SCIE 3900. This course will be encouraged for those interested in pursuing graduate school.

Service learning (SCIE-3800) and internship (SCIE-3990) are two possible opportunities for the experiential learning component of this certificate. As a result, the program will require a small number of internship placements each year (<3) and the Faculty of Science has an experiential learning specialist (Ms. Michelle Bondy) who will develop internship opportunities for students. Ms. Michelle Bondy will facilitate and coordinate the development of placements for students in physics-related field. This will include liaising with employers and industry representatives to coordinate placements. Previous co-op students have completed co-op semesters

which are similar to internship placements at Tessonics, Inc., TRIUMF, Windsor Regional Cancer Center, etc. As such, these represent possible organizations where students could complete internships in physics.

E.4 Mechanism for Supervision of Placements (QAF section 2.1.9)

Describe the mechanism that will be established for the supervision of experiential learning placements.

Students who complete undergraduate research will be supervised by a faculty member. The faculty member will determine the mechanism for supervision and will monitor student progress as they complete their research project. Students in field courses will be supervised by the course instructor who will assess student work and will monitor students' progression and attainment of course learning outcomes.

The internship and service learning course instructor will supervise students' progression through the course and attainment of course learning outcomes. Placement supervisors will be established and documented in the internship and service learning application form. Placement supervisors will complete a safety orientation checklist with students prior to commencing these placements. Students are required to create learning goals in collaboration with their placement supervisor. These will be documented as part of the course requirements. Weekly time logs will be maintained by the student and confirmed by the placement supervisor. There will be a mid-term and final performance appraisal completed by the supervisor and sent to the course instructor.

E.5 Fees Associated with Experiential Learning Component

Provide information on the fees associated with the experiential learning component, if applicable.

NB: all proposed fees must be approved as part of the University's operating budget, via the Ancillary Fee Committee.

Outside of standard tuition fees, there will be no additional fees associated with the experiential learning component of this certificate.

E.6 AAU Council Approval of New Co-op Component

Please obtain signatures for the following statement.

Before a determination can be made regarding the feasibility of a co-op program, there must be a clear indication of support for the program from the AAU. Support implies that the area will provide ongoing departmental funding to establish a co-op faculty representative who will liaise with the Centre for Career Education in the operation of the program and that the area will ensure that an adequate number of faculty members in the AAU or program contribute to the co-operative education program by grading work-term reports, attending and evaluating work-term presentations, assisting in the job development process, establishing a departmental co-op committee as appropriate, etc. (see Policy on Co-op Programs, Summary of AAU/Faculty Member Involvement in a Co-operative Education Program, for more on the role of the AAU and faculty members). This commitment must be agreed to by the AAU Council at a meeting at which the development or modification of a co-op program was considered and approved.

Signed agreement by the AAU Head, acting as chair of the AAU Council, that AAU members support the development of the co-op program.

Name of AAU Head (typed or e-signature):_____
[Approval of the program by the AAU Council shall constitute agreement and support by AAU members of the development of the co-op program.]

Name of Director of the Co-op Services (typed or e-signature):_____
[Approval of the program by the Director of Co-op Services shall constitute agreement and support of the development of the co-op program.]

PROGRAM DEVELOPMENT COMMITTEE
PROPOSAL BRIEF FOR NEW PROGRAMS
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E.7 Guidelines for the Establishment of New Co-op Programs: CHECKLIST

Final Overview:
Please complete this checklist to ensure that the Senate-approved guidelines for the establishment of a new co-op program have been addressed.

Does the proposal:

□   include the endorsement of/involvement by the Centre for Career Education?
□   adequately describe the academic program?
□   include a strong rationale for co-operative education?
□   list the types of positions suitable to students at the junior, intermediate and senior work-term?
□   articulate the possibility for international placements at a later point?
□   provide for a reasonable proportion of international students to obtain appropriate placement opportunities?
□   include a plan to monitor the availability of work placements on an ongoing basis?
□   articulate specific learning outcomes (degree level expectations) and co-op requirements?
□   include a commitment by the department to adequately support the program by funding a co-op faculty representative?:
□   include a commitment by the department to adequately support the program by ensuring that an adequate number of faculty members are willing to grade work term assignments, assist in the job development process, etc.?

Will the program:

□   attract a sufficient number of students including students from outside of the Windsor-Essex region (a minimum annual intake of 20 students enrolled in the co-op component)?
□   be able to attract and sustain an adequate number of positions of good quality both inside and outside of the Windsor-Essex region?
□   provide year-round availability of students to the workplace in some manner?
□   meet the requirements for accreditation by the Canadian Association of Co-operative Education (see guidelines)?

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APPENDIX A

FACULTY CURRICULA VITAE
(not required for undergraduate diploma or certificate proposals)

[Append curricula vitae of all faculty members in the AAU offering the program as well as from faculty members from other AAUs who are core to the delivery of the program. Faculty CVs should be in a standardized format - contact the Quality Assurance office for instructions about how to obtain properly formatted CVs from the UWindsor eCV system. Other standardized formats are acceptable as well, such as that used by one of the Tri-Councils]

N/A

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APPENDIX B – BUDGET SUMMARY SHEET

Projections of Enrolment, Expenditures and Revenues (enrolments over 5 years)						
Year	1	2	3	4	5	Total
Revenue						
Tuition income*	$17,916	$82,436	$150,815	$285,147	$363,723	$900,037
Potential Provincial funding**	$17,916	$18,185	$18,458	$12,490	$12,677	$79,725
Other sources of funding *(please list)*						
Total Revenue	**$35,832**	**$100,621**	**$169,273**	**$297,636**	**$376,400**	**$979,762**
Expenses						
Additional Faculty member						
Additional Staff/Technician						
GA/TA***						
External Examiners *(for graduate programs)*						
Library Resources						
New Facilities/Equipment						
Facilities/Equipment Maintenance						
Technology/CTL resources						
Other expenses *(please list)*						
International Student Agent Fees****	$0	$4,000	$8,000	$16,000	$20,000	$48,000
International Student Tax*****	$0	$1,700	$3,400	$6,800	$8,500	$20,400
Total Expenses	$0	$5,700	$11,400	$22,800	$28,500	**$68,400**
Net Income	$35,832	$94,921	$157,873	$274,836	$347,900	**$911,362**

* 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..

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

***NA

**** $2,000 per international student

***** $850 per international student

Appendix C - Curriculum Map

Courses to Program Outcomes: Honours Certificate in Physics (all courses)

Course	A D PLO 1	A PLO 2	B C PLO 3	B D PLO 4	C PLO 5	D PLO 6	D C PLO 7	E I PLO 8	E PLO 9	F D PLO 10	G PLO 11	H I PLO 12	I PLO 13
PHYS-3115	R	R	R	R	R	R	R	R	R	R	R	R	R
PHYS-3200	R	R	R	R	R	R	R	R	R	R	R	R	R
PHYS-3210	R	R	R	R	R	R	R	R	R	R	R	R	R
PHYS-3500	R	R	R	R	R	R	R	R	R	R	M	R	M
PHYS-4100	M	M	M	M	M	M	M	M	M	M	M	M	M
PHYS-4130	M	M	M	M	M	M	M	M	M	M	R	M	M
SCIE-3800	M	M			M	M	M		M	M	M	M	
SCIE-3900	M	M	M	M	M	M	M	M	M	M	M	M	M
SCIE-3990	M	M			M	M	M		M	M	M	M	

Legends

Courses

PHYS-3115	Atomic and Molecular Spectra
PHYS-3200	Electromagnetic Theory
PHYS-3210	Electromagnetic Waves
PHYS-3500	Classical Mechanics
PHYS-4100	Quantum Mechanics I
PHYS-4130	Introduction to Statistical Mechanics
SCIE-3800	Service Learning
SCIE-3900	Undergraduate Research Experience
SCIE-3990	Internship

Program Learning Outcomes (PLOs)

PLO 1   Integrate and utilize concepts and techniques learned in Physics (e.g., essentials of mechanics, electromagnetic theory, quantum mechanics, and statistical mechanics) to solve theoretical and applied problems (also relevant to D).

PLO 2   Apply physical and mathematical principles to describe and explain phenomena in the fundamental and applied sciences.

PLO 3   Retrieve, review, and critically evaluate scientific literature (also relevant to C).

PLO 4   Formulate mathematical models for physical problems (also relevant to D)

PLO 5   Apply mathematical and physical concepts and skills to solve theoretical and applied problems.

PLO 6   Formulate mathematical models for physical problems.

PLO 7   Utilize concepts and techniques to obtain quantitative solutions to complex problems in Physics (also relevant to C).

PLO 8   Provide accurate analysis of solutions to theoretical and applied problems, including accurate descriptions and honest attributions of sources of information utilized in the solutions (also relevant to I).

PLO 9   Use evidence-informed approaches when applying physics principles to solve theoretical and applied problems.

PLO 10   Communicate effectively and professionally in both written, and oral formats to a wide range of audiences (also relevant to D).

PLO 11   Work constructively with others to solve applied problems.

*Note: Based on the entrance requirements associated with this certificate, participants will begin this certificate at the reinforcement level of the certificate learning outcomes. Student have the option of completing one 3000 or 4000 level course in Science which was not included in the curriculum map given the range of courses available for students to select.

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Appendix D – References

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Physicists and Astronomers, on the Internet at https://www.bls.gov/ooh/life-physical-and-social-science/physicists-and-astronomers.htm

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University of Windsor
Program Development Committee

5.3:   **Interdisciplinary Health Science – Major Program Change (Form B)**

Item for: **Approval**

MOTION: **That the Interdisciplinary Health Science Stream be approved for the Honours Biomedical Science, Honours Biology and Honours Psychology, as outlined in the program/course changes forms. ^**

^Subject to approval of the expenditures required.

Rationale/Approvals:
▪ This major program change has been approved by the Faculty of Arts Humanities and Social Sciences Coordinating Council, the Science Program Development Committee (SPDC) as delegated by the Faculty of Science Coordinating Council and the Provost.
▪ *See attached.*

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MAJOR PROGRAM CHANGES
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A. Basic Program Information

Faculty(ies)	Science FAHSS
Department(s)/School(s)	Biomedical Sciences Psychology Integrative Biology
Name of Program as it Will Appear on the Diploma (*e.g.*, Bachelor of Arts Honours Psychology with thesis)	Honours Biomedical Science - Interdisciplinary Health Science Stream Honours Psychology - Interdisciplinary Health Science Stream Honours Biological Sciences - Interdisciplinary Health Science Stream
Proposed Year of Offering* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Fall 2022
Mode of Delivery:	Face-to-face
Planned steady-state Student Enrolment (per section B.4.2)	100+
Normal Duration for Completion:	4-years
Will the program run on a cost-recovery basis?	No

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)*

Health science is an interdisciplinary field that encompasses many facets of health across the lifespan. Health Science degree programs vary considerably in their focus - from public health to environmental health; therefore, students with education and training in the health sciences are well-prepared for a plethora of careers ranging from health promotion specialists, data analysts, health policy analysts, and health care administrators, and are well-positioned for professional degrees and graduate programs. As such, several Departments/Schools at the University of Windsor are proposing **new streams** in existing degree programs, in **Interdisciplinary Health Sciences (IHS)** that will support the need for trained individuals with knowledge of heath, wellness, and illness from multiple perspectives (e.g., biological, behavioural, social, environmental). Given the growth of the health sector in general, these new program streams will help connect students to a wide range of careers and research possibilities by providing them with an interdisciplinary perspective (see B.4 Demand for the Modified Program for information on labour market trends). The addition of these IHS streams will address a gap in curricula at the University of Windsor as health science is often an area of study prospective undergraduate students request at open house events yet there are currently no programs operating under a 'health science' label despite existing programs already offering training in this area. Providing specific and targeted curricula under the umbrella of health science will attract new students and help the University of Windsor to be competitive with other institutions offering health science programs. The proposed IHS

streams also offers an opportunity for authentic interdisciplinary learning which is known to help students develop skillsets that are attractive to employers (Stryon, 2013).

To help address the curricular need and the growing interest among students in the field of health sciences, the Departments/Schools of: 1) Biomedical Sciences; 2) Psychology; and 3) Integrative Biology are **each** proposing the creation of **new streams** within their respective degree programs:

- Honours Biomedical Science - Interdisciplinary Health Science Stream
- Honours Psychology - Interdisciplinary Health Science Stream
- Honours Biological Sciences - Interdisciplinary Health Science Stream

Students within these streams will have the unique opportunity to select and complete an interdisciplinary health science concentration **in conjunction with** completing their declared major. These concentrations will consist of 11 courses: **three 'core' interdisciplinary courses** (i.e., a foundation, cornerstone, and capstone) that will be completed by *all* students in *any* IHS stream to ensure authentic and integrative learning as well as to offer a cohort learning experience among students from different departments. The remaining eight courses will relate to the **concentration subject area** that are designed to provide students with background in another area that is directly relevant to the healthcare sector (e.g., Economics, Indigenous Studies). The 'core' interdisciplinary courses will be designed to tie together what the student is learning in their health-related major (Biomedical, Biology and Psychology) and in their concentration to ensure that they develop a unique and interdisciplinary perspective of the health sciences that they would not otherwise get through their major alone. Essentially, the design of the Interdisciplinary Health Sciences (IHS) program is to guide students in their selection of (health-relevant) electives and ensure that there is meaningful integration between the concentration and the major, as well as other students in the program pursuing different concentrations.

Structuring the **Interdisciplinary Health Sciences (IHS)** program on streams of existing majors and concentrations, creates a 'plug and play' model that allows other health-related programs to develop their own streams in the future or to create unique concentrations that are relevant to healthcare. The initial proposal is starting with streams in the Departments of Biomedical Sciences, Integrative Biology and Psychology, but other departments are programs are welcome to create new streams in the future.

The first concentrations being proposed are:

- Healthcare Economics
- Health and Aging
- Health and Society
- Indigenous Health
- Healthy Spaces and Places
- Medical Humanities
- One Health
- Biostatistics

The selection of the concentration areas and curriculum within each area were intentionally designed to leverage existing areas of strength and expertise at the University of Windsor, to foster Departmental/School collaborations, to provide flexibility to students, and to facilitate sought-after interdisciplinary learning. These concentration areas will recognize the diversity in approaches in the field of health science and represent unique areas of focus that are less common at other institutions. As noted, the 'plug-and-play' approach to this new program allows other departments to develop new concentrations or suggest courses to the existing concentrations. For example, we are planning to introduce a Healthcare Informatics concentration through Computer Science in Fall 2022.

Please see the learning outcome tables for a detailed description of the knowledge, skills, and abilities students will have gained upon successful completion of these concentrations and Section C. Program Details for information on

degree requirements. Curriculum mapping will be initiated in Fall 2022 by the Interdisciplinary Health Sciences faculty member that will be hired to support the new program.

Consistency with Institutional Goals:

Given the diversity in Departments/Schools proposing streams in IHS, this curricular initiative aligns with a considerable number of program areas of strength and expansion. Furthermore, the IHS concentrations span the field of health science from multiple perspectives, (e.g., biological, behavioural, social, environmental) further supporting institutional goals. Most directly, these streams and concentrations align with "Health and Wellness" which is both an area of strength (#6) and expansion (#1). More tangentially, select streams and concentrations also align with "Environmental and Ecosystem Adaption", and "Humanities" (#5 and #7 within program areas of strength). Beyond these strategic areas, these curricular changes support institutional initiatives focusing on academic program innovation by fostering inter-departmental/school collaborations, high-impact practices through the inclusion of a capstone course, and innovations in teaching and learning excellence.

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.*

The Departments/Schools of: 1) Biomedical Sciences; 2) Psychology; and 3) Integrative Biology are **each** proposing the creation of **new streams** within their respective degree programs:

- Honours Biomedical Sciences - Interdisciplinary Health Science Stream
- Honours Psychology - Interdisciplinary Health Science Stream
- Honours Biological Sciences - Interdisciplinary Health Science Stream

Students within these streams will have the unique opportunity to select and complete an interdisciplinary health science concentration in one of the following areas, along with common core IHS courses: 1) Foundations in Interdisciplinary Health Sciences (foundation course); 2) Health Promotion and Translation (cornerstone); 3) Capstone Project.

Concentration areas are:
- Healthcare Economics
- Health and Aging
- Health and Society
- Indigenous Health
- Healthy Spaces and Places
- Medical Humanities
- One Health
- Biostatistics

The Higher Education Strategy Associates (HESA) conducted a scan of interdisciplinary health sciences programs and identified several concentrations and specializations that exist at other institutions (see Appendix E for their report). These concentrations and specializations include, though are not limited to: environment and health, health throughout the lifespan, child health, population and public health, health and aging, health promotion etc. The information garnered from this report, along with a review of existing courses at the University of Windsor was used to inform the selection of the proposed concentrations. The concentrations were carefully selected to leverage existing areas of strength and expertise at the University of Windsor across campus, to be consistent with the state of the discipline of health sciences, but also to offer a unique, or in some cases, less common area of focus (compared to other institutions) in health sciences.

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

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

Program delivery:
This program is unique, in part, due to its proximity to multiple health-related organizations including, WeSpark, Windsor Essex County Health Unit, Windsor Essex Community Health Centre etc. The relationships that exist between the Departments/Schools at the University of Windsor and these organizations may provide students with critical networking opportunities. The design of IHS program, consisting of multiple streams in existing programs provides students with a unique opportunity to select and complete an interdisciplinary health science concentration **in conjunction with** completing their declared major. This approach is novel, as most Canadian health sciences programs admit students into a central program and then have them specialize in later years (see HESA report in Appendix E).

Curriculum: The curriculum within this program was intentionally designed to offer students an authentic interdisciplinary learning experience. Research suggests that most interdisciplinary programs in Canada are not truly interdisciplinary; rather these programs often require students to complete courses from different (siloed) disciplines rather than experiencing the integration of these disciplines (Gillis et al., 2017). With this design, the responsibility is on students to draw connections, but there is no guarantee that this may happen. Within the proposed program, students will complete **three core IHS courses that are intentionally designed to facilitate interdisciplinary learning**, understand overlap in disciplines, and ensure a cohort learning experience where students in any IHS stream are able to connect and learn from one another. The Medical Humanities concentration is also novel and an emerging area that may attract students who do not see themselves as traditional science students. Furthermore, there is also a stream on Indigenous Health which addresses a large gap in curricula as there are currently only a few institutions offering Indigenous health science concentrations and specializations in Ontario.

Gillis, D., Nelson, J., Driscoll, B., Hodgins, K., Fraser, E., & Jacobs, S. (2017). Interdisciplinary and transdisciplinary research and education in Canada: A review and suggested framework. Collected Essays on Learning and Teaching, 10, 203-222. Doi: 10.22329/celt.v10i0.4745

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

The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967).

In revising this program, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?

Please consider these prompt questions and additional Resources including disciplinary examples:
- *What process has your department/Faculty used to consider Indigenization?*
- *How have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*

- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which <u>literatures</u>, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?*

The IHS program includes a concentration in Indigenous Health and the courses in this concentration will include content related to this topic. The learning outcomes for this concentration were created in consultation with the program coordinator- Indigenous Curriculum and Pedagogy Initiatives. The Faculty of Science is also investing in an Indigenous Knowledge Keeper who will help to incorporate Indigenous content, perspectives, and materials into concentration and across the 'core' courses including Indigenous conceptions of health and illness, Indigenous medicine, and ways of redressing inequity. This new faculty position is a recognition that Indigenous knowledge is not ours to claim or to own, and that Indigenous knowledge is alive, and it needs to be an Indigenous member that holds this knowledge on behalf of Faculties.

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 streams is, Interdisciplinary Health Sciences**.** This name recognizes both the subject area of study and interdisciplinary design of the concentrations. Therefore, the name is representative of the stream content and current usage in the field. There are no changes to the degree major name.

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. 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.).

A multifaceted approach relying on primary and secondary data sources was used to conduct the market assessment for the proposed new streams. This permitted triangulation of data sources and the conclusion that there is evidence of student and market demand for the new program streams in IHS.

Primary data on student demand and interest for the program was collected through surveys. Specifically, prospective undergraduate students were surveyed about their interests in a health sciences program. To expand our sample and enhance the generalizability of our results, we also surveyed current students enrolled in the Faculty of Science at the University of Windsor about their interests in health sciences. Select applicant data for health science and related programs was also included as part of the HESA report and is summarized below (see the HESA report for more details). Lastly, employment data was gathered from Canadian and American labour market sources.

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Student Survey

98 prospective undergraduate students completed our survey which contained questions about a range of new science programming (beyond just health sciences). Students who expressed initial interest in health sciences were prompted with the following question: "If a new undergraduate program in Health Sciences were to be offered, would you be interested in applying to this program?" 30 future undergraduate students responded, 'definitely yes' and 36 future undergraduate students responded 'probably yes'. Therefore, 66 of 98 (~67%) prospective undergraduate students indicating they would 'definitely' or 'probably' be interested in health sciences are promising figures. To gain a more in-depth understanding of student interest, we conducted a second survey with current undergraduate students in the Faculty of Science at the University of Windsor. Of the 201 responses, 91 students expressed interest in health sciences which prompted two follow-up questions. When asked "Would you have been interested in completing a degree in Health Sciences instead of your current degree?" 22 of 91 students responded, 'definitely yes' and 46 of 91 students responded 'probably yes'.

Enrollment Data

Most Canadian institutions do not readily share enrollment data; however, four programs provide useful enrollment or graduation data (see Table 1). These data showcase consistent growth in health science graduates over the 2010s. Growth in enrollment in these programs is consistent suggesting student interest is relatively strong and predicable.

Table 1: Growth in Enrollment/Graduates, by Available Programs

Institution	Change in Enrollment/ Graduates	Timespan of Data
Manitoba	120%	2016-2019
McMaster	120%	2014-2018
Ottawa	128%	2010-2019
Simon Fraser	123%	2012-2019

Labour Market

Health science is an interdisciplinary field that encompasses health from a variety of lenses (e.g., social, political, economic, environmental). The design of the proposed IHS program ensures students gain specialized skills in an IHS concentration as well as their declared major. This unique design equips students with a diversity of knowledge, skills, and abilities and will prepare them for a variety of career opportunities as well as postgraduate programs. Given the range of career prospects for students graduating from one of the proposed streams, in addition to the various concentrations available, the purpose of this labour market is to highlight select career opportunities; however, this is not a comprehensive list. Within Ontario, labour market information and statistics suggests that there are employment opportunities in many occupations related to health sciences (Ministry of Labour, Training and Skills Development, n.d.; see Table 2). Many of these positions require a bachelor's degree and have a stable job outlook.

Table 2. Ontario Employment statistics

Job profile	Median income	Projected number of job openings (2017-2021)	Job outlook (2017-2021)^	Annual Number of job postings
Biologist and related scientists	$74,703	2,001-3,000	Above average	803
Database analysts and data administrators	$83,370	3,001-4000	Above average	3,034 (2019)
Biological technologists and technicians	$61,533	801-900	Average	141

Inspectors in public and environmental health and occupational health and safety	$78,208	4,001-5,000	Above average	1,385 (2019)
Social policy researchers, consultants and program officers	$74,861	3,001-4000	Average	113 (2019)
Economists and economic policy researchers and analysts	$88,421	1,001-2,000	Average	1076
Health policy researchers, consultants and program officers	$72,767	4,001-5,000	Undetermined	557 (2019)
Natural and applied science policy researchers, consultants and program officers	$85,673	1,001-2,000	Undetermined	86 (2019)
Recreation, sports and fitness policy researchers, consultants and program officers	$59,255	301-400	Undetermined	0
Health information management occupations	$59,859	301-400	Undetermined	694 (2019)
Government managers - health and social policy development and program administration	$110,789	701-800	Undetermined	0
Senior managers - health, education, social and community services and membership organizations	$101,717	901-1,000	Undetermined	0

Note: These data were gathered from the Ministry of Training, Colleges and Universities Ontario's labour market website for the aforementioned job profiles; Job posting data on this site is extracted by Burning Glass Technologies, Labour Insight™.

^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.

Biologist and related scientists:
https://www.iaccess.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=2121

Database analysts and data administrators:
https://www.services.labour.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=2172

Biological technologists and technicians:
https://www.services.labour.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=2221

Senior managers - health, education, social and community services and membership organizations:
https://www.services.labour.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=0014

Government managers - health and social policy development and program administration:
https://www.services.labour.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=0411

Health information management occupations:
https://www.services.labour.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=1252

Inspectors in public and environmental health and occupational health and safety:
https://www.services.labour.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=2263

Health policy researchers, consultants and program officers:
https://www.services.labour.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=4165

Natural and applied science policy researchers, consultants and program officers:
https://www.services.labour.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=4161

Social policy researchers, consultants and program officers:
https://www.services.labour.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=4164

Economists and economic policy researchers and analysts:
https://www.services.labour.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=4162

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Recreation, sports and fitness policy researchers, consultants and program officers:
https://www.services.labour.gov.on.ca/labourmarket/jobProfile/jobProfileFullView.xhtml?nocCode=4167

In summary, the curriculum included in the proposed IHS streams and concentrations aligns with the discipline and addresses gaps in programming at the University of Windsor. Furthermore, there is strong interest among students for this area of study. Based on available enrollment data from select institutions, enrollment in health science programs appears to be stable and the risk associated with offering these HIS streams and concentrations is minimal given the scant resource requests. Based upon the review of market demand and student interest, we believe there is sufficient evidence for the creation of the IHS streams.

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 program are likely to be similar to those enrolled in any of the existing degree programs included in this proposal. That is, we expect almost all of the students to be non-visa students.

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.

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.)	First Year of Operation	Second Year of Operation	Third Year of Operation	Fourth Year of Operation	Fifth Year of Operation (Steady-state enrolment overall)
In the regular program (non-co-op)	25	50	75	100	100
In the co-op/experiential learning stream (if applicable)					
For co-op options: projected number of international students enrolled in the co-op stream					

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)	
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)	

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

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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*   *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.*

Health sciences is an interdisciplinary field that covers heath, wellness, and illness from multiple perspectives (e.g., biological, behavioural, social, environmental). While health sciences may be a relatively new academic discipline, it has grown in popularity as illustrated by increases in student enrollment. The criticality of this field, particularly as it relates to public health, population health, and epidemiology, has never been more important as society navigates the Covid 19 pandemic. The knowledge gained through a health science specialty not only contributes to a globally conscious citizens, but also the training of future professionals who will be at the forefront of addressing novel public health issues. While there is no empirical evidence gathered at this time, it is expected that there will be a growth in interest in health science among youth given the prominent position of Covid 19 in the public discourse. These events have highlighted the importance of understanding public health issues, data predictions, and the ability to communicate health recommendations with the public.

As detailed in the Labour Market analysis section above (B.4.1), there are several professions available for graduates who earn their degree and combine it with a health science concentration. Furthermore, there is strong evidence of student interest in health sciences demonstrating the need for the University of Windsor to develop programing to retain these students who may otherwise choose to enroll at another institution that offers a degree in health science.

Beyond the labour market and student interest trends, there has also been a rapid growth in interdisciplinary programs, in part, because of calls to minimize disciplinary boundaries (e.g., Gillis et al. 2017; Holley, 2009) and an increase in research funding allocated to interdisciplinary work. Within Canada Gillis et al.'s notes that often interdisciplinary university programs are not truly interdisciplinary, rather, they consist of students completing courses from different (soiled) disciplines. As such, the proposed IHS program has been designed to include three core courses that emphasize the integration of the various perspectives on health sciences to facilitate a truly interdisciplinary experience for students. This interdisciplinary environment has the potential to help students develop a skillset (e.g., critical thinking, communication) that is attractive to 21st century employers (Stryon, 2013) and contribute to solving multifaceted problems presented in society today (Manathunga, Lant, & Mellick, 2006; Gillis et al., 2017).

The IHS steams and concentrations can be offered with few additional resources; therefore, the benefits of this program far outweigh any potential cost and will contribute to societies need for individuals skilled in areas of health science.

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Gillis, D., Nelson, J., Driscoll, B., Hodgins, K., Fraser, E., & Jacobs, S. (2017). Interdisciplinary and transdisciplinary research and education in Canada: A review and suggested framework. Collected Essays on Learning and Teaching, 10, 203-222. Doi: 10.22329/celt.v10i0.4745

Holley, K. (2009). Special Issue: Understanding Interdisciplinary challenges and opportunities in higher education. ASHE Higher Education report, 35(2), 1-131.

Manathunga, C., Lant, P., & Mellick, G. (2006). Imagining an interdisciplinary doctoral pedagogy. Teaching in Higher Education, 11(3), 365-379.

Styron, R. (2013). Interdisciplinary education: a reflection of the real world. Systemics, Cybernetics and Informatics, 11(9), 47–52.

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 https://www.ontariouniversitiesinfo.ca/programs and https://www.universitystudy.ca/search-programs/. Also, list similar programs in the geographically contiguous area, e.g., Michigan/Detroit.*

Canadian Institutions offering health science programs are noted below in bullet points. Table 3 includes an overview of health science specializations and concentrations scanned as part pf the HESA report (programs that do not include specializations are not included). Please see the HESA report in Appendix E for more information on these programs, areas of specializations/concentrations.

- Laurentian University-Health Promotion: https://laurentian.ca/program/health-promotion/details
- Ontario Tech University- Health Sciences: https://ontariotechu.ca/programs/health-sciences/health-science.php
- Queen's University- Health Sciences: https://bhsc.queensu.ca/
  Wilfrid Laurier University- Health Sciences: https://wlu.ca/programs/science/undergraduate/health-sciences-bsc/index.html?utm_source=2020%20recruitment&utm_medium=einfo&utm_campaign=program%20information
  University of Waterloo- Health Studies: https://uwaterloo.ca/future-students/programs/health-studies?utm_source=mur-einfo&utm_medium=referral&utm_campaign=mur-ouac

Note: Other Health Sciences programs available in Canada are noted in the table below along with their respective specializations.

University	Specialization Offered
Calgary	Students select an "area of concentration" made from courses in Anthropology, Community Rehabilitation and Disability Studies, Economics, Psychology, Geography, Sociology, or Political Science
Carleton	Biomedical Science; Disability and Chronic Illness; Environment and Health; Global Health; Health Throughout Lifespan.
Manitoba	Health Policy, Planning and Evaluation; Health Promotion and Education; Family Health
McMaster	Biomedical Sciences; Child Health; Global Health
New Brunswick	Society and Health; Management and Health; Biomedical Sciences and Health

Northern British Columbia	Aboriginal Health; Environmental Health.
Ottawa	Integrative Health Biosciences; Population and Public Health; Technologies and Innovation in Health Care.
Simon Fraser	Life Sciences; Population and Quantitative Health Sciences.
Toronto (Scarborough)	Health Policy; Population; Co-op BSc and BA option.
Western	Health Sciences; Health and Aging; Health Promotion; Health with Biology Specialization.

Source: HESA report.

The IHS concentrations in this proposal were carefully selected to be consistent with the state of the discipline of health sciences, yet also offer a unique perspective on the area of study.

Despite any similarities that may exist with other health science programs, it is important for the University of Windsor to expand programming to attract prospective students who may otherwise choose to attend other institutions that offer a degree in health science.

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.

The proposed program is like other institutional programming; however, we believe our program will be attractive to students for the following reasons (for more information please see section B.2.1):
- Proximity and relations with multiple health-related organizations (e.g., WeSpark)
- The 'stream' program design is novel in Canada and allows students to specialize in an area right away
- Authentic interdisciplinary design
- Inclusion of Medical Humanities and Indigenous Health concentrations
- Special features of the city (i.e., inexpensive housing, easy access to train/car/plane transportation, next to international border; neighbour city of metropolitan Detroit).

As reported in B.4.1 and B.4.4, we anticipate student interest to be high for this program based on survey responses from current and prospective students and the stable program growth in other health science programs. Lastly, labour data illustrates that there continues to be a growing need for trained individuals in health science. Therefore, we believe there is societal need for this program. Beyond this need, the Department/Schools at the University of Windsor can offer these program streams with few additional resources; therefore, the benefits of offering the IHS streams and concentrations far outweigh any potential cost and will contribute to recruitment efforts.

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.

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The Departments/School of Biomedical Sciences, Psychology, and Integrative Biology are actively committed to supporting the creation of the new IHS program streams as are the other Departments/Schools who offer courses included in any of the concentrations. The Dean of Science has been in contact and received approval from all departments contributing courses to this program. All the courses within the proposed concentrations are currently being offered on a regular basis so there is active commitment to support the IHS program streams.

The three new 'core' courses (i.e., foundation, cornerstone, and capstone courses) will be taught by a **newly requested** AAS position who will also be responsible for coordinating and advising students in the various streams. There may also be an increase in the number of GAs/TAs to each of the courses in each concentration; however, this will correspond with increases in enrollment. The cost of any additional GAs/TAs are covered under the new budget model through direct tuition to the student's home Faculty and through service teaching payments between departments.

Administrative tracking will be provided within the UWinsite Student system. Academic advising will occur within each Department/School offering a stream in conjunction with the new AAS responsible for coordinating the program. These individuals will also advise students on matters related to appropriate sequencing and course selection.

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

Complete the following table listing all faculty members in the AAU that will offer 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: Only faculty who typically teach courses included in any of the program streams are included in the table below. Their program affiliations remain the same.

FAHSS

First Name	Last Name	Rnk	Categ.	AAU	First Name	Last Name	Rnk	Categ.	AAU
Tina	Pugliese	2	T	Drama	Catherine	Kwantes	1	T	Psychology
Lionel	Walsh	2	T	Drama	Kathryn	Lafreniere	1	T	Psychology
Michael	Keating	2	T	Drama	Rosanne	Menna	1	T	Psychology
Esther	Van Eek	2	T	Drama	Carlin	Miller	1	T	Psychology
Michelle	MacArthur	3	TT	Drama	Antonio	Pascual-Leone	1	T	Psychology
Alice	Nelson	3	TT	Drama	Jill	Singleton-Jackson	1	T	Psychology
Meaghen	Quinn	3	TT	Drama	Charlene	Senn	1	T	Psychology
David	Court	2-6	P	Drama	Renee	Biss	3	TT	Psychology
Phebe	Lam	2-6	P	Drama	Michael	Boroughs	3	TT	Psychology
					Chantal	Boucher	3	TT	Psychology
Louis	Cabri		T	E& CW	Onawa	LaBelle	3	TT	Psychology
Carol	Davison		T	E& CW	Jessica	Kichler	2	TT	Psychology
Thomas	Dilworth		T	E& CW	Dana	Menard	2	TT	Psychology
Richard	Douglass Chin		T	E& CW	Lance	Rappaport	2	TT	Psychology
Johanna	Frank		T	E& CW	Kristoffer	Romero	2	TT	Psychology
Susan	Holbrook		T	E& CW	Kendall	Soucie	2	TT	Psychology
Dale	Jacobs		T	E& CW					
Mark	Johnston		T	E& CW	Robert	Arnold	2	T	SAC
Joanna	Luft		T	E& CW	Tanya	Basok	1	T	SAC
Nicole	Markotic		T	E& CW	Gerald	Cradock	2	T	SAC
Suzanne	Matheson		T	E& CW	Ronjon	Paul	2	T	SAC
Sandra	Muse		TT	E& CW	Natalie	Deckard	3	T	SAC
Stephen	Pender		T	E& CW	John	Deukmedjian	2	T	SAC
Katherine	Quinsey		T	E& CW	Amy	Fitzgerald	1	T	SAC
					Glynis	George	2	T	SAC

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Christina	Burr	2	T	History		Jacqueline	Lewis	2	T	SAC
Guy	Lazure	2	T	History		Randy	Lippert	2	T	SAC
Miriam	Wright	2	T	History		Suzanne	McMurphy	2	T	SAC
Mohamed	Hassan	2	T	History		Reza	Nakhaie	2	T	SAC
Robert	Nelson	2	T	History		Francisca	Omorodion	2	T	SAC
Shauna	Huffaker	2	T	History		Cheran	Rudhramoorthy	2	T	SAC
Steven	Palmer	2	T	History		Danielle	Soulliere	2	T	SAC
						Jane	Ku	2	T	SAC
Hans	V. Hansen	1	T	Philosophy						
Christopher	Tindale	1	T	Philosophy		Bruce	Kotowich		T	SOCA
Jeff	Noonan	1	T	Philosophy		Min	Bae		T	SOCA
Marcello	Guarini	1	T	Philosophy		Sally	Bick		T	SOCA
Philip	Rose	2	T	Philosophy		Karen	Engle		T	SOCA
Catherine	Hundleby	2	T	Philosophy		Brent	Lee		T	SOCA
Radu	Neculau	2	T	Philosophy		Cyndra	MacDowall		T	SOCA
						Kimberly	Nelson		T	SOCA
Andrea	Sullivan-Clarke	3	TT	Philosophy		Nicholas	Papador		T	SOCA
						Lee	Rodney		T	SOCA
Chris	Abeare	2	T	Psychology		Sigi	Torinus		T	SOCA
Kimberly	Babb	2	T	Psychology		Janice	Waldron		T	SOCA
Lori	Buchanan	1	T	Psychology		Jennifer	Willet		T	SOCA
Joseph	Casey	1	T	Psychology		Jason	Grossi		TT	SOCA
Gregory	Chung Yan	2	T	Psychology		Catherine	Heard		TT	SOCA
Jerome	Cohen	1	T	Psychology		Nick	Hector		TT	SOCA
Ken	Cramer	1	T	Psychology						
Laszlo	Erdodi	2	T	Psychology		Betty Jo	Barrett	1	T	W &GS
Patti	Fritz	2	T	Psychology		Richard	Douglass	2	T	W &GS
Julie	Larson	1	T	Psychology		Ashley	Glassburn	3	TT	W &GS
Kenneth	Hart	2	T	Psychology		Catherine	Hundleby	2	T	W &GS
Calvin	Langton	2	T	Psychology		Jane	Ku	2	T	W &GS
Dennis	Jackson	1	T	Psychology		Charlene	Senn	1	T	W &GS
Josee	Jarry	2	T	Psychology						
Ben	Kuo	1	T	Psychology						

Science

First Name	Last Name	Rnk	Categ.	AAU	First Name	Last Name	Rnk	Categ.	AAU
Dora	Cavallo-Medved	6	P	Biomed.	Marcelo	Arbex	1	T	Economics
Michael	Crawford	1	T	Biomed.	Tarek	Jouini	2	T	Economics
Martin	Crozier	4-3	LTA	Biomed.	Dingding	Li	2	T	Economics
Jeffrey	Dason	3	TT	Biomed.	Jinyue	Li	4-3	LTA	Economics
Andrew	Hubberstey	2	T	Biomed.	Hyuk-Jae	Rhee	1	T	Economics
John	Hudson	1	T	Biomed.	Sang-Chul	Suh	1	T	Economics
Shashi	Jasra	6	P	Biomed.	Christian	Trudeau	1	T	Economics
Phillip	Karpowicz	2	T	Biomed.	Nurlan	Turdaliev	1	T	Economics
Lisa	Porter	1	T	Biomed.	Yuntong	Wang	1	T	Economics
Mir Munir	Rahim	3	TT	Biomed.	Chenyang	Xu	4-3	LTA	Economics
Andrew	Swan	2	T	Biomed.	Yahong	Zhang	3	TT	Economics
Huiming	Zhang	1	T	Biomed.					
					Ihsan	Al-Aasm	1	T	Environment
Imran	Ahmad	2	T	C. Science	Michelle	Bondy	8	PT	Environment
Saja	Al Mamoori	4-3	LTA	C. Science	Maria	Cioppa	2	T	Environment
Dima	Alhadidi	3	TT	C. Science	Jill	Crossman	3	TT	Environment
Abedalr.	Alkhateeb	4-3	LTA	C. Science	Ken	Drouillard	1	T	Environment
Ahmad	Biniaz	3	TT	C. Science	Aaron	Fisk	1	T	Environment
Boubak.	Boufama	1	T	C. Science	Joel	Gagnon	1	T	Environment
Curtis	Bright	3	TT	C. Science	Alice	Grgicak-Mannion	6	P	Environment
Xiao	Chen	2	T	C. Science	Chris	Houser	1	T	Environment

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Christie	Ezeife	1	T	C. Science	Pardeep	Jasra	7	PT	Environment
Hossein	Fani	3	TT	C. Science	Hugh	Mac Isaac	1	T	Environment
Mahdi	Firoozjaei	4-3	LTA	C. Science	Robert	McKay	1	T	Environment
Scott	Goodwin	1	T	C. Science	Ali	Polat	1	T	Environment
Robin	Gras	1	T	C. Science	Neil	Porter	9	P	Environment
Arunita	Jaekel	1	T	C. Science	Cameron	Proctor	3	TT	Environment
Shaoquan	Jiang	4-3	LTA	C. Science	Iain	Samson	1	T	Environment
Shafaq	Khan	4-3	LTA	C. Science	Frank	Simpson	1	T	Environment
Ziad	Kobti	1	T	C. Science	Chris	Weisener	1	T	Environment
Jianguo	Lu	1	T	C. Science	Jianwen	Yang	1	T	Environment
Usama	Mir	4-3	LTA	C. Science					
Pooya	Moradian	3	TT	C. Science	John	Albanese	2	T	iBio
Asish	Mukhopadhy	1	T	C. Science	Isabelle	Barrette-Ng	1	T	iBio
Alioune	Ngom	1	T	C. Science	Stephanie	Doucet	2	T	iBio
Prashanth	Ranga	4-3	LTA	C. Science	Catherine	Febria	3	TT	iBio
Luis	Rueda	1	T	C. Science	Daniel	Heath	1	T	iBio
Sherif	Saad Ahmed	3	TT	C. Science	Dennis	Higgs	1	T	iBio
Ikjot	Saini	3	TT	C. Science	Nigel	Hussey	2	T	iBio
Saeed	Samet	2	T	C. Science	Oliver	Love	2	T	iBio
Kalyani	Selvarajah	4-3	LTA	C. Science	Daniel	Mennill	1	T	iBio
Yung H.	Tsin	1	T	C. Science	Tanya	Noel	6	P	iBio
Dan	Wu	2	T	C. Science	Trevor	Pitcher	1	T	iBio
Aznam	Yacoub	4-3	LTA	C. Science	Kirsten	Poling	6	P	iBio
Xiaobu	Yuan	1	T	C. Science	Christina	Semeniuk	2	T	iBio
					Julie	Smit	6	P	iBio
					Sherah	Vanlaerhoven	1	T	iBio

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 aside from the common core courses included in the IHS concentrations currently exist at the University of Windsor and are offered from FAHSS, Faculty of Science, Faculty of Nursing, and Odette School of Business. Given that all courses are already listed within the current academic calendar, and that UWindsor has been supporting students in their pursuit to become knowledgeable in areas of health science for many years, there is strong evidence of sufficient and highly qualified faculty to support the creation of these new program streams and the concentrations. The faculty teaching these courses are specialists in the area who have expertise in the subjects that are central to the IHS concentrations. Faculty members who will teach courses in the concentrations are considered experts in the subjects, have active research programs, publish in high quality peer-reviewed journals, and have been awarded institutional and provincial teaching awards.

The common core courses will be taught by a dedicated AAS. The AAS hired to teach these courses will have a strong interdisciplinary background in health sciences, capable of introducing the various concentrations. This individual will have published in leading national and international journals and will be capable of teaching and assessing students.

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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 in various Departments/Schools to offer the courses included in the concentrations.

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

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 the proposed IHS concentrations are offered regularly within the current academic calendar so there are few anticipated additional resources required to offer these concentrations. Resources include potentially an increase in GA/TAs support; however, this will be based upon enrollment numbers and one AAS position to teach the three new core courses.

Given that all but three courses in the IHS concentrations already exist, we do not anticipate requiring any additional support staff, library resources, teaching and learning support, student support services, space, equipment, or facilities.

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 <u>other</u> 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 proposed IHS streams and concentrations were intentionally designed to leverage campus-wide strengths and foster collaboration among multiple Departments/Schools at the University of Windsor. As such, this proposal relies on existing resources (primarily in the form of courses) from other units on campus. With this in mind, the proposal includes formal approvals by Departments/Schools who will be creating program steams within the majors and the departments whose courses are included in the concentration(s).   The decision on what courses should be included in the concentration was done directly by the participating departments.

The new streams and three new core courses do not require maintenance/upgrading of any resources.

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 <u>internal reallocation of resources and cost savings</u> 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.*

If not applicable, write n/a.

Faculty:	1 AAS with experience in Interdisciplinary Health Sciences
Staff:	N/A
GA/TAs:	No additional GA/TA resources required beyond what would be expected for 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 <u>all affected</u> 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.*

Library Resources and Services:	No change
Teaching and Learning Support:	No change
Student Support Services:	No change
Space and Facilities:	No change
Equipment (and Maintenance):	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.*

Students completing an IHS stream will adhere to the **same admission requirements** as their corresponding major.

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.

The IHS streams were intentionally created by guiding open electives to an IHS concentration. Learning outcomes have been created for each IHS concentration and the curriculum within these concentrations have been scaffolded to ensure students' progress from introductory to mastery of the learning outcomes.

Admission requirements for IHS streams are consistent with the requirements for the corresponding major program. Students in an IHS stream will complete the same core courses as students in the corresponding major program. Therefore, students in an IHS stream will be well-prepared to meet the programmatic learning outcomes.

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.

IHS Program Structure (11 courses total): 8 courses from a concentration + 3 IHS core courses

Appendix D includes a summary of major degree programs and IHS streams for each Department/School participating in this program development as well as how IHS concentration and core courses were applied to degree requirements.

Note: Thesis options and experiential learning opportunities in IHS streams are consistent with the respective degree majors.

IHS Core Courses:
1. IHSC-1000: Foundations in Interdisciplinary Health Sciences
2. IHSC-3000: Health Promotion and Translation
3. IHSC-4000: Capstone Project

Concentrations:
The concentrations have been developed by the contributing departments and include courses that they view as being directly or indirectly relevant to some aspect of the health sciences. As noted, the 'core' of the IHS program will ensure that the topics explored through the concentrations are related back to modern healthcare and the student's health-related major.   In this respect, the 'core' courses are key to meeting the learning outcomes for each concentration.

It is noted that some concentrations provide choice for students and include pre-requisite courses. Advising datasheets will be created by the IHS Coordinator (AAS Hire) to ensure that students are able to successfully complete their degree. The AAS will also work with the Registrar's Office to identify potential course conflicts between the concentrations and the major to build the advising sheets.

Healthcare Economics
1. ECON-1100   Introduction to Economics I
2. ECON-1110   Introduction to Economics II
3. ECON-2120   Intermediate Statistical Methods
4. ECON-2210   Intermediate Microeconomics
5. ECON-2900   Health Economics
6. ECON-4300   Economic Analysis of Law
7. ECON-4600   Cost-benefit analysis
8. STAT-2910   Statistics for the Sciences

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Aging and Health (Pick 8 courses)
1. GART-2040   Health-Care Ethics through the Lifespan
2. NURS-3510   The Meaning of Death
3. PHIL-2250   Ethics of Life, Death and Health Care
4. PHIL-2520   Existentialism
5. PSYC-1150   Introduction to Psychology as a Behavioural Science
6. PSYC-1160   Introduction to Psychology as a Social Science
7. PSYC-2250   Developmental Psychology: Adulthood and Aging
8. PSYC-2360   Introduction to Social Psychology
9. PSYC-3390   Health Psychology
10. SACR-3150   On Death and Dying
11. SWRK-3560   Serving Older People

Health and Society (Pick 8 courses)
1. GART-1210   An Introduction into Indigenous Topics
2. GART-2040   Health-Care Ethics through the Lifespan
3. GART/SOSC**** Psychoactive Substances and Social Policy
4. GART/SOSC**** Advanced Seminar on Prostitution
5. SACR-1000   Understanding Social Life
6. SACR-2040   Sociology of Families
7. SACR-2050   Sociology of Sexualities
8. SACR-3150   On Death and Dying
9. SACR-3400   Food and Global Sustainability
10. SACR-3650   Green Criminology
11. SWRK-1170   Meeting Human Needs through Social Welfare
12. WGST-1000   Women in Canadian Society
13. WGST-2500   Women's Bodies, Women's Health
14. WGST-2800   Boys to Men: A critical exploration
15. WGST-3470   Social Work and Violence
16. WGST-2100   Gender Sexuality and Social Justice
17. WGST-2200   Women, Race and Social Justice
18. WGST-3500   Practical Strategies for Social Change: Intervening to Prevent Sexual Violence
19. WGST-4500   Practicum in Social Change

Indigenous Health (Pick 8 courses)
1. GART-1210   An Introduction into Indigenous Topics
2. ENGL-2320   Indigenous Literature
3. HIST-2460   Aboriginal Peoples in Canadian History: Beginnings to Mid-Nineteenth Century
4. HIST-2470   Aboriginal Peoples in Canadian History: Mid-Nineteenth Century to Present
5. ENGL-3330   Indigenous Literature of Turtle Island
6. PHIL-2300   Indigenous Philosophy of the Americas
7. PHIL-4260   Philosophy of Law
8. ESTU-1100   Humans and the Environment
9. POLS-2000   Indigenous Policy and Constitutional Relationships
10. POLS-3000   Indigenous Policy and Constitutional Relationships
11. POLS-4000   Indigenous Nation-Building: Traditional Governance

Healthy Spaces and Places (Pick 8 courses)

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1. ESCI-1151 — Fundamentals of GIS
2. MACS-2500 — Stories of the City
3. VABE-1100 — Architectural Design I
4. VABE-1200 — Architectural Design II
5. VABE-2130 — Principles of Structural Behaviour
6. VABE-4600 — Space in Acoustics and Light
7. MACS-4520 — Urban Ecologies
8. MACS-4500 — Border Culture
9. MACS-2200 — The Planned City as a Work of Art
10. VSAR-3850 — Green Corridor
11. MACS-1500 — Contemporary Visual Culture
12. MACS-2140 — Survey of Art History: Ancient to Medieval
13. MACS-2150 — Survey of Art History: Renaissance to Modern

Medical Humanities (Pick 8 courses)

1. CMAF-1010 — Introduction to Media and Society
2. DRAM-2100 — Speech Communication to Inform
3. ENGL-24010 — Rhetoric
4. GART-1210 — An Introduction into Indigenous Topics
5. GART-2040 — Health-Care Ethics through the Lifespan
6. HIST-2500 — Women in Canada and the United States, 1870-present
7. HIST-4030 — Medicine, Healing and the Health Profession
8. HIST-4630 — History of Gender and Sexuality
9. MACS-2500 — Stories of the City
10. PHIL-2550 — Knowledge, Science and Society
11. PSYC-2400 — Psychology of Sex and Gender
12. PHIL-3590 — Women, Knowledge & Reality
13. PSYC-1150 — Introduction to Psychology as a Behavioural Science
14. PSYC-1160 — Introduction to Psychology as a Social Science
15. PSYC-2400 — Psychology of Sex and Gender
16. ENGL-2310 — World Literatures in English
17. ENGL-2320 — Indigenous Literature
18. ENGL-2330 — Gender and Literature

One Health

1. BIOL-2101 (Ecology)
2. BIOL 2070 (Introductory Microbiology) or BIOL-2071 (Introductory microbiology and techniques)
3. 3 of:
   o BIOL-2040 Human Physiology I
   o BIOL-2080 Economic Botany
   o BIOL-2480 Principles of Neuroscience
   o BIOL-3212 (Environmental Physiology)
   o BIOL-3201 (Applied Entomology)
   o BIOL-3250 (Population and community ecology)
   o BIOL-4232 (Pollution Ecology)
   o BIOL-4252 (Evolutionary Endocrinology)
   o BIOL-4270 (Conservation Biology)
   o BIOM-3070 (Medical microbiology) or BIOM-3071 (Medical Micro & Techniques)
   o BIOM-3540 (Immunology)

- o BIOM-3550 (Embryology)
4. 2 of:
   - o ESCI-1100 (Environmental systems – an introduction to environmental science)
   - o ESCI-1111 (Introduction to Earth Science)
   - o ESCI-1130 (Atmosphere and Climate)
   - o ESCI-2210 (Introduction to climate change)
   - o ESCI-3310 (Global water crisis)
   - o ESCI-4500 (Ecosystem Health)
5. 1 of:
   - o GART-1210 (An introduction into Indigenous topics)
   - o SACR-2270 (Globalization, Development and Social Change)
   - o ESTU-1100 (Humans and the Environment)
   - o ESTU-2500 (Concepts for Ecosystem Management)
   - o GART-2040 (Health-Care Ethics through the Life-Span)
   - o PHIL-2270 (Environmental Ethics)
   - o PHIL-2280 (Technology, Human Values and the Environment)
   - o PHIL-2300 (Indigenous Philosophy of the Americas)

Biostatistics
1. MATH 1720/1760   Differential Calculus
2. MATH1250/1260   Linear Algebra
3. Math 1730   Integral Calculus
4. STAT-2920   Introduction to Probability
5. STAT-2950   Introduction to Statistics
6. STAT-3420   Probability
7. STAT-3950   Statistics
8. STAT-4xxx   Any other statistics
9. STAT-4550   Regression Analysis
10. STAT-4970   Biostatistics

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Honours Biomedical Science- IHS Stream

Total courses: 40

Degree requirements:

(a) BIOL-1101, BIOL-1111, BIOL-2111, BIOL-2040, BIOL-2071, BIOM-2131, BIOM-3500, BIOM-3530
(b) Eight courses from: BIOM-2021, BIOL-2480*, BIOM-3070 or BIOM-3071, BIOM-3400, BIOM-3540, BIOM-3550, BIOM-3560, BIOM-3581**, BIOM-3750, BIOM-4008, BIOM-4440* BIOM-4510, BIOM-4530, BIOM-4540, BIOM-4550, BIOM-4560, BIOM-4590, BIOM-4904**, BIOL-4450*, BIOL-4481*. Take 2 courses from: BIOL-2050, BIOL-3022, BIOL-3142, BIOL-3571, CHEM-2200, CHEM-2310, CHEM-2500, CHEM-3210, BIOC-4010, BIOC-4030, BIOC-4050, PHYS-3700.
(c) CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010, BIOC-3100, BIOC-3110, BIOC-3130
(d) MATH-1720 (or MATH-1760)***, STAT-2910, and one pair of both PHYS-1400 and PHYS-1410 or both PHYS-1300 (or PHYS-1400) and PHYS-1310
(e) Three IHS core courses
(f) Four courses from an IHS concentration
(g) Four courses from an IHS concentration

*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.

Courses used to calculate the major average are: Same as Honours Biomedical Science

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

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

N/A

Honours Psychology-IHS Stream

Total courses: 40

Degree requirements:

(a) eighteen courses, including PSYC-1150, PSYC-1160, PSYC-2300, PSYC-3200, PSYC-3350 or PSYC-3530 or PSYC-3580. The total number of courses must include at least four 3000-level courses and two 4000-level courses.
(b) two courses from Arts;
(c) two courses from Languages or Science;
(d) two courses from any area of study, excluding Social Sciences.
(e) GART-1500, GART-1510;
(f) SOSC-2500;
(g) three courses from an IHS concentration and two courses from any area of study, including psychology
(h) three IHS core courses and five courses from an IHS concentration

Courses used to calculate the major average are: Same as Honours Psychology

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

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Honours Biological Sciences-IHS Stream

Total courses: 40

Degree requirements:

(a) twenty courses, including the "Core" courses BIOL-1101, BIOL-1111, BIOL-2101, BIOL-2111, BIOM-2131, and BIOL-3142; and fourteen other Biology (BIOL-and BIOM-) courses. At least nine courses must be at the 3000 level or above. (Recommended: BIOL-2071 and BIOL-3022.)

(b) eight Science courses, including CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010, STAT-2910, MATH-1720 (or MATH-1760)*, and at least one pair of both ESCI-1100 and ESCI-1111, or both PHYS-1300 and PHYS-1310, or both PHYS-1400 and PHYS-1410, or both COMP-1047 or COMP-2067 and COMP-2057, or both COMP-1400 and COMP-1410, or both ESCI-1120 and ESCI-1130;

(c) six courses from the chosen IHS concentration

d) three IHS core courses and one course from Arts/Languages or Social Sciences

(e) two courses from the same chosen IHS concentration

*It is recommended that students who have taken MATH-1720 (or MATH-1760) also take MATH-1730.
**ECON-XXXX courses will be counted as Social Science courses.

Courses used to calculate the major average are: Same as Honours Biological Sciences

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?

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N/A

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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.*

Students completing an IHS stream will adhere to the **same requirements** for continuation in their program as the corresponding major:

- Continuation in the Honours Biomedical Sciences - Interdisciplinary Health Science Stream is consistent with the Honours Biomedical Sciences
- Continuation in the Honours Psychology - Interdisciplinary Health Science Stream is consistent with the Honours Psychology
- Continuation in the Honours Biological Sciences - Interdisciplinary Health Science Stream is consistent with the Honours Biological Sciences

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.*

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> *Specify new or changes to standing required for graduation in the experiential learning option or co-op option of the revised program, where applicable.*

Students completing an IHS stream will adhere to the **same requirements** for graduation in their program as the corresponding major:

- Graduation from the Honours Biomedical Sciences - Interdisciplinary Health Science Stream is consistent with the Honours Biomedical Sciences
- Graduation from the Honours Psychology - Interdisciplinary Health Science Stream is consistent with the Honours Psychology
- Graduation from the Honours Biological Sciences - Interdisciplinary Health Science Stream is consistent with the Honours Biological Sciences

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.*
>
> *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).*

Courses taken for the concentrations will be taken in place of electives in the relevant program sequencing. Students will also need to carefully consult their undergraduate advisor to ensure appropriate sequencing and degree requirements are met.

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.*
>
> *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).*

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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.

Note: The IHS streams were created by redirecting electives to an IHS concentration. Therefore, students in any stream will continue to meet the programmatic learning outcomes that correspond to their major degree program and concentrations learning outcomes are 'add-ons'. For example, students in the Honours Biomedical Sciences - Interdisciplinary Health Science Stream will complete the same core degree requirements as those students in the Honours Biomedical Sciences and therefore will meet the same programmatic learning outcomes. In addition to meeting these program level learning outcomes, students in an IHS stream will also meet the learning outcomes for the IHS concentration that they complete. For simplicity purposes, the learning outcomes for each concentration have been listed in the tables below and the programmatic level learning outcomes are listed in Appendix B and can be found on CuMA.

Healthcare Economics

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A UWindsor graduate will have the ability to demonstrate:	COU-approved Undergraduate Degree Level Expectations
A. Integrate and apply economic theories and models to healthcare. Discuss the costs and benefits of health promotion/disease prevention services, and the role of determinants of health.	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
B. Retrieve, review, and critically evaluate scientific literature related to healthcare economics (also relevant to C and D).	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
C. Apply health economics and economic models to solve health science problems (also relevant to A and 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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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A UWindsor graduate will have the ability to demonstrate:	COU-approved Undergraduate Degree Level Expectations
D. Use statistical packages in analyzing health-related data.	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge
E. Analyze and critically address economic aspects of healthcare polices and decisions (also relevant to C).	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Formulate findings and recommendations on healthcare economic problems using oral, written, and numerical formats (also relevant to D).	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. Use evidence-informed approaches when applying health economics and economic models to solve problems in areas of health science.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Create varied solutions by adapting economic models to solve healthcare problems.	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
I. Identify and describe the importance of economic considerations and models in the delivery of healthcare.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

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Health and Society

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A UWindsor graduate will have the ability to demonstrate:	COU-approved Undergraduate Degree Level Expectations
A. Explain and apply fundamental theories and definitions of health and illness from a social science and humanities perspective (also relevant to I). Apply multiple theoretical approaches to understand the health of individuals, groups, and communities (also relevant to H).	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
B. Retrieve, review, and critically evaluate scientific literature related to health and society (also relevant to C and D).	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
C. Compare, evaluate, and apply key concepts related to societal health issues/theories/policies/debates.	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
D. Analyze and interpret academic and non-academic sources to examine societal health trends (also relevant to I).	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge
E. Critically discuss inequalities and ethical issues related to modern health from a social perspective (also relevant to F)	E. responsible behaviour to self, others and society	6. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Communicate societal health issues related to social determinants of health at individual, community, and policy levels (also related to D and I).	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. Discuss topics pertaining to health and illness from a social, cultural, and political and environmental perspective.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Identify and critically evaluate the complexities of health and illness in a society, including emerging health problems, inequalities, health policies, and quality of life (also relevant to C).	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity

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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A UWindsor graduate will have the ability to demonstrate:	COU-approved Undergraduate Degree Level Expectations
I. Identify and describe new advances in healthcare technologies and policies aimed to address societal health issues.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

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Health and Aging

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	Characteristics of a University of Windsor Graduate <u>A UWindsor graduate will have the ability to demonstrate:</u>	COU-approved Undergraduate Degree Level Expectations
A. Identify and explain current health challenges across the lifespan. Identify and explain key theories and frameworks of successful aging and apply these to health science-related problems (also relevant to 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
B. Retrieve, review, and critically evaluate scientific literature related to health and aging (also relevant 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
	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
D. Analyze and interpret academic and non-academic sources to examine health trends across the lifespan (also relevant to I).	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge
E. Critically discuss ethical issues that arise throughout the lifespan (also relevant to F)	E. responsible behaviour to self, others and society	7. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Communicate health issues related to aging and age-related social determinants of health at individual, community, health system, and policy levels (also related to I).	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. Interact constructively with others to identify solutions to health challenges across the lifespan.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Identify and critically evaluate the complexities of aging across the lifespan and explore health issues related to aging and social determinants of health (also relevant to C).	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity

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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	Characteristics of a University of Windsor Graduate <u>A UWindsor graduate will have the ability to demonstrate:</u>	COU-approved Undergraduate Degree Level Expectations
I. Identify and describe how changing social determinants of health and aging influence healthcare	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

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Healthy Spaces and Places

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	Characteristics of a University of Windsor Graduate <u>A UWindsor graduate will have the ability to demonstrate:</u>	COU-approved Undergraduate Degree Level Expectations
A. Identify and explain the key theories, frameworks, and approaches of user-centered design. Identify and describe how the build environment can affect the health and wellbeing of communities (also relevant to D)	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
B. Retrieve, review, and critically evaluate scientific literature related to principles of design, architect, and ergonomics (also relevant 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
C. Conduct evaluations of spaces and recognize how their design may fall short in following a user-centered approach (also relevant 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
D. Solve problems related to built environment challenges (also relevant to C).	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge
E. Explain and adhere to code, regulatory requirements, and universal accessibility in the design of spaces (also relevant to F).	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Communicate design solutions for the built environment that adhere to codes and regulations (also relevant to D and E)	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. Interact constructively with others to discuss solutions to issues of the built environment (also relevant to E).	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Propose and design spaces using user-centered approaches (also relevant to C, E and I).	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity

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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A UWindsor graduate will have the ability to demonstrate:	COU-approved Undergraduate Degree Level Expectations
I. Monitor changes to code, regulatory, and accessibility requirements.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

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Medical Humanities

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	Characteristics of a University of Windsor Graduate <u>A UWindsor graduate will have the ability to demonstrate:</u>	COU-approved Undergraduate Degree Level Expectations
A. Explain social, historical, and cultural concepts and theories that shape understandings of health, wellness, and healing (also relevant to 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
B. Retrieve, review, and critically evaluate scientific literature related to medical humanities (also relevant to C and D).	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
C. Critically evaluate how social, historical, and cultural factors have influenced health, wellness, and healing in past and present cultures (also relevant to H).	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
D. Analyze and interpret academic and non-academic sources to examine factors which have influenced the construction of health, wellness, and healing in past and present cultures (also relevant to B and I).	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge
E. Critically discuss the ethical implications of health, wellness, and healing in society (also relevant to F)	E. responsible behaviour to self, others and society	8. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Communicate social, historical and cultural concepts of health, wellness, and healing to a wide audience using oral, written, visual formats (also related to D and I).	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. Discuss and debate topics pertaining to health, wellness and healing from a social, historical and cultural environmental perspective.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Identify and critically evaluate the complexities and evolution of health, wellness, and healing from social, historical, cultural, and environmental perspectives (also relevant to C and I).	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity

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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	Characteristics of a University of Windsor Graduate <u>A UWindsor graduate will have the ability to demonstrate:</u>	COU-approved Undergraduate Degree Level Expectations
I. Evaluate how changes in society and environment may influence healthcare in the future	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

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One Health

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A UWindsor graduate will have the ability to demonstrate:	COU-approved Undergraduate Degree Level Expectations
A. Identify and explain the interconnection between people, animals, plants, and their shared environment.	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
B. Retrieve, review, and critically evaluate scientific literature related to One Health (also relevant to C and D).	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
C. Apply scientific knowledge to evaluate solutions to health and sustainability challenges (also relevant to A).	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

D. Interpret scientific data related to biodiversity, ecology, and environmental science (also relevant to B)	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge
E. Describe and advocate for responsible practices with respect to biodiversity and ecological and biological sustainability (also relevant to A).	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Communicate ecological and environmental factors that influence health and sustainability using oral, written, visual formats and numerical formats (also related to D and I).	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. Develop and promote interventions for sustainability that consider the impacts to humans, animals, and the environment (also relevant to E and H).	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity

H. Describe the process, techniques, and methodology to assess ecological and environmental factors that influence health and sustainability.	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
I. Use a transdisciplinary approach to assess ecological and environmental factors that influence health and sustainability.	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

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Indigenous Health

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	Characteristics of a University of Windsor Graduate <u>A UWindsor graduate will have the ability to demonstrate:</u>	COU-approved Undergraduate Degree Level Expectations
A. Explain the diversity of cultures, experiences, histories and geography of Indigenous Communities that that shape understandings of health, wellness, and healing (also relevant to 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
B. Retrieve, review, and critically evaluate scientific literature related to Indigenous culture and history, and explain the connection between history and present health outcomes, (also relevant to C and D).	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
C. Critically evaluate how social, historical, and cultural factors have influenced health, wellness, and healing in Indigenous Communities and Identify, acknowledge, and analyse how this is considered by Western medical knowledge (also relevant to H).	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
D. Analyze and interpret academic and non-academic sources to examine factors which have influenced health, wellness, and healing in Indigenous Communities (also relevant to B and I).	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge
E. Critically discuss the ethical implications of health, wellness, and healing in Indigenous Communities including inequity of care and access to services (also relevant to F)	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Communicate social, historical, and cultural concepts relevant to Indigenous health, wellness, and healing to a wide audience using oral, written, visual formats (also related to D and I).	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. Discuss and debate topics pertaining to Indigenous health, wellness, and healing from a social, historical, and cultural perspective.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Identify and critically evaluate the complexities and evolution of Indigenous health, wellness, and healing from social, historical, cultural, and environmental perspectives (also relevant to C and I).	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity

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Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A UWindsor graduate will have the ability to demonstrate:	COU-approved Undergraduate Degree Level Expectations
I. Acknowledge and analyse the limitations of one's own knowledge and perspectives, and incorporate new ways of seeing, valuing, and understanding with regard to Indigenous health	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

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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.

Students in any stream will continue to complete their corresponding core degree requirements and there will be no discernable difference in students' achievement of programmatic learning outcomes. Learning outcomes for each IHS concentration were created to recognize the additional knowledge, skills, and abilities that students will acquire. Course-specific assessments will be used to evaluate students' mastery of the concentration learning outcomes. These assessments may include, though are not limited to: examinations, papers (e.g., research papers, literature reviews, reflection papers), presentations, laboratory reports, and assignments. The structure of the concentrations are scaffolded to ensure students can meet the learning outcomes as well as progress from 'introduction' to 'mastery' of concentration learning outcomes. In particular, the common core courses will play a key role in ensuring the introduction, reinforcement, and mastery of concentration learning outcomes. The additional courses included in each concentration will provide additional opportunities for students to reinforce, practice, and master these skills.

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.*

N/A

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.

Given that the IHS concentrations are comprised on existing courses, there will be no differences in the model of delivery for these courses. Students in any stream will continue to complete their corresponding core degree requirements and there are no changes to the modes of delivery of these courses. IHS concentrations are also comprised of existing courses and there will be no difference in the model of delivery for these courses. The common core courses will be delivered face-to-face. Courses may include: standard lectures with active learning techniques embedded (e.g., discussions), tutorials, laboratories, field trips, field work, 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 concentration 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.)

Expected Workload per 3.0 Course Credit/Week	Average Time *per week* the Student is Expected to Devote to Each Component Over the Course of the Program
Lectures	0-3

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Tutorials	0-3
Practical experience	Will vary depending on major
Service or experiential learning	Will vary depending on major
Independent study	1-2
Reading and work for assessment, including meeting classmates for group work/project assignments (essays, papers, projects, laboratory work, etc.)	1-2
Studying for tests/examinations	3
Other: *[specify]*	

Compare the student workload for this program with other similar programs in the AAU:
The core university courses for each stream are courses that are completed by students enrolled in the corresponding major degree program. Therefore, the workload for the new streams are consistent with the workload for a student completing the corresponding major degree program.

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.

Students in any stream will continue to complete their corresponding core degree requirements and there will be no discernable difference in students' achievement of programmatic learning outcomes. Learning outcomes for each IHS concentration are 'add-ons' to recognize the additional knowledge, skills, and abilities that students will acquire by redirecting their electives to focus on an area of health science. The planned assessment activities in courses are intended to focus on achievement of knowledge and skills in various areas of health sciences (e.g., healthcare economics, etc.). This is consistent with the concentration learning outcomes. Assessments may take different forms, including though not limited to: examinations, laboratory/field reports and/or assignments, research projects, written documents (e.g., research papers, literature reviews), and oral and visual presentations. The common core courses will play key role in ensuring the introduction, reinforcement, and mastery of concentration learning outcomes. The additional courses included in each concentration will provide additional opportunities for students to reinforce, practice, and master these skills.

The academic advisors within each department and the IHS program coordinator 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.

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 new or revised stated learning outcomes and degree level expectations.

As the IHS streams evolve, student success and performance level will be tracked through consultation, student feedback, and grades. The academic advisors and IHS program coordinator will be responsible for monitoring student progression and responding to student questions regarding the IHS completion. All courses will contribute to students' attainment of the program learning outcomes.

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

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

E.1 Experiential Learning Component and Nature of Experience

Describe the new or revised experiential learning component and the nature of the experience (field placement, required professional practice, service-learning, internship, etc.)

N/A

E.2 Knowledge and Skills Brought to the Workplace

Provide a description of the knowledge and skills that students will be bringing to the workplace/placement based on the revised curriculum.

N/A

E.3 Evidence of Availability of Placements

Provide evidence of the availability of an adequate number of positions of good quality both inside and outside the Windsor area for the new or revised co-op/experiential learning option (including names and contact information of potential employers, written statements or surveys from potential employers; and employer feedback concerning the hiring of graduates).

Provide a summary of the types of positions that would be suitable at each level of work-term.

How will these placements/opportunities be developed?

[NB: For co-op programs, the majority of Ontario placements should qualify for the Co-op Education tax credit. See Policy on Co-op Programs for more details.]

N/A

E.4 Mechanism for Supervision of Placements (QAF section 2.1.9)

Describe the mechanism that will be established for the supervision of the new or revised experiential learning placements.

N/A

E.5 Fees Associated with Experiential Learning Component

Provide information on the fees associated with the new or revised experiential learning component, if applicable.

NB: all proposed fees must be approved as part of the University's operating budget, via the Ancillary Fee Committee.

N/A
Co-operative Education (see guidelines)?

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APPENDIX A – BUDGET SUMMARY SHEET

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

Projections of Enrolment, Expenditures and Revenues (enrolments over 5 years)						
Year	**1**	**2**	**3**	**4**	**5**	**Total**
Revenue						
Tuition income*	$ 144,950	$ 289,900	$ 434,850	$ 579,800	$ 579,800	$ 2,029,300
Potential Provincial funding**	This program will keep us within the corridor and will not represent new Provincial funding					
Other sources of funding *(please list)*						
Total Revenue	$ 144,950	$ 289,900	$ 434,850	$ 579,800	$ 579,800	$ 2,029,300
Expenses						
Additional Faculty member	$ 125,000	$ 126,250	$ 127,512	$ 128,787	$ 130,075	$ 637,625
Additional Staff/Technician						
GA/TA***						
External Examiners *(for graduate programs)*						
Library Resources						
New Facilities/Equipment						
Facilities/Equipment Maintenance						
Technology/CTL resources						
Other expenses *(please list)*						
Total Expenses	$ 125,000	$ 126,250	$ 127,512	$ 128,787	$ 130,075	$ 637,625
Net Income	$ 19,950	$ 163,650	$ 307,338	$ 451,012	$ 449,724	$ 1,391,674

*Estimate $5798 per full-time equivalent domestic undergraduate student using the FAHSS base tuition.

Appendix B – Degree Level Learning Outcomes

Honours BSc in Molecular Biology and Biotechnology
Program Learning Outcomes
Last Updated: May 11, 2018
(Sa180511-5.5.1)

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:	COU-approved Undergraduate Degree Level Expectations
Describe a wide range of core biological concepts that include molecular biology, genetics, ecology, and evolution. Define the scientific method as it relates to research and societal issues Describe and integrate the relationship between biological structure and function at any level of the biological organization of life (molecular level to biosphere) Illustrate an advanced understanding of cellular and molecular biology concepts.	**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
Locate and access resources and primary scientific literature information in molecular biology and biotechnology. Conduct safe laboratory experiments in molecular biology and biotechnology Develop a research proposal with literature citations to address research hypotheses in the area of molecular biology and biotechnology.	**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 of knowledge

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Critically analyze a topic in molecular biology and provide a justification for this evaluation Access and effectively utilize the primary research literature for solving problems in Biology and Biotechnology Formulate and test hypotheses Apply the primary literature to a new research problem in molecular biology or biotechnology	**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
Write a formal paper with the correct structure (e.g. include proper citations, references, etc.) Express complex concepts in written form Demonstrate an ability to analyze data and interpret results demonstrate an ability to solve quantitative problems	**D.** literacy and numeracy skills	4. Communication skills 5. Awareness of limits of knowledge
Show advanced research skills in a molecular biology laboratory setting Recognize and practice the rules of academic integrity as appropriate to the program	**E.** responsible behaviour to self, others and society	5. Awareness of limits of knowledge 6. Autonomy and professional capacity
Formulate an in-depth research report and communicate the results in a community setting qualitatively summarize and objectively present data (Also relevant to B)	**F.** interpersonal and communications skills	4. Communication skills 6. Autonomy and professional capacity
Participate constructively and cooperatively in group activities Work as part of a team in a research setting	**G.** teamwork, and personal and group leadership skills	4. Communication skills 6. Autonomy and professional capacity

Analyze methodology used to distinguish between different functionalities of diverse biological systems Design innovative solutions to demonstrate biological concepts	**H.** creativity and aesthetic appreciation	2. Knowledge of methodologies 3. Application of knowledge 6. Autonomy and professional capacity
Predict future patterns based on present data on the rapidly changing nature of biology Apply knowledge and skills to present issues	**I.** the ability and desire for continuous learning	6. Autonomy and professional capacity

PDF generated on March 19, 2021

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Bachelor of Arts Honours Psychology *
Program Learning Outcomes
Last Updated: May 26, 2017
(Sa170526-5.5.6)

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:	COU-approved Undergraduate Degree Level Expectations
Characterize the nature of psychology as a discipline and explain, contrast, and critique major perspectives of psychology (e.g., cognitive, psychodynamic, sociocultural). Apply and integrate psychological concepts, language, major theories, and research findings to explain psychological phenomena. Compare and contrast psychological explanations across diverse populations and contexts Articulate how psychological principles can be used to explain social issues.	**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
Synthesize ideas from psychological literature. Seek scientific evidence about psychological claims. Evaluate the appropriateness of conclusions derived from psychological research (Also relevant to C). **(Also applies to C.)** Explain different research methods used by psychologists. Design and conduct basic research to address psychological questions using appropriate research methods.	**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 of knowledge

Page 1 of 3

Design and conduct psychological research in accordance with the ethical requirements for the discipline of Psychology regarding the treatment of participants.		
Recognize, develop, defend, and criticize arguments. Solve complex problems using appropriate applications of psychological terms and concepts and nuanced problem- solving strategies. Evaluate new ideas with an open but critical mind.	**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
Evaluate the suitability, relevance, accuracy, and reputability of informational sources. Write effectively in various formats in the publication style of the American Psychological Association. Interpret statistics and other quantitative information in relation to the methodology by which it was generated. Conduct statistical analyses to evaluate research questions and hypotheses.	**D.** literacy and numeracy skills	4. Communication skills 5. Awareness of limits of knowledge
Explain, assess, and apply ethical behaviour in the science and practice of psychology Use information and technology in accordance with the Canadian Code of Ethics for Psychologists.	**E.** responsible behaviour to self, others and society	5. Awareness of limits of knowledge 6. Autonomy and professional capacity
Write, discuss, and argue effectively for various audiences and purposes.	**F.** interpersonal and communications skills	4. Communication skills 6. Autonomy and professional capacity

Page 2 of 3

Collaborate and interact effectively with people from diverse backgrounds and/or cultural perspectives.	**G.** teamwork, and personal and group leadership skills	4. Communication skills 6. Autonomy and professional capacity
Generate novel approaches to problem-solving in psychology.	**H.** creativity and aesthetic appreciation	2. Knowledge of methodologies 3. Application of knowledge 6. Autonomy and professional capacity
Ask reasonable and skeptical questions about causes of behaviour. Tolerate ambiguity and accept the tentative and complex nature of psychological explanations. Accurately self-assess their abilities, achievement, and work habits.	**I.** the ability and desire for continuous learning	6. Autonomy and professional capacity

PROGRAM DEVELOPMENT COMMITTEE
MAJOR PROGRAM CHANGES
FORM B

Honours BSc in Biological Sciences
Program Learning Outcomes
Last Updated: May 11, 2018
(Sa180511-5.5.1)

Learning Outcomes	Characteristics of a University of Windsor Graduate	COU-approved Undergraduate Degree Level Expectations
At the end of the course, the successful student will know and be able to:	The University of Windsor graduate will have the ability to demonstrate:	
Describe a wide range of core biological concepts that include molecular biology, genetics, ecology, and evolution.	**A.** the acquisition, application and integration of knowledge	1. Depth and breadth of knowledge
Define the scientific method as it relates to research and societal issues.		2. Knowledge of methodologies
Describe and integrate the relationship between biological structure and function at any level of the biological organization of life (molecular level to biosphere)		3. Application of knowledge
Bachelor of Science – Biological Sciences with thesis: Integrate acquired content into a specific research context		5. Awareness of limits of knowledge
Locate and access resources and primary scientific literature information.	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)	1. Depth and breadth of knowledge
Conduct laboratory experiments accurately and safely, employing appropriate tools and procedures.		2. Knowledge of methodologies
Formulate and test a hypothesis using appropriate methodologies.		3. Application of knowledge
		5. Awareness of limits of knowledge
Bachelor of Science – Biological Sciences with thesis: Design and conduct a research investigation that is thoughtfully situated in extant literature		

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Critically analyze a biological topic and provide a justification for this evaluation Access and effectively utilize the primary research literature for solving problems Formulate and test hypotheses Bachelor of Science – Biological Sciences with thesis: Apply the primary literature to a new research problem	**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
Write a formal paper with the correct structure (e.g. include proper citations, references, etc.) Express complex concepts in written form analyze data and interpret results of biological research Solve quantitative problems Bachelor of Science – Biological Sciences with thesis: write a research paper in a publishable format	**D.** literacy and numeracy skills	4. Communication skills 5. Awareness of limits of knowledge
Provide evidence of basic technical skills and safe practice in a laboratory or field situation Recognize and practice the rules of academic integrity Bachelor of Science – Biological Sciences with thesis: conduct independent research. (Also relevant to B)	**E.** responsible behaviour to self, others and society	5. Awareness of limits of knowledge 6. Autonomy and professional capacity
Produce an effective communication (e.g. paper, presentation, website, etc.) on a biological subject. Qualitatively summarize and objectively present data Bachelor of Science – Biological Sciences with thesis: Formulate an in-depth research report and communicate the results in a community setting. (Also relevant to B)	**F.** interpersonal and communications skills	4. Communication skills 6. Autonomy and professional capacity

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Participate constructively and cooperatively in group activities Bachelor of Science – Biological Sciences with thesis: Work as part of a team in a research setting.	**G.** teamwork, and personal and group leadership skills	4. Communication skills 6. Autonomy and professional capacity
Analyze methodology used to distinguish between different functionalities of diverse biological systems Design innovative solutions to demonstrate biological concepts	**H.** creativity and aesthetic appreciation	2. Knowledge of methodologies 3. Application of knowledge 6. Autonomy and professional capacity
Predict future patterns based on present data on the rapidly changing nature of biology Apply knowledge and skills to present issues	**I.** the ability and desire for continuous learning	6. Autonomy and professional capacity

PROGRAM DEVELOPMENT COMMITTEE
MAJOR PROGRAM CHANGES
FORM B

PROGRAM DEVELOPMENT COMMITTEE
MAJOR PROGRAM CHANGES
FORM B
Appendix D

IHS Program Structure (11 courses total): 8 courses from a concentration + 3 IHS core courses (will be science courses)

Below is a summary of major degree programs and IHS streams for each department participating in this program development. The **red** illustrates how IHS concentration and core courses were applied.

PROGRAM DEVELOPMENT COMMITTEE
MAJOR PROGRAM CHANGES
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Honours Molecular Biology and Biotechnology **Note: Soon to be changed to Honours Biomedical Science** **Degree requirements listed below reflect the proposed changes that are underway**	Honours Biomedical Science- IHS Stream
(a) 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*~~	(a) 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***	**(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***
(c) *Chemistry and Biochemistry:* CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010, BIOC-3100, BIOC-3110, BIOC-3130~~, BIOC-4010.~~	**(c)** *Chemistry and Biochemistry:* CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010, BIOC-3100, BIOC-3110, BIOC-3130~~, BIOC-4010.~~
)**(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)~~	)**(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.**	(e) Three IHS core courses (serves as an emphasis in a similar way the courses in 'e' serve)
(f) Six courses from any Science	(f) Four courses from an IHS concentration (if in an IHS stream, can take courses outside of science)
(~~f~~**g**) 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).	(g) Four courses from an IHS concentration

PROGRAM DEVELOPMENT COMMITTEE
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Honours Psychology	Honours Psychology-IHS Stream
(a) eighteen courses, including PSYC-1150, PSYC-1160, PSYC-2300, PSYC-3200, PSYC-3350 or PSYC-3530 or PSYC-3580. The total number of courses must include at least four 3000-level courses and two 4000-level courses.	(a) eighteen courses, including PSYC-1150, PSYC-1160, PSYC-2300, PSYC-3200, PSYC-3350 or PSYC-3530 or PSYC-3580. The total number of courses must include at least four 3000-level courses and two 4000-level courses.
(b) two courses from Arts;	(b) two courses from Arts;
(c) two courses from Languages or Science;	(c) two courses from Languages or Science;
(d) two courses from any area of study, excluding Social Sciences.	(d) two courses from any area of study, excluding Social Sciences.
(e) GART-1500, GART-1510;	(e) GART-1500, GART-1510;
(f) SOSC-2500;	(f) SOSC-2500;
(g) five courses from any area of study, including Psychology;	(g) three courses from an IHS concentration and two courses from any area of study, including psychology
(h) eight courses from any area of study, excluding Psychology.	(h) three IHS core courses and five courses from an IHS concentration

PROGRAM DEVELOPMENT COMMITTEE
MAJOR PROGRAM CHANGES
FORM B

Honours Biological Sciences	Honours Biological Sciences-IHS Stream
(a) twenty courses, including the "Core" courses BIOL-1101, BIOL-1111, BIOL-2101, BIOL-2111, BIOM-2131, and BIOL-3142; and fourteen other Biology (BIOL-and BIOM-) courses. At least nine courses must be at the 300 level or above. (Recommended: BIOL-2071 and BIOL-3022.)	(a) twenty courses, including the "Core" courses BIOL-1101, BIOL-1111, BIOL-2101, BIOL-2111, BIOM-2131, and BIOL-3142; and fourteen other Biology (BIOL-and BIOM-) courses. At least nine courses must be at the 300 level or above. (Recommended: BIOL-2071 and BIOL-3022.)
(b) eight Science courses, including CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010, STAT-2910, MATH-1720 (or MATH-1760)*, and at least one pair of both ESCI-1100 and ESCI-1111, or both PHYS-1300 and PHYS-1310, or both PHYS-1400 and PHYS-1410, or both COMP-1047 or COMP-2067 and COMP-2057, or both COMP-1400 and COMP-1410, or both ESCI-1120 and ESCI-1130;	(b) eight Science courses, including CHEM-1100, CHEM-1110, CHEM-2300, BIOC-2010, STAT-2910, MATH-1720 (or MATH-1760)*, and at least one pair of both ESCI-1100 and ESCI-1111, or both PHYS-1300 and PHYS-1310, or both PHYS-1400 and PHYS-1410, or both COMP-1047 or COMP-2067 and COMP-2057, or both COMP-1400 and COMP-1410, or both ESCI-1120 and ESCI-1130;
(c) six additional Science courses (five additional courses if taking MATH-1720 (or MATH-1760) and MATH-1730)* excluding **ECON-XXXX and including additional courses in Biology. At least two of these courses must be at the 300 level or above;	c) six courses from an IHS concentration (if in an IHS stream, can take courses outside of the listed areas)
(d) four courses from Arts/Languages or Social Sciences, with at least one from each;	d) Three IHS core courses and one course from Arts/Languages or Social Sciences
(e) two courses from any area of study.	(e) Two courses from an IHS concentration
*It is recommended that students who have taken MATH-1720 (or MATH-1760) also take MATH-1730. **ECON-XXXX courses will be counted as Social Science courses.	

University of Windsor
Program Development Committee

5.3.1: **Interdisciplinary Health Science - New Course Proposals (Form Ds)**

Item for: **Approval**

MOTION: **That the following courses be approved:**
IHSC-1000. **Foundations in Interdisciplinary Health Sciences**
IHSC-3000. **Health Promotion and Translation**
IHSC-4000. **Capstone Project**

^Subject to approval of the expenditures required.

Rationale/Approvals:

- This course has been approved by the Faculty of Arts Humanities and Social Sciences Coordinating Council and the Science Program Development Committee (SPDC) as delegated by the Faculty of Science Coordinating Council
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

TITLE OF PROGRAM(S)/CERTIFICATE(S):	**Interdisciplinary Health Sciences**
DEPARTMENT(S)/SCHOOL(S):	**Science**
FACULTY(IES):	**Science**

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Winter 2022

A. NEW COURSE PROFILE

Course # and Title: IHSC-1000: Foundations in Interdisciplinary Health 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.

This course will introduce students to the interdisciplinary field of health sciences, including definitions of heath, wellness, and illness from multiple perspectives (e.g., biological, behavioural, social, environmental). Students will be exposed to various areas of specialization including: healthcare economics, healthcare informatics, health and aging, health and society, Indigenous health, healthy spaces and places, medical humanities, environmental health, and one health. Current health science issues within the community and media will be presented. (This course is restricted to students enrolled in an Interdisciplinary Health Sciences Stream.)

A.2 Experiential Learning Categories

Does the course include experiential learning? Check all that apply.
For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

- [ ] applied research
- [ ] capstone
- [ ] clinic
- [ ] co-op
- [ ] community service learning
- [ ] creative performance or exhibit (*for visual and performing arts*)
- [ ] entrepreneurship
- [ ] field experience or site visit
- [ ] labs
- [x] No experiential learning in this course
- [ ] field work
- [ ] industry/community consulting project
- [ ] interactive simulations
- [ ] internship – full-time
- [ ] internship – part-time
- [ ] professional practicum
- [ ] research project
- [ ] study abroad

A.3 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 [please specify]	Lecture	Lab/ Tutorial	Online	Co-op/ practicum/ experiential learning
3.0	36	X				36			

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** *[provide old course number]*
N/A	N/A	N/A	N/A	Yes- only for students enrolled in an Interdisciplinary Health Sciences Stream	

***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 Departments/Schools of: 1) Biomedical Sciences; 2) Psychology; and 3) Integrative Biology are **each** proposing the creation of **new streams** within their respective degree programs that will support the need for trained individuals with knowledge of heath, wellness, and illness from multiple perspectives (e.g., biological, behavioural, social, environmental).

- Honours Molecular Biology and Biotechnology - Interdisciplinary Health Sciences Stream
- Honours Psychology - Interdisciplinary Health Sciences Stream
- Honours Biological Sciences - Interdisciplinary Health Sciences Stream

Students within these streams will have the unique opportunity to select and complete an interdisciplinary health science (IHS) concentration **in conjunction with** completing their declared major. These concentrations will consist of 11 courses, including three 'core' interdisciplinary courses (i.e., a foundation, cornerstone, and capstone) that will be completed by *all* students in *any* IHS stream to ensure authentic and integrative learning as well as to offer a cohort learning experience among students from different departments.

The proposed course serves as the **foundation course**. The purpose of this course is to provide an Introduction to IHS and survey of the various concentration themes (i.e., Healthcare Economics, Healthcare Informatics, Health and Aging, Indigenous health, Health and Society, Healthy Spaces and Places, Medical Humanities, Environmental Health, One Health).

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

The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967).

*In developing this new course, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Please consider these prompt questions and additional Resources including disciplinary examples:

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?*

The IHS program includes a concentration in Indigenous Health and this course will include content related to this topic. The Faculty of Science is also investing in an Indigenous knowledge keeper who will help to incorporate Indigenous content, perspectives, and materials into this course. This new faculty position is a recognition that Indigenous knowledge is not ours to claim or to own, and that Indigenous knowledge is alive, and it needs to be an Indigenous member that holds this knowledge on behalf of Faculties.

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 *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A U of Windsor graduate will have the ability to demonstrate:
A. Explain and apply fundamental theories and definitions of heath, wellness, and illness from multiple perspectives (e.g., biological, behavioural, social, environmental) (also relevant to I).	A. the acquisition, application and integration of knowledge
B. Read, synthesize, and evaluate health science research (also relevant to C).	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

Course Learning Outcomes *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A U of Windsor graduate will have the ability to demonstrate:
C. Develop basic research questions in an area of health science (also relevant to B).	C. critical thinking and problem-solving skills
D. Communicate health science topics and research using written, spoken, numerical, and visual formats (also relevant to F).	D. literacy and numeracy skills
E. Analyze factors that influence health, wellness, and illness and their relevance to community health planning (Also applies to C, E).	E. responsible behaviour to self, others and society
F. Communicate the findings of health science research effectively in oral and written formats (also relevant to D).	F. interpersonal and communications skills
G. Discuss and debate current health science issues present in the media.	G. teamwork, and personal and group leadership skills
H. Compare and contrast and the definitions of heath, wellness, and illness from multiple perspectives (e.g., biological, behavioural, social, environmental) (also relevant to C)	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
	50	100	100-150	100-150	100-150

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 will **only** be available to students enrolled in an IHS stream and is not expected to impact enrolment in existing courses.

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
0	Tutorials
0	Labs
0	Practical experience
1	Independent Study
1-2	Reading for the course

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

2-3	Work for assessment (essays, papers, projects, laboratory work)
1	Meeting with others for group work/project assignments
0	Studying for tests/examinations
0	Other: *[specify]*

How does the student workload for this course compare with other similar courses in the department/program area?	The estimated workload associated with this course is consistent with a first-year science course.

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 Departments/School of Biomedical Sciences, Psychology, and Integrative Biology, are actively committed to supporting the creation of the new IHS streams and this new course. This course will be taught by the AAS who has been requested as part of the IHS stream development. The AAS hired to teach this course will have a strong interdisciplinary background in health sciences, capable of providing an introduction to the various concentrations. The hired person will be a specialist in health sciences who will have expertise in the subjects that are central to the course. This individual will have published in leading national and international journals and will be capable of teaching and assessing students within this course. This course may also include opportunities for faculty members from the various Departments/Schools offering an IHS stream to guest lecture.

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 cxourse 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.

Only students in an IHS stream will be eligible to complete this course. This course is housed in the Faculty of Science and will be taught by the new AAS position requested as part of the IHS program proposal. Several Department/Schools will offer IHS streams and they will advise students on matters related to appropriate sequencing and course selection. Beyond this, there is no anticipated reliance on other campus units.

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.).

There are no new planned reallocation of resources and cost savings.

PROGRAM DEVELOPMENT COMMITTEE
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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. If not applicable, write n/a.*

Faculty:	1 AAS position that was requested as part of the IHS program proposal
Staff:	None
GA/TAs:	1-2 additional GA/TAs will need to be assigned for grading/proctoring duties

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

*Describe all **additional institutional resources and services** required by <u>all affected</u> 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.

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

TITLE OF PROGRAM(S)/CERTIFICATE(S):	Interdisciplinary Health Sciences
DEPARTMENT(S)/SCHOOL(S):	Science
FACULTY(IES):	Science

Proposed change(s) effective as of* [Fall, Winter, Spring]: *(subject to timely and clear submission)*	Winter 2022

A. NEW COURSE PROFILE

Course # and Title: IHSC-3000: Health Promotion and Translation

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 introduce students to health promotion and knowledge translation activities. In particular, students will gain skills in the analysis, synthesis, evaluation, and dissemination of evidence-informed research to diverse audiences as well as understand the role of education programs to heath, wellness, and illness from multiple perspectives (e.g., biological, behavioural, social, environmental). (This course is restricted to students enrolled in an Interdisciplinary Health Sciences Stream.) (Prerequisites: IHSC-1000)

A.2 Experiential Learning Categories

Does the course include experiential learning? Check all that apply.
For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

- [ ] applied research
- [ ] capstone
- [ ] clinic
- [ ] co-op
- [ ] community service learning
- [ ] creative performance or exhibit (*for visual and performing arts*)
- [ ] entrepreneurship
- [ ] field experience or site visit
- [ ] labs
- [x] No experiential learning in this course

- [ ] field work
- [ ] industry/community consulting project
- [ ] interactive simulations
- [ ] internship – full-time
- [ ] internship – part-time
- [ ] professional practicum
- [ ] research project
- [ ] study abroad

A.3 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 [please specify]	Lecture	Lab/ Tutorial	Online	Co-op/ practicum/ experiential learning
3.0	36	X				36			

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** *[provide old course number]*
IHSC-1000	N/A	N/A	N/A	Yes- only for students enrolled in an Interdisciplinary Health Sciences Stream	

***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 Departments/Schools of: 1) Biomedical Sciences; 2) Psychology; and 3) Integrative Biology are **each** proposing the creation of **new streams** within their respective degree programs that will support the need for trained individuals with knowledge of heath, wellness, and illness from multiple perspectives (e.g., biological, behavioural, social, environmental).

- Honours Molecular Biology and Biotechnology - Interdisciplinary Health Sciences Stream
- Honours Psychology - Interdisciplinary Health Sciences Stream
- Honours Biological Sciences - Interdisciplinary Health Sciences Stream

Students within these streams will have the unique opportunity to select and complete an interdisciplinary health science (IHS) concentration **in conjunction with** completing their declared major. These concentrations will consist of 13 courses: three 'core' interdisciplinary courses (i.e., a foundation, cornerstone, and capstone) that will be completed by *all* students in *any* IHS stream to ensure authentic and integrative learning as well as to offer a cohort learning experience among students from different departments.

The proposed course serves as the **cornerstone** course. The purpose of this course is to provide training on how to be strong communicators with focus on knowledge translation.

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

The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967).

*In developing this new course, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Please consider these prompt questions and additional Resources including disciplinary examples:

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
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- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?*

The IHS program includes a concentration in Indigenous Health and this course will include content related to this topic. The Faculty of Science is also investing in an Indigenous knowledge keeper who will help to incorporate Indigenous content, perspectives, and materials into this course. This new faculty position is a recognition that Indigenous knowledge is not ours to claim or to own, and that Indigenous knowledge is alive, and it needs to be an Indigenous member that holds this knowledge on behalf of Faculties.

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 *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A U of Windsor graduate will have the ability to demonstrate:
B. Explain and apply health promotion strategies.	B. the acquisition, application and integration of knowledge
B. Analyze and interpret health related data (also relevant to D). Identify areas/audiences in need of health education programs based on obtained data (also relevant to D and E).	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)

PROGRAM DEVELOPMENT COMMITTEE
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Course Learning Outcomes *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A U of Windsor graduate will have the ability to demonstrate:
C. Critically evaluate research articles and translate them to evidence-based practices (Also relevant to B)	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E. Identify and adhere to ethical practices when engaging in health promotion and knowledge translation activities (also relevant to A).	E. responsible behaviour to self, others and society
F. Create documents or media that communicate information on specific areas of health science to a wide range of audiences (also relevant to D, H).	F. interpersonal and communications skills
G. Discuss the role of health education and promotion professions to heath, wellness, and illness from multiple perspectives (e.g., biological, behavioural, social, environmental).	G. teamwork, and personal and group leadership skills
H.	H. creativity and aesthetic appreciation
I. Identify and describe the importance of knowledge translation to health promotion and disease prevention.	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
	50	100	100-150	100-150	100-150

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 will **only** be available to students enrolled in an IHS stream and is not expected to impact enrolment in existing courses.

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
0	Tutorials
0	Labs
0	Practical experience
1	Independent Study
1-2	Reading for the course
2-3	Work for assessment (essays, papers, projects, laboratory work)

PROGRAM DEVELOPMENT COMMITTEE
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1	Meeting with others for group work/project assignments
0	Studying for tests/examinations
0	Other: *[specify]*

How does the student workload for this course compare with other similar courses in the department/program area?	The estimated workload associated with this course is consistent with a third-year science course.

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 Departments/School of Biomedical Sciences, Psychology, and Integrative Biology are actively committed to supporting the creation of the new IHS streams and this new course. This course will be taught by the AAS who has been requested as part of the IHS stream development. The AAS hired to teach this course will have a strong interdisciplinary background in health sciences, capable of teaching students best practices in health promotion and knowledge translation. This individual will have published in leading national and international journals and will be capable of teaching and assessing students within this course.

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 cxourse 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.

Only students in an IHS stream will be eligible to complete this course. This course is housed in the Faculty of Science and will be taught by the new AAS position requested as part of the IHS program proposal. Several Department/Schools will offer IHS streams and they will advise students on matters related to appropriate sequencing and course selection. Beyond this, there is no anticipated reliance on other campus units.

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.).

There are no new planned reallocation of resources and cost savings.

PROGRAM DEVELOPMENT COMMITTEE
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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.*

Faculty:	1 AAS position that was requested as part of the IHS program proposal
Staff:	None
GA/TAs:	1-2 additional GA/TAs will need to be assigned for grading/proctoring duties

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

*Describe all **additional institutional resources and services** required by <u>all affected</u> 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.

Library Resources and Services:	None
Teaching and Learning Support:	None
Student Support Services:	None
Space and Facilities:	None
Equipment (and Maintenance):	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
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FORM D

TITLE OF PROGRAM(S)/CERTIFICATE(S):	Interdisciplinary Health Sciences
DEPARTMENT(S)/SCHOOL(S):	Science
FACULTY(IES):	Science

Proposed change(s) effective as of* [Fall, Winter, Spring]: *(subject to timely and clear submission)*	Winter 2022

A. NEW COURSE PROFILE

Course # and Title: IHSC-4000: Capstone Project

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.

In this course students will work in interdisciplinary groups to develop a comprehensive and interdisciplinary solution to a grand challenge in health. This will include developing a plan, conducting research on this issue, and disseminating the findings and recommendations for solving this problem. Findings and recommendations will be presented at an annual colloquium. (This course is restricted to students enrolled in an Interdisciplinary Health Sciences Stream**.)** (Prerequisites: IHSC-1000, IHSC-3000).

A.2 Experiential Learning Categories

Does the course include experiential learning? Check all that apply.
For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

- [ ] applied research
- [x] capstone
- [ ] clinic
- [ ] co-op
- [ ] community service learning
- [ ] creative performance or exhibit (*for visual and performing arts*)
- [ ] entrepreneurship
- [ ] field experience or site visit
- [ ] labs
- [ ] No experiential learning in this course

- [ ] field work
- [ ] industry/community consulting project
- [ ] interactive simulations
- [ ] internship – full-time
- [ ] internship – part-time
- [ ] professional practicum
- [ ] research project
- [ ] study abroad

A.3 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 *[please specify]*	Lecture	Lab/ Tutorial	Online	Co-op/ practicum/ experiential learning

3.0	36	X				36			

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** [provide old course number]
IHSC-1000 IHSC-3000	N/A	N/A	N/A	Yes- only for students enrolled in an Interdisciplinary Health Sciences Stream	

***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 Departments/Schools of: 1) Biomedical Sciences; 2) Psychology; 3) Kinesiology are each proposing the creation of new streams within their respective degree programs that will support the need for trained individuals with knowledge of heath, wellness, and illness from multiple perspectives (e.g., biological, behavioural, social, environmental).

- Honours Molecular Biology and Biotechnology - Interdisciplinary Health Sciences Stream
- Honours Psychology - Interdisciplinary Health Sciences Stream
- Honours Biological Sciences - Interdisciplinary Health Sciences Stream

Students within these streams will have the unique opportunity to select and complete an interdisciplinary health science (IHS) concentration in conjunction with completing their declared major. These concentrations will consist of 13 courses: three 'core' interdisciplinary courses (i.e., a foundation, cornerstone, and capstone) that will be completed by *all* students in *any* IHS stream to ensure authentic and integrative learning as well as to offer a cohort learning experience among students from different departments.

The proposed course serves as the capstone course. The purpose of this course is to provide an opportunity for students to draw on the skills and knowledge they have developed throughout the IHS stream and apply and expand these to an interdisciplinary research project.

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

The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967).

In developing this new course, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?

Please consider these prompt questions and additional Resources including disciplinary examples:

PROGRAM DEVELOPMENT COMMITTEE
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- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?*

The IHS program includes a concentration in Indigenous Health and this course will include content related to this topic. Specifically, in this course students will work in groups representing different combinations of IHS streams and concentrations to research a health science topic. Possible research topics may include Indigenous population health, contemporary and/or historical health inequities, creating healthy communities, disease prevention etc. The Faculty of Science is also investing in an Indigenous knowledge keeper who will help to incorporate Indigenous content, perspectives, and materials into this course.

The research will be guided by an Indigenous knowledge keeper who will help to incorporate Indigenous content, perspectives, and materials into this course. This new faculty position is a recognition that Indigenous knowledge is not ours to claim or to own, and that Indigenous knowledge is alive, and it needs to be an Indigenous member that holds this knowledge on behalf of Faculties.

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 *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A U of Windsor graduate will have the ability to demonstrate:
C. Design, plan, and conduct research on an area of health science.	C. the acquisition, application and integration of knowledge

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Course Learning Outcomes *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A U of Windsor graduate will have the ability to demonstrate:
B. Retrieve, review, and critically evaluate scientific literature (also relevant to C). Analyze and interpret qualitative and quantitative data from various sources (also relevant to D).	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Compare and contrast research findings and develop recommendations to solve health science problems.	C. critical thinking and problem-solving skills
D.	D. literacy and numeracy skills
E. Identify and adhere to ethical research practices and protocols. (also relevant to A).	E. responsible behaviour to self, others and society
F.	F. interpersonal and communications skills
G. Conduct peer review and provide constructive feedback to others. Work collaboratively with others to solve health science problems.	G. teamwork, and personal and group leadership skills
H. Create documents or media to disseminate research finding and recommendations that apply to a wide audience (also relevant to D and F).	H. creativity and aesthetic appreciation
I. Identify limitations in existing research and explain how these can be addressed through future research (also relevant to B)	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
	50	100	100-150	100-150	100-150

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 will **only** be available to students enrolled in an IHS stream and is not expected to impact enrolment in existing courses.

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

0	Tutorials
0	Labs
0	Practical experience
1	Independent Study
1-2	Reading for the course
2-3	Work for assessment (essays, papers, projects, laboratory work)
2	Meeting with others for group work/project assignments
0	Studying for tests/examinations
0	Other: *[specify]*

How does the student workload for this course compare with other similar courses in the department/program area?	The estimated workload associated with this course is consistent with a fourth-year science course.

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 Departments/School of Biomedical Sciences, Psychology, and Integrative Biology, are actively committed to supporting the creation of the new IHS streams and this new course. This course will be taught by the AAS who has been requested as part of the IHS stream development. The AAS hired to teach this course will have a strong interdisciplinary background in health sciences. This individual will have published in leading national and international journals and will be capable of teaching and assessing students within this course.

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 cxourse 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.

Only students in an IHS stream will be eligible to complete this course. This course is housed in the Faculty of Science and will be taught by the new AAS position requested as part of the IHS program proposal. Several Department/Schools will offer IHS streams and they will advise students on matters related to appropriate sequencing and course selection. Beyond this, there is no anticipated reliance on other campus units.

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.).

There are no new planned reallocation of resources and cost savings.

PROGRAM DEVELOPMENT COMMITTEE
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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.*

Faculty:	1 AAS position that was requested as part of the IHS program proposal
Staff:	None
GA/TAs:	1-2 additional GA/TAs will need to be assigned for grading/proctoring duties

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

*Describe all **additional institutional resources and services** required by <u>all affected</u> 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.*

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

Re: **Interdisciplinary Health Sciences**   October 21, 2021

The proposed Interdisciplinary Health Sciences (HIS) program were approved by the Faculty Coordinating Councils of the Faculty of Arts, Humanities and Social Sciences, and the Faculty of Science.

The IHS program will further promote the University of Windsor as a 'health' destination and represents an opportunity to significantly increase undergraduate enrolment in the participating departments through both majors and service teaching. A conservative estimate based on a Higher Education Strategy Associates (HESA) report suggests that the steady state enrolment will exceed 100 students and will help to balance declining undergraduate enrolments across campus. The design of this program allows it to admit students starting in Fall 2022.

The program is starting with Streams of existing majors (Biological Sciences, Biomedical Sciences and Psychology), but there is an opportunity for other programs to 'plug-and-play' new streams in the future. The current majors (e.g., Biomedical Sciences) have open and largely unrestricted electives, while the IHS Streams require that students complete a concentration of courses that are

relevant to the complex and diverse Healthcare industry (e.g., Healthcare Economics, One Health). Connections between the Major Streams and the Concentrations will be supported by the Foundation, Cornerstone and Capstone courses that will provide students with a survey of the interdisciplinary nature of the healthcare industry, skills in knowledge translation and an opportunity to work collaboratively to solve a Healthcare related grand challenge respectively. In other words, the interdisciplinary combination of the Stream and the Concentration will be brought together through these dedicated IHS courses.
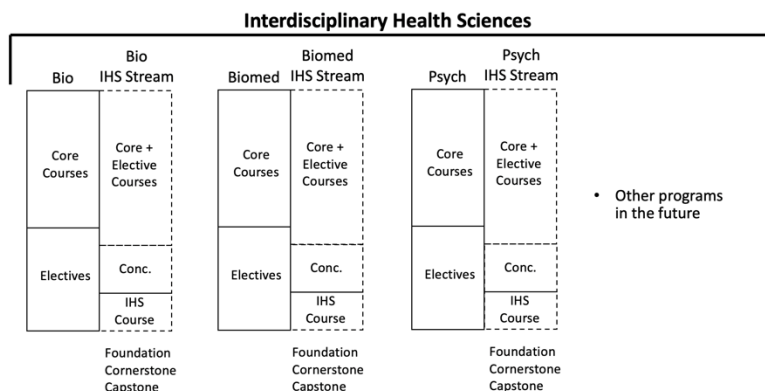
Following the approval at PDC and in parallel with approval at Senate, the Faculty of Science in collaboration with the Faculty of Arts, Humanities and Social Sciences will initiate the process for hiring a Director of the IHS program. In addition to being responsible for offering the Foundation, Cornerstone and Capstone courses, the IHS Director will be initially responsible for academic advising and the development of academic advising sheets, curriculum mapping for the concentrations, and working with the Office of the Registrar to identify potential course and timing conflicts between the Major Streams and the Concentrations that represent new combinations of courses and programs.

It is important to note that the design of this program using streams provides greater flexibility and ensures that there is no competition with the existing majors. Moreover, the enrolments and associated tuition and grant are aligned to the home Faculty (FAHSS for Psychology; Science for Biology and Biomedical), with the service teaching transfers completed between participating programs. This provides the participating programs with the revenue required to cover the costs associated with additional GA/TA support and

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potentially sessional instructors as the program grows. In this respect, the new interdisciplinary (and interfaculty) program is built based on the new Activity Based Budget Model. As noted, there are opportunities for other programs to create additional Streams and/or Concentrations in the future.

Sincerely,

Dr. Chris Houser, PhD
Dean, Faculty of Science
Professor, School of the Environment

INTERDISCIPLINARY HEALTH SCIENCES: A SCAN FOR THE UNIVERSITY OF WINDSOR

Jonathan McQuarrie
March 2021

HIGHER
EDUCATION
STRATEGY
ASSOCIATES

Contents

Introduction

The University of Windsor's Faculty of Science is investigating the possibility of creating an Interdisciplinary Health Science program. This is an exciting opportunity that speaks to several key trends in academic programming: bringing together multiple disciplines in creative and structured ways, breaking barriers between departments, providing students with flexibility to take courses that interest them, and connecting students to a wide range of careers and research possibilities by providing them with an interdisciplinary perspective.

The objective of this report is to provide representatives of the University of Windsor with perspective on how the program can be best constructed to attract applicants without cannibalizing existing Windsor programs. To this end, the report provides an analysis of the high-level construction of other interdisciplinary health science programs, including their core courses, department or faculty location, and what sorts of specializations are offered. It draws from examples across North America to provide evidence of what approaches might attract students, and it examines existing courses at the University of Windsor to provide some initial consideration of how departments might collaborate to create a program that draws on their expertise and attracts students to their classrooms.

There are some assumptions and limitations to this study that should be noted:

1. Discussion of potential contribution by Windsor's departments are made without reference to the budgetary model used by the institution to allocate funding. This is a document designed to generate ideas from best practices across North America; budgetary allocations are best considered internally.
2. The document proceeds from the premise that an Interdisciplinary Health Science program should be launched. In other words, the research was not directed towards *whether* such a program should be launched, but *how* best to launch such a program.
3. HESA's understanding from a mid-January meeting is that the construction of the program will be through the use of core courses based on discipline streams and elective concentrations. The paper therefore particularly prioritizes the question of concentrations, as this appears to be one of the most "open" questions to resolve. There will be some consideration of how other institutions create streams.
4. There is somewhat limited discussion of enrollment patterns here. This is for two reasons: Windsor readers will already know their internal enrollment patterns, and in-depth investigation of enrollment was not in the report's scope. In general, Health Science enrollment in Ontario is relatively stable[1] but there is room to develop new offerings to spark student interest from a range of backgrounds.

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[1] See Statistics Canada, Table 37-10-0112-01 Postsecondary enrolments by field of study.

Methodology

This report primarily draws on academic calendars, university recruitment websites, course descriptions, and student data. HESA conducted a search for North American undergraduate health science programs with the following characteristics:

- The program emphasizes its interdisciplinary nature in any language found on the program page or on future students pages;
- The program has connections to a range of departments and/or provides a range of specializations and concentrations for its students;
- The concentrations or specializations offered have relevance to those being considered by Windsor.

The aim of the scan was to be representative of various approaches taken by programs.

The following characteristics of identified programs were collected:

- Program Composition (single program / distinct streams / concentrations).
- Faculty "home" and contributing departments.
- Core course requirements (i.e. courses that students are required to take).
- Available concentrations or specializations, along with their credit requirements.
- Capstone requirements.

A list of programs HESA collected information from is provided in Appendix A.

The other main source used was Windsor's course descriptions and available programs as found in the Spring 2021 calendar. A main concern was ensuring that any new program does not unduly replicate (or cannibalize) existing programs; reviewing existing programs and providing ideas for how the proposed program can fit alongside them is thus an important part of the evidence gathered. Other programs also provide some evidence for how they direct students to various programs that have overlapping but distinct focal points.

Health Science and Interdisciplinarity

The distinction between **interdisciplinary** and **multidisciplinary** is useful to bear in mind when thinking of this program. While these terms are often used interchangeably, formal usage reveals some subtle differences. *Interdisciplinary* denotes the combination of fields that combine to create a unique branch of inquiry and study that relates to, but is not necessary encompassed by, a range of departments. Cognitive Sciences and Medieval Studies are two examples. *Multidisciplinary* denotes an area that draws on different fields of knowledge and approaches but nevertheless retains the distinction between disciplines.[2]

Health sciences, as suggested by the proposed name for the new Windsor program and by the existence of distinct Schools and Faculties devoted to its study and training, is generally classified as an interdisciplinary field. However, Health Science programs are often constructed in a way that combines multidisciplinary and interdisciplinary approaches—various programs offer courses listed as health science courses and courses from other departments. Table One provides a breakdown of the composition of core Health Science listed courses compared to department listed courses in select Canadian programs. For context, the table also indicates which faculty each program is housed in.

Table 1: Core Courses in Health Science Programs, by Listed Department

Institution	Faculty	Health Sci %*	Other Dep'ts %
McMaster	Faculty of Science	88.2%	11.8%
Western**	School of Health Studies	84.6%	15.4%
Calgary	School of Medicine	81.8%	18.2%
Lethbridge	Faculty of Health Sciences	70.0%	30.0%
UTSC	Faculty of Arts and Science	66.7%	33.3%
Ottawa	Interdisciplinary School of Health Sciences	65.2%	34.8%
UNB	Faculties of Arts, Business, Science, and Applied Science	40.9%	54.5%
SFU	Faculty of Health Sciences	38.1%	61.9%
UNBC	School of Health Sciences	35.3%	64.7%
Manitoba	Faculty of Health Sciences and Faculties of Arts and Science	33.3%	66.7%
Carleton	Faculty of Science	31.3%	68.8%

*Note: "Health Science" includes listing names like Health Studies, Aboriginal Health, or Human Health.
**Western's Health Science program begins in Year Two, so this somewhat overrepresents the weight of Health Science courses a student majoring in the program will complete.

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[2] See, for instance, Basarab Nicolescu, "Multidisciplinarity, Interdisciplinarity, Indisciplinarity, and Transdisciplinarity: Similarities and Differences," *RCC Perspectives*, 2014.

There is no set formula for creating a Health Science core course curriculum in Canada—as long as students receive some exposure to Health Science in their early years, there is considerable space for variation. While Health Science is an interdisciplinary *field,* undergraduate programs are often created in a way that combines interdisciplinary and multidisciplinary approaches.

Table One primarily reveals the diversity of core courses in Health Science programs in Canada. Programs like McMaster and Calgary primarily guide their students through health science listed courses right from a student's beginning, while UNBC and Carleton draw extensively from multiple programs. In effectively all cases, the number of Health Science listed courses increases as a student advances through their major.

Ultimately, while Health Sciences is itself an interdisciplinary field, many Canadian programs are created in a multidisciplinary way. We anticipate, based on planning documents shared with us, that the Windsor program will come closer to the Manitoba and Carleton model of drawing significantly from multiple programs.

Science and Arts

A second factor in examining the high-level composition of these programs is the distinction between a Bachelor of Science and a Bachelor of Arts in the field. Three of the Canadian programs scanned (Simon Fraser, Manitoba, and UT Scarborough) offer a BA option for their students. Table 2 provides a high-level summary of the distinction between the arts and science major core course pathways at those institutions:

Table 2: BSc and BA Comparisons

Institution	Distinctions
Simon Fraser	-BSc students take additional Chemistry, Physics, and Math courses in the first year. -BA students take more Health Science listed courses as core courses in the second and third year; BSc students make take more courses more science departments.
Manitoba	-BSc students take 1st year courses in Biology, Chemistry, and Physics; BA students take 1st year courses in Anthropology, Family Studies, Psychology, and Sociology. -BSc and BA students take the same courses in 2nd year; in 3rd year BA students take an additional Sociology course.
UTSC	-Almost identical year 1 and 2 requirements; BSc students have an additional Biology course. In years 3 and 4, both students select from Health Science listed courses, but the lists students select from are somewhat different.

The limitation of Table 2 is that it considers only the major core courses; presumably students in BA and BSc paths take rather different electives or minors to compliment their interests. Nevertheless, the overlap between the BA and BSc constructions is notable and speaks to the high level of flexibility of the Health Science discipline. For the Windsor approach, it indicates that there can be considerable core course overlap regardless of a student's chosen pathway.

Core Course Topics

Building on this analysis, it is important to examine the courses that programs see as core knowledge that students need to bring into their concentrations and specializations. Again, this analysis will focus primarily on Canadian programs—many U.S. Health Science programs take students in their third year, so the "core" courses do not line up exactly with what might be necessary for a Canadian student.

To compare core skills, HESA examined the course title, department, and description of any required health science program course and coded them according to subject. The table below presents the comparative frequency of these topics. Note that some topics *might* be addressed in part of a course, but not have a full course devoted to it—Indigenous health is an example of this.

Table 3: Core Course Topic Frequency

Pervasive (In all or almost all programs)	Biology; Quantitative Methods/Statistics; Intro to Health Studies.
Frequent (In at least half of the programs)	Anatomy; Chemistry; Ethics; Sociology; Qualitative Research Design.
Common (in at least 3 programs)	Indigenous Studies/Health; Psychology; Nutrition; Economics; Health Determinants.

Most of these core courses are the discipline introduction to these fields. In the case of Biology, for example, this includes courses like UNB's "Biological Principles" that introduces students to ecology, ecosystems, cells and organisms, and evolution; along with some basic lab work examining cells and organisms. This is similar for fields like Chemistry, Economics, Psychology, and Sociology.

Courses focused on Indigenous issues can take a few forms. Lethbridge's program introduces students to health issues and factors shaping Indigenous peoples and also provides some initial perspective into Indigenous ways of knowledge and healing. UNBC has students take a general course on Indigenous history and sociology and allows for further specialization in a concentration.

All programs require that students take a course that sharpens their quantitative skills, either in the form of an introduction to statistics or as a specific course in quantitative methods in health sciences. For instance, Ottawa requires two distinct courses in quantitative methods— a course on continuous variables and a course on categorical variables. It also has students complete exercises that reproduce experiments and issues that they might face in the health sector. Some programs, including SFU and Carleton, require students to complete calculus courses.

Effectively every program has students complete a broad introduction to the interdisciplinary field of health sciences, usually in their first year. For instance, Carleton has students complete "Fundamentals of Health," which provides both various scientific (biomedical, epidemiological) approaches to health and an overview of relevant policies and cultural factors that can affect individual health.

The core courses communicate a large amount concerning the intent of the program. When examining the required courses, a broad spectrum of programs—from scientifically orientated to social science orientated—emerge. Figure 1 demonstrates this by orientating more science intensive programs on the left side and more social science focused programs on the right (with three programs that offer a roughly equal balance between the two approaches in the middle):

Figure 1: Program Orientation, from Scientifically Orientated (l) to Social Science Orientated (r)

Ottawa Carleton Western SFU McMaster	Manitoba Calgary UTSC	UNBC UNB Lethbridge
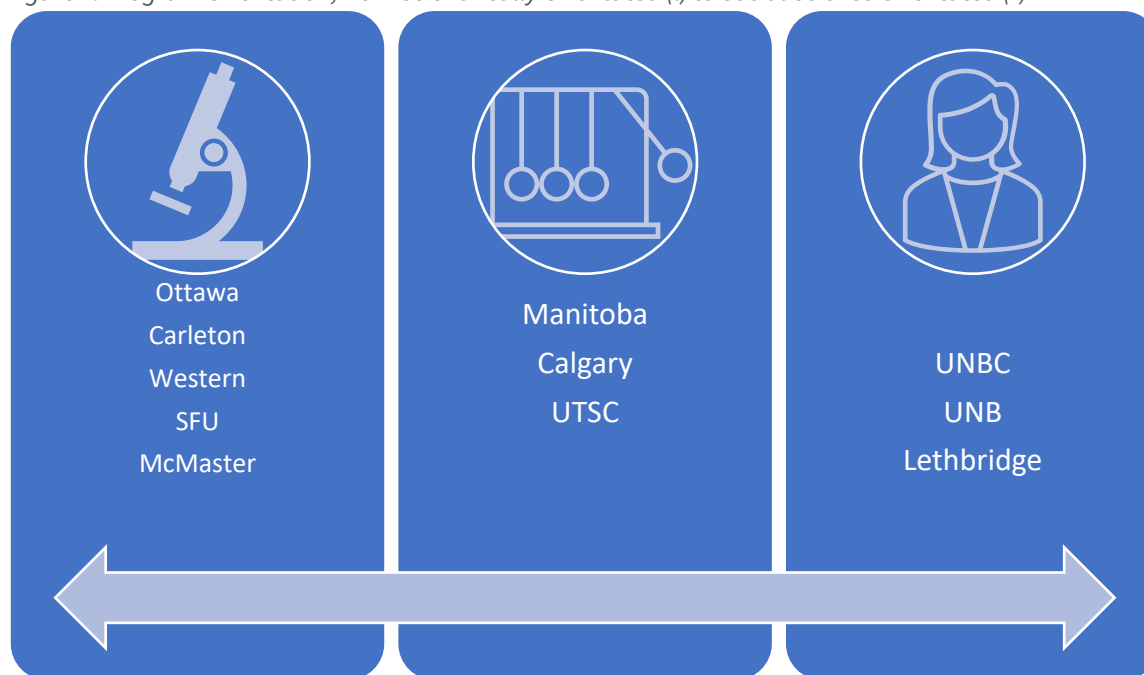
As the image suggests, this is a spectrum rather than three discrete categories. However, the variation between programs aligns well with the current Windsor plan to offer both a path that might be more based in the sciences and one based more in the social sciences. It should also be noted that a more scientifically orientated program like Ottawa's can also be orientated further towards the social sciences or the sciences depending on the student's preferred specialization. In the case of Ottawa's program, a focus on Population and Health leads to more policy and IR related upper year courses, while a focus on Health Biosciences leads to more lab-based courses.

> Whereas most programs are somewhere along a social science-science spectrum, the Windsor three stream model will provide for more flexibility than most existing Canadian programs.

The impact and importance of specializations will be addressed further in the section "Specializations and Concentrations."

Bridging the Streams

There are three main ways to provide students with an understanding of how different disciplines intersect in the health sciences: the foundation/introductory course, cornerstone courses that allow students to examine issues from multiple approaches, and capstone projects or courses that bring themes together.

Foundations

A challenge that faces any interdisciplinary program is ensuring that students get exposure to research and knowledge from across the various disciplinary "streams." As noted above, one way to do this is to have a first-year general introduction to Health Science as an approach that exposes students to the scientific, social, and political questions that the discipline tackles. For instance, SFU's "Foundations of Health Science" focuses on fundamental definitions of health, illness, and disease and explores how these categories are measured. It also exposes students to the various socio-economic, environmental, and political factors that shape population health. UNB's "Introduction to Health from a Global Perspective" takes a similar approach, though it focuses more on how communication and persuasion play a role in shaping public health.

The U.S. programs offer another potential model for the timing of an introductory public health courses. Many of the scanned programs begin in year three, after students complete an Associate degree or the first two general years of a program. For instance, Texas A&M offers their "Foundations of Public Health" to all students in third year, focusing on the history and development of public health, providing an overview of potential careers in public health, and exploring the various definitions and factors behind population health. Ohio University, which is targeted specifically at students with an associate degree or with another health field degree, also offers an "Introduction to Public Health" course while students also complete some other more specific courses on disease and public health advocacy.

The only scanned Canadian program that resembles this U.S. approach is the University of Manitoba. Their program primarily provides students with discipline specific courses in biology, chemistry, economics, and psychology in the first two years before offering "Fundamentals of Health Promotion" in third year.

> Canadian programs usually introduce Health Science in first year. Some programs in the United States do so in third year, so there is some flexibility for the placement of the foundation course.

Cornerstones

Most programs have a selection of required health science listed courses that all students are required to take, regardless of specialization. These "cornerstone" courses are generally intended to provide students with a shared framework and understanding of some more advanced concepts in the health sciences.

Every scanned program had a course devoted to methodological approaches, usually combining an overview of qualitative and quantitative approaches used in health science projects and research. For instance, Calgary's "Interdisciplinary Research Approaches" provides students with approaches for identifying strong research questions and the tools needed to solve them and requires all students in health sciences to take the course regardless of concentration. Some programs, like Ottawa, provide distinct courses for qualitative and quantitative approaches—more science intensive programs (see Figure 1, above) tend to require more quantitative research methodology courses.

Another common cornerstone course that draws on all concentrations are courses in health determinants. There are somewhat different emphases: SFU and Carleton's determinants course focuses on social determinants while UTSC's determinants course foregrounds biological factors, but effectively all determinants courses seek to have students understand the myriad factors that shape human health and to develop a holistic understanding of what shapes health.

> Every program had a research methodology cornerstone course required across concentrations, and most had a course on social and/or biological health determinants.

Other shared cornerstone courses include ones that specifically explore the interaction between policy and health, such as Calgary's "Health Services and Health Systems" and McMaster's "Health Systems and Health Policy." These courses can be useful across concentrations because every health science researcher, regardless of eventual role or industry—every health science project has policy and politics as an environmental factor. Some programs choose to provide this study as a part of their foundation course rather than offer a specific cornerstone course. Another shared course is one that examines understanding of the experiences or perspectives of diseases. For instance, Ottawa's "Experience of Illness, Impairment, and Disability" has students focus on health and wellness from a patient perspective and to develop their understanding of how different people experience the health care system.

Capstones

Capstones in this area take a few forms: a final research project, a thesis, field work, or a group project that draws together students from various streams back together.

The University of New Brunswick, which has considerable collaboration between departments for its program, offers a particularly useful model for Windsor. Their year-long "Transformation through Collaborations and Innovation" projects have students from the various majors (Society and Health, Management and Health, and Biomedical Sciences and Health) return to work in mixed-major groups to first identify a health issue, then formulate a plan, and finally conduct research and present findings for creating specific recommendations for tackling an issue. While the course is a simulation, it replicates projects that students may conduct in teams across different research fields or departments.

Several programs have well developed field work placement opportunities. For instance, the University of California MERCED has students work in community offices and public health clinics in the area after completing a course on Health Care in the San Joaquin Valley, which introduces students to local health care professionals. The University of Illinois requires students complete a short independent study on working in health before completing a field placement that aligns with their chosen concentration.

In Canada, Lethbridge's program has students participate in a full-time fieldwork placement in an "Aboriginal health environment," such as a reserve, a school system, or a relevant public health office. Some programs also offer placements through the general institutional co-op office, but do not make these placements a requirement. Finally, McMaster allows students complete to complete a combination "community based participatory research" and then a thesis that reflects on those experiences and that presents findings from that research. The precise parameters of the participatory research are developed with the support and approval of a thesis supervisor.

The most common capstone approach is simply to require the completion of a major project or a thesis. Calgary, Manitoba, and SFU use this approach, which largely resemble other major research capstones. Students work with a supervisor to identify and develop a project and then produce a substantial research project. This option is generally of most interest to students who are pursuing graduate work. Whether this thesis combines different fields and concentrations depends on the project.

Finally, some programs do not have a formal capstone requirement, but rather have students complete a selection of fourth year courses to satisfy their graduation requirements. Ottawa and Carleton are examples of this approach.

Enrollment Patterns

There are some encouraging enrollment trends that can guide planning for this program. While most Canadian institutions do not readily share enrollment data, four programs provide useful enrollment or graduation data. All four programs show meaningful growth in Health Science graduates over the 2010s. Table 3 below provides a summary of these trends, by calculating the shift in enrollment from the earliest year of data available to the latest by percentage.

Table 4: Growth in Enrollment/Graduates, by Available Programs

Institution	Change in Enrollment/ Graduates	Timespan of Data
Manitoba	120%	2016-2019
McMaster	120%	2014-2018
Ottawa	128%	2010-2019
Simon Fraser	123%	2012-2019

Though the timespans of the growth differ, the growth in enrollment for these programs is remarkably consistent, demonstrating that student interest is relatively strong and even somewhat predictable for programs. While there are some small year-to-year dips within the datasets, the overall growth is quite favourable.

A second way to demonstrate potential demand is to examine provincial application patterns. Using OUAC data, we can examine a spread between the number of first choice applicants in health fields and in Kinesiology and the number of first choice registrants. Typically, Kinesiology programs in Ontario ultimately confirm half of their first-choice applicants, and Health Science programs confirm about one-quarter of their first-choice applicants, as Figure 2 demonstrates.[3]

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[3] Data from OUAC: https://www.ouac.on.ca/statistics/archive/archived-ugrad-2020/. Data is Ontario secondary students only (i.e. OUAC 101).
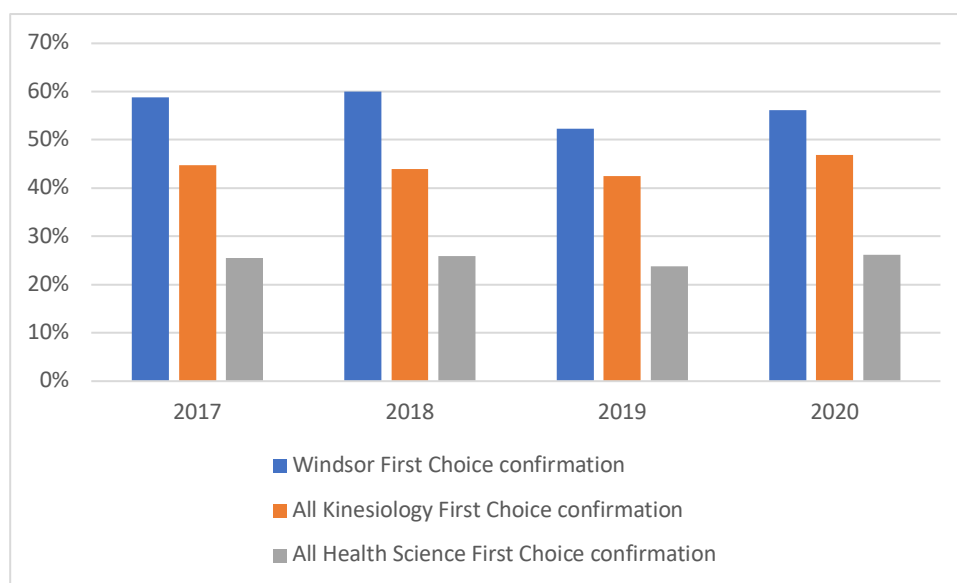
Figure 2: First Choice Applicants Confirmed

Figure 2 primarily demonstrates that there is some unmet demand for students who are interested in Kinesiology and Health Sciences. This suggests that **while cannibalization is a reasonable concern, programs that are sufficiently differentiated should be able to find some student interest.**

Specializations and Concentrations

As a program that draws on a wide range of fields and departments, the various concentrations and specializations are fundamental to making a strong health science program. Table 5 provides an overview of the different specializations offered at the scanned programs and gives a sense of the wide range of options (programs that do not have specializations are not included):

Table 5: Health Science Specializations and Concentrations

University	Specialization Offered
Calgary	Students select an "area of concentration" made from courses in Anthropology, Community Rehabilitation and Disability Studies, Economics, Psychology, Geography, Sociology, or Political Science
Carleton	Biomedical Science; Disability and Chronic Illness; Environment and Health; Global Health; Health Throughout Lifespan.
Illinois	Health and Aging; Health Behaviour Change; Health Diversity
Manitoba	Health Policy, Planning and Evaluation; Health Promotion and Education; Family Health
McMaster	Biomedical Sciences; Child Health; Global Health
New Brunswick	Society and Health; Management and Health; Biomedical Sciences and Health
Northern British Columbia	Aboriginal Health; Environmental Health.
Ottawa	Integrative Health Biosciences; Population and Public Health; Technologies and Innovation in Health Care.
Simon Fraser	Life Sciences; Population and Quantitative Health Sciences.
Toronto (Scarborough)	Health Policy; Population; Co-op BSc and BA option.
Western	Health Sciences; Health and Aging; Health Promotion; Health with Biology Specialization.

HESA used some of the specializations to create an examination of several different broad concentration options. They are: Biomedical Sciences; Health and Aging; Health and Business/Economics; Health Policy; Health Promotion; Indigenous Health; and Medical Humanities. For each of these concentrations, HESA's analysis identifies some sample

programs, considers key outcomes or skills associated with these concentrations, and points to **some** existing Windsor courses that might work in such a concentration.[4]

Each concentration concludes with a brief and high-level discussion of the risk of internal competition (or cannibalization) created by each program.

Material from the University of Windsor suggests that the current vision is to have 10 courses constitute a specialization—our scan suggests that this is reasonably in-line with existing programs.

Biomedical Sciences

Sample Programs

University of Manitoba's Biomedical Science concentration is a three-course specialization requiring extensive lab work that focuses particularly on the mechanisms of disease. Carleton's concentration requires students complete approximately 11 semester courses in topics around organic chemistry, molecular biology, and virology. McMaster's version has students apply for the Concurrent Certificate in Biomedical Sciences after completing 30 units from upper year courses in biochemistry, immunology, and the life sciences. The certificate also requires students to complete a thesis or final independent project.

Key Skills and Outcomes

In terms of competencies, the Biomedical Science concentration tends to provide students with more advanced scientific training in cellular biology, organic chemistry, immunology, pathology, and virology. The main distinction between a Health Science with Biomedical Science concentration degree and a Biomedical Science degree primarily comes for the core courses—health science students will likely have completed more courses on health care policy and on social issues around health care, at the expense of some additional lab or specialized courses in the areas noted above.

Many of these programs suggest that students who complete this concentration will move onto graduate study in the biomedical sciences—Carleton, McMaster and New Brunswick see graduate studies or professional degrees as a major outcome of this specialization. In terms

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[4] Some is emphasized because there may be existing non-listed courses or potentially courses that were not captured in our scan of Windsor courses. We used the current calendar to find sources: https://web4.uwindsor.ca/units/registrar/calendars/undergraduate/cur.nsf/inToc/7E4EDF63A9990D72852572C80056F592?OpenDocument

of immediate job opportunities, the programs highlight laboratory technologist or biomedical researcher as two potential outcomes.

Existing Windsor Courses

Any biomedical science specialization would draw heavily on the existing Biomedical Science programs, and particularly on the Honours degree in Biochemistry and Biomedical Science. As noted above, the examples for biomedical science specializations tend to make their differentiation in terms of the core courses offered to students (some trade-off of science courses for social science courses), but otherwise are quite similar.

Risk of Internal Competition

There is a large degree of overlap between a Health Science with Biomedical Science concentration and the existing Biomedical Science program. However, if another "stream" is used to drive students into Biomedical Science courses by admitting them into an Integrative Health Science program then the program may ultimately represent a net gain of students into biomedical science courses.

Health and Aging

Sample Programs

Aging concentrations usually focus on issues around old age individuals, but courses relating specifically to teenage or child health also are included here. McMaster has an intriguing (if cumbersomely named) Honours BA in Aging and Society & Health and Society that has students take a wide range of courses from anthropology, geography, kinesiology, Indigenous studies, psychology, and sociology. Western has a specific Health and Aging specialization that draws more specifically on health science listed courses that focus on the social, physiological, and mental impact of aging.

Key Skills and Outcomes

The Western program emphasizes that students who complete this concentration are well suited to a range of careers caring for and working with aging adults. Of particular interest is their fourth-year community-based learning course, Gerontology in Practice, which has students work directly with the Age Friendly London Network and other groups connected

with aging. McMaster lists a wide range of career outcomes, including care coordinators, recreation/activation staff at long-term care facilities, physiotherapy, and social work.

Existing Windsor Courses

Potential course matches are present in a number of departments. They include:

- *Biomedical Sciences:* Anatomy; Natural Health Products and Their Mechanisms.
- *Kinesiology:* Health and Wellness; Human Growth and Development; Human Movement and Aging.
- *Interdisciplinary Arts and Sciences:* Health Care Ethics through the Life-Span.
- *Philosophy:* Ethics of Life, Death, and Health Care.
- *Psychology:* Health Psychology.
- *Sociology/Anthropology/Criminology:* On Death and Dying.

As the list above suggests, there are quite a number of potential department participants. There is a particular concentration in courses around Kinesiology's Movement Science major which suggests some potential issue with cannibalization.

Risk of Internal Competition

Reasonably limited—while there is a cluster of courses in Kinesiology, an aging concentration is quite widespread across a range of departments and seems to a strong candidate for a concentration based on existing courses.

Health and Business/Economics

Sample Programs

The main Canadian example of this approach is at the University of New Brunswick, which has students take 11 semester courses in business and economics, including mandatory courses in accounting, marketing, micro and macro economics, as well as health economics. Students also select approximately five additional business or economics courses according to their interests.

Kent State also offers an interesting example in their Integrated Health Sciences program that combines health science specific courses with twelve courses in economics, accounting, computer science, marketing, and public administration. Drawing from several different

departments, Kent State offers an intriguing example of what a Windsor concentration might look like.

Key Skills and Outcomes

Generally, the aim of these programs is to be distinct from a health care administration credential; this is generally done by having students take more science- and lab-based courses through their health science course requirements. The general expectation is that students will use this concentration to go into health care administration where they will have a stronger basis to bridge the silos between administration and clinical practice that persist in health networks. The concentration also sets students up for future MBA studies.

Existing Windsor Courses

In addition to basic courses in accounting and marketing, potential course matches include:

- *Business Administration:* Business Ethics in a Global Context; International Logistics; Supply Chain Management.
- *Biomedical Sciences:* Development of Leadership Skills.
- *Communication, Media and Film:* Research Methods in Communication; Public Relations, Media and Society.
- *Economics:* Micro/Macroeconomics for the Real World; Public Sector Economics: Expenditure.
- *Kinesiology*: Organizational Behaviour; Sport Finance.
- *Psychology:* Industrial-Organizational Psychology.

Risk of Internal Competition

The highest risk of competition is with the Sports Management and Leadership program in Kinesiology, though the intended career outcomes are distinct. There is also need for support from Odette to provide the core courses.

Health Policy

Sample Programs

Many programs have at least one course in health policy, including McMaster, Western, and UNBC. The University of Manitoba and the University of Toronto at Scarborough (UTSC) have specific health policy tracks. UTSC includes a co-op program as part of their program, where students can receive co-op placements with administrative bodies like the Ministry of Health and Long-Term Care or Cancer Care Ontario. There is also a strong model at the University of California Merced, where students get placements with local health organizations in the surrounding community.

There are two approaches: creating the specialization through department listed courses or creating it through health science listed courses. Manitoba has students complete the health science core and then take courses from political science, psychology, sociology, and other disciplines. UTSC has students primarily complete courses from within the department, with specific courses on global health, health and aging, politics, and comparative health policy systems.

Key Skills and Outcomes

Students completing these programs gain an appreciation of Canadian systems and global issues and perspectives in health care policy. Programs mostly endeavour to illuminate how race, class, gender, and sexuality shape health care outcomes. Most programs also give students the tools to compare different health care systems.

This program can set students up for work with NGOs, government, community health organizations, or other health organizations. As with many policy-based programs, there is a decent chance that students will need to complete graduate work to advance in these fields.

Existing Windsor Courses

Potential course matches include:

- *Business Administration:* Business Ethics in a Global Context; International Logistics
- *Economics*: Micro/Macroeconomics for the Real World; Public Sector Economics: Expenditure.
- *Kinesiology:* Population Health; Gender Issues in Sport; Sociology of Sport and Physical Activity.

- *Interdisciplinary Arts and Sciences:* Community Program Delivery and Evaluation; Practical Strategies for Social Change: Intervening to Prevent Sexual Assault; Science, Ethics and Social Policy.
- *Sociology, Anthropology; Criminology:* Sexuality and Health.

Risk of Internal Competition

The largest risk is likely with the Interdisciplinary Arts and Science program, but this may ultimately function as an interdisciplinary option within that program. There is also some cross-over with Kinesiology.

Health Promotion

Sample Programs

Many scanned programs have at least one or two required courses in health promotion, including SFU, and Western. UBC-O has a health promotion concentration in their Kinesiology department, and Manitoba offers a concentration that draws on several different departments. Manitoba also states that health promotion is a fundamental principle of the entire program, so all students receive some course work in the field.

There are also ways to combine specializations; for instance, Ottawa folds their health promotion courses into their Population and Public Health specialization. Here students complete the course "Disease Prevention and Health Promotion," which teaches students about promotion in a variety of community and social contexts.

Key Skills and Outcomes

Programs with this specialization should train strong communicators and evaluators. It should allow students to assess, design, and implement health promotion campaigns and approaches and be able to adjust their approaches depending on audiences and outcomes. Particular focus is also given to methods for evaluating approaches—here, quantitative metric analysis is important.

After graduation, students can move into a wide range of organizations involved in public health. Community health organizations are a particular target for students.

Existing Windsor Courses

Potential course matches include:

- *Biomedical Sciences*: Development of Leadership Skills.
- *Communication, Media and Film:* Research Methods in Communication
- *Kinesiology:* Health and Wellness.
- *Interdisciplinary Arts and Sciences:* Practical Strategies for Social Change: Intervening to Prevent Sexual Assault.
- *Philosophy:* Ethics of Life, Death, and Health Care.
- *Psychology:* Health Psychology.
- *Women and Gender Studies:* Women's Bodies, Women's Health; Practical Strategies for Social Change: Intervening to Prevent Sexual Violence.

Risk of Internal Competition

As a specialization that would likely draw from multiple departments, there seems to be limited risk of this program replicating an existing one. A more significant challenge could be getting enough departments to commit seats to Health Science students.

Nutrition

Sample Programs

Generally, nutrition comes up as a course or two within a major rather than a specific pathway. The main nutrition pathway example comes from the University of South Florida's BSc, which offers a four-course specialization that has courses on food safety, food and culture, and sports nutrition.

Other program examples come from nutrition majors: McGill's BSc in Nutrition Science with potential sub-specializations in sport nutrition, health and disease, and global nutrition patterns. The common core has courses in food science, biochemistry, nutrition and health, and food chemistry.

Key Skills and Outcomes

Nutrition programs provide students with an understanding of the relationship between societies and food, the scientific foundations of food and health, knowledge of metabolism and some base understanding of biotechnology.

Students who complete nutrition studies are generally prepared for further studies to certify as a nutritionist, or to move into medical school. Immediate career outcomes include work in the food, pharmaceutical industries or in government food regulation and policy. Given Windsor's connection to Jamieson Laboratories in Windsor, there are also interesting opportunities in providing students with unique placements and career opportunities.

Existing Windsor Courses

Potential course matches include:

- *Biomedical Sciences:* Natural Health Products and Their Mechanisms; Pharmacology for Health Sciences.
- *Kinesiology:* Sport Nutrition; Obesity and Eating Disorders

Risk of Internal Competition

The largest risk of competition may be with existing Biomedical Science offerings, depending on how orientated the specialization is towards biochemistry and pharmacology. As with other programs, there is also some overlap with Kinesiology.

Indigenous Health

Sample Programs

There are multiple programs that concentrate on Indigenous Health. Two institutions, Lethbridge and Regina, offer specific four-year programs on Indigenous Health, while UNBC, Manitoba, and New Brunswick offer courses in the field. Canadore College in North Bay is an emerging leader in this area for nursing and aging. Generally, there seems to be something of a gap in existing southern Ontario programming for Indigenous Health.

Key Skills and Outcomes

Indigenous Health courses and programs generally focus on providing students with a curriculum that seeks to combine different knowledge and perspectives on care and wellness. Notably, a course like Lethbridge's Indigenous Health and Restoration combines study of the physical, emotional, social, and spiritual levels and approaches issues holistically. Students who complete an Indigenous Health concentration should gain a strong knowledge of how colonial structures have shaped (and harmed) Indigenous health, and some knowledge about Indigenous history in the area where they live.

In terms of outcomes, students with this specialization may have roles that are somewhat similar to other health science graduates (e.g. in health policy, promotion, or moving to graduate work), but they will have the background needed to work with Indigenous populations to promote health.

Existing Windsor Courses

Potential course matches include:

- *English*: Indigenous Literatures.
- *History*: Medicine, Healing, and the Health Professions; Aboriginal Peoples in Canadian History.
- *Interdisciplinary Arts and Sciences:* An Introduction to Indigenous Topics.

Another specific course on Indigenous healing and knowledge would likely be required, but there is an intriguing basis here.

Risk of Competition

Very little. Presumably some students in the Interdisciplinary Arts and Sciences programs take programs that lead them in a similar direction, but this would be a fairly novel program in southwest Ontario overall.

Medical Humanities

Sample Programs

Medical Humanities tends to be offered as a certificate or as a minor. Ottawa offers a Medical Humanities certificate through its Faculty of Medicine, Dalhousie has a four-course certificate, and UTSC recently launched a medical humanities minor. In the U.S., Baylor has an 18 credit certificate (generally six courses); Rice has a minor that draws from Anthropology, Art History, English, History, Philosophy, and other departments; and Perdue has a 18 credit certificate that finishes with a capstone project that is overseen by a faculty member. The Purdue certificate also groups course options by the Humanities and the Social Sciences and draws from disciplines in those fields.

Key Skills and Outcomes

Students with medical humanities training should excel particularly at communication, critical thinking, and ethical decision making. Given that health is shaped by context and location, students completing these degrees should also be more aware of historical and cultural factors that shape understandings of health, wellness, and healing.

Many of the programs highlight the certificate's value to students in pre-medical fields who might become front line practitioners. These programs are also of use to people aiming to work in health care administration, nursing, or health policy.

Existing Windsor Courses

Potential course matches include:

- *English:* Rhetoric.
- *History:* Medicine, Healing and the Health Professions.
- *Kinesiology:* Historical Perspectives on Physical Activity and Sport in Western Civilization; The Social Construction of Leisure; Sociology of Sport and Physical Activity.
- *Interdisciplinary Arts and Sciences:* An Introduction into Indigenous Topics; Health Care Ethics through the Life-Span.
- *Philosophy:* Knowledge, Science, and Society.
- *Psychology:* Psychology of Sex and Gender.

- *Women and Gender Studies:* Boys to Men: A critical exploration of masculinities; Women's Bodies, Women's Health; Victims, Survivors, and Warriors: Violence in the Lives of Women and Girls.

Risk of Internal Competition

These certificates seem to primarily function as a net driver of students to these courses, by drawing together related courses in disparate departments. There may be some competition in determining which (if any) courses are mandatory.

Differentiating Windsor

The report provides a few observations throughout for how Windsor could differentiate itself from existing programs—this brief section gathers and highlights ways that Windsor can differentiate their potential IHS program.

- *Consider developing a flexible entry option for working professionals.* This approach is more common in the U.S., where students enter a Integrated Health Science program in the equivalent of a Canadian third year. This option could be offered to people with relevant diplomas or people who work in the health field but are looking to enhance their credentials.
- *Provide a suite of courses or a specialization in Indigenous health.* While Indigenous health science programs are more common in western provinces, there is little emphasis on this concentration in Ontario. There is thus opportunity for Windsor to be an early mover in this critical area.
- *Embrace the "stream" model.* Most Canadian programs admit students into a central human science program and then have them specialize in later years; the Windsor model of admitting students into discipline distinct "streams" would be reasonably novel in Canada—the main existing model for this approach is at the University of New Brunswick.
- *Connect to Kinesiology.* While some Canadian programs have courses that are often offered in Kinesiology departments (such as courses in aging, nutrition, or human movement), only Manitoba's program has a formal link to the Kinesiology department. Kinesiology departments are more active in U.S. programs, and their participation could be an intriguing feature of a Windsor program.
- *Promote the Medical Humanities.* The medical humanities are an emerging area that can attract students who might not necessarily "see" themselves as science students. It can also help to direct students who might not take humanities courses to those courses, providing those departments with students. The University of Ottawa is an early mover in this area, but there are not too many other examples in Canada.
- *Highlight potential links to Jamieson.* Strong programs can highlight area employers that the program connects to, through recruitment, co-op placements, and talks. Windsor has the advantage of highlighting a major and well-known employer as a key link to their HIS program, and Jamieson is a firm that requires people who understand pharmacology, policy and communication (among other skills). This could be a point of emphasis for a specialization in biomedical sciences or nutrition.
- *Consider a comparative focus.* Windsor has the advantage of being a city on the border and could provide particularly in-depth comparative analysis of Canadian and U.S. approaches to health care and health policy, particularly through occasional lectures or discussions from U.S. based peers.

Conclusion

There is much to recommend for the creation of an Interdisciplinary Health Science program, including strong precedents at other institutions, good underlying enrolment numbers, and existing expertise from a variety of departments. Moving forward, it will be important to clearly distinguish, in both recruitment websites and in the academic calendar, how the IHS program differs from other offerings, like Kinesiology's Movement Science.

The scan highlights several potential advantages to the proposed program:

- Potential tie-ins to industry demand through a nutrition or biomedical science specialization.
- An opportunity to provide relatively unique programming in Indigenous health and in medical humanities.
- Opportunity to meet the considerable demand for people who understand aging and care.
- Recruitment of students who are broadly interested in the sciences and arts but who are not specifically inclined towards one or the other.
- Opportunities for departments to develop courses together or to consider how their existing courses work alongside each other in unique ways.
- Creating another path for students interested in medical school or other post-baccalaureate study in the medical fields.

The document is primarily a scan for reflection and discussion, so there are no firm recommendations associated with the report. However, the scan does demonstrate the considerable potential of an IHS program and the considerable value in moving forward with the program in some form.

Appendix A: Programs Scanned

Note: this list refers to programs scanned in detail, and not to all programs mentioned in the report.

Institution	Program	Faculty/School	Concentrations Available
Calgary	Bachelor of Health Sciences (BSc)	Cumming School of Medicine	Students must pick area of concentration in: Anthropology; Community Rehabilitation and Disability Studies; Economics; Psychology; Geography; Sociology; Political Science
California MERCED	Public Health	School of Social Sciences, Humanities and Arts	None
Carleton	Bachelor of Health Science (Hons)	Faculty of Science	Biomedical Sciences, Disability and Chronic Illness, Environment and Health, Global Health, Health Through the Lifespan
Illinois	Interdisciplinary Health Sciences	College of Applied Health Sciences; Dep't of Kinesiology and Community Health	Health and Aging; Health Behaviour Change; Health Diversity
Lethbridge	BHSc Aboriginal Health	Faculty of Health Science	None
Manitoba	Interdisciplinary Health Program (BA and BSc options)	Rady Faculty of Health Science and the Faculties of Arts and Science	For BSc, there is a Biomedical Sciences Concentration. For BA, there are Health Policy, Planning and Evaluation; Health Promotion and Education; Family Health
McMaster	Bachelor of Health Science (Hons)	Faculty of Health Science	Biomedical Sciences, Child Health, Global Health
Ohio	Integrated Healthcare Studies	College of Health Sciences; Dep't of Interdisciplinary Health Sciences	None, but wide course choice
SFU	BA and BSc Health Sciences	Faculty of Health Science	BSc: Life Sciences; Population and Quantiative Health Sciences.

South Florida	Public Health	College of Public Health	Nutrition; Infection Control; Health Education; Environmental and Occupational Health; Global Health
Texas A&M	BSc Public Health	School of Public Health	Public Health; Industrial Engineering /Occupational Safety
U Ottawa	Bachelor of Health Science (Hons)	Interdisciplinary School of Health Sciences	Population and Public Health; Technologies and Innovation in Health Care; Integrative Health Biosciences
UNB	Bachelor of Health	Combo: Business, Arts and Science, Applied Science and Engineering	Society and Health; Management and Health; Biomedical Sciences and Health
UNBC	Bachelor of Health Science	Faculty of Health Science	Community and Population Health-Aboriginal and Rural OR Environmental Health
UTSC	BA and BSc Health and Society	UTSC Arts and Science, Department of Health and Society	BA-Health Policy (w Co-op option); BSc-Population Health; BSc Health Studies, Co0op
Western	BHSc Health Sciences	School of Health Studies	Health and Aging; Health Promotion; Biology

University of Windsor
Program Development Committee

5.4: **Human Kinetics – Degree Completion Program (Form C1)**

Item for: **Approval**

MOTION: That the Bachelor of Human Kinetics (Honours Kinesiology-Movement Science) for Fanshawe College's 2-year Fitness and Health Promotion Program be approved. ^

^Subject to approval of the expenditures required.

Rationale/Approvals:
- This program has been approved by the Faculty of Human Kinetics.
- *See attached.*

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TITLE OF PROGRAM/CERTIFICATE:	Bachelor of Human Kinetics (Honours Kinesiology - Movement Science) for Graduates of Fanshawe College's 2-year Fitness and Health Promotion Program
DEPARTMENT(S)/SCHOOL(S):	Kinesiology
FACULTY(IES):	Human Kinetics

Proposed articulation agreement or degree completion pathway effective as of* [Fall, Winter, Spring]: *(subject to timely and clear submission)	Fall 2022

A. Program Details
A.1 Admission Requirements (QAF section 2.1.2)

Describe admission requirements for the articulation agreement/degree completion pathway:
- *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.*

A student may enter the Bachelor of Human Kinetics (Kinesiology-Movement Science) program after completing the two-year Diploma in Fitness and Health Promotion from Fanshawe College with a cumulative average equivalent to a 70% (B- or 3.0/4) or better.

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

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

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

Degree Completion Pathways specify the remaining courses that need to be completed for the awarding of the degree program.

Degree Completion – Course Requirements:

Total courses: 25

Degree requirements *(list remaining courses required for completion of degree pathway)***:**
These students will have to complete the following courses in order to fulfill the requirements of the BHK program Honours Kinesiology – Movement Science:

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(a) Human Kinetics Core (3):

KINE-2250	Ethics in Sport and Physical Activity
KINE-2700	Research Design
KINE-2690	Measurement and Evaluation

(b) Movement Science Courses:

Take all of (7):

KINE-1110	Principles of Mental Skills Training
KINE-1100	Human Performance
KINE-1660	Functional Anatomy II
KINE-1800	Fundamental Mechanics of Human Motion
KINE-2240	Introduction to Occupational Biomechanics/Ergonomics
KINE-2040	Sport Nutrition
KINE-2850	Human Growth and Development

Take 6 of:

KINE-3010	Use and Abuse of Drugs
KINE-3020	Exercise and Fitness Psychology
KINE-3030	Imagery Effects on Performance
KINE-3060	Obesity and Eating Disorders
KINE-3100	Motor Learning and Control
KINE-3330	Applied Sport Psychology
KINE-3600	Physiology of Exercise and Respiration
KINE-3610	Musculoskeletal Physiology
KINE-3620	Human Factors and Performance
KINE-3630	Cognitive Ergonomics
KINE-4000	Human Movement and Aging
KINE-4040	Population Health
KINE-4080	Dynamics of Skill Acquisition
KINE-4100	Physical Activity for Special Populations
KINE-4530	Perceptual Motor Development
KINE-4580	The Endocrine System in Sport, Exercise and Health
KINE-4600	Cardiovascular Physiology
KINE-4610	Chronic Disease and Exercise Rehabilitation
KINE-4620	Exercise in Extreme Environments
KINE-4630	Applied Neurophysiology
KINE-4640	The Pathophysiology of Pain
KINE-4650	Ergonomics and Injury Prevention
KINE-4660	Cardiac Rehabilitation
KINE-4670	User Experience for Ergonomics
KINE-4710	Physiological Basis of Sports Therapy
KINE-4750	Individual Studies
KINE-4760	Principles of Coaching
KINE-4770	Outdoor Recreation
KINE-4780	Undergraduate Thesis (6 units)
KINE-4800	Advanced Biomechanics
KINE-4850	Group Dynamics in Sport

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Take 2 of:

KINE-4910	Lab course in Biomechanics and Ergonomics
KINE-4920	Lab course in Physiology
KINE-4930	Lab course in Motor Learning and Sport Psychology

(c) 6 (six) courses from the Faculty of Engineering, the Faculty of Nursing, Department of Psychology, the Faculty of Science and/or the Faculty of Education (Minor in Organizational Learning and Teaching only).

(d) 1 (one) course from any area of study, excluding Kinesiology.

NOTE: Of the 6 courses in requirements (c) all must be at the 2000 level or above.

Transfer credit obtained through this articulation agreement is subject to re-evaluation in cases where the student decides to transfer into another program at the University.

This articulation agreement will be reviewed and amended, if appropriate, by the Department of Kinesiology every five years following the approval of the articulation. 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.

Suggested Course Sequencing

(note: deviation from this sequencing may result in additional time to program completion)

Year 1							
Fall				**Winter**			
1	¨	KINE-1110	Principles of Mental Skills Training	1	¨	KINE-2250	Ethics in Sport and Physical Activity
2	¨	KINE-1800	Fundamental Mechanics of Human Motion	2	¨	KINE-2100	Human Performance
3	¨	KINE-2700	Research Design	3	¨	KINE-1660	Functional Anatomy II
4	¨	____-____	Non-Kin-MS Option	4	¨	____-____	Non-Kin-MS Option
5	¨	____-____	Non-Kin-MS Option	5	¨	____-____	Non-Kin-MS Option
Year 1							
Intersession/Summer							
1	¨	KINE-2690	Measurement and Evaluation				
2	¨	KINE-2040	Sport Nutrition				
3	¨	KINE-2850	Human Growth and Development				
4	¨	____-____	Non-Kin-MS Option				
5	¨	____-____	Non-Kin-MS Option				
Year 2							
Fall				**Winter**			
	¨	KINE-2240	Introduction to Occupational Biomechanics/Ergonomics				
Take 2 of:							
	¨	KINE-4910	Lab course in Biomechanics and Ergonomics				
	¨	KINE-4920	Lab course in Physiology				
	¨	KINE-4930	Lab course in Motor Learning and Sport Psychology				
Take 6 of (# dependent on courses taken in year 1 and 2):							

¨	KINE-3010	Use and Abuse of Drugs		¨	KINE-4600	Cardiovascular Physiology
¨	KINE-3020	Exercise and Fitness Psychology		¨	KINE-4610	Chronic Disease and Exercise Rehabilitation
¨	KINE-3030	Imagery Effects on Performance		¨	KINE-4620	Exercise in Extreme Environments
¨	KINE-3060	Obesity and Eating Disorders		¨	KINE-4630	Applied Neurophysiology
¨	KINE-3100	Motor Learning and Control		¨	KINE-4640	The Pathophysiology of Pain
¨	KINE-3330	Applied Sport Psychology		¨	KINE-4650	Ergonomics and Injury Prevention
¨	KINE-3600	Physiology of Exercise and Respiration		¨	KINE-4660	Cardiac Rehabilitation
¨	KINE-3610	Musculoskeletal Physiology		¨	KINE-4670	User Experience for Ergonomics
¨	KINE-3620	Human Factors and Performance		¨	KINE-4710	Phys. Basis of Sports Therapy
¨	KINE-3630	Cognitive Ergonomics		¨	KINE-4750	Individual Studies
¨	KINE-4000	Human Movement and Aging		¨	KINE-4760	Principles of Coaching
¨	KINE-4040	Population Health		¨	KINE-4770	Outdoor Recreation
¨	KINE-4080	Dynamics of Skill Acquisition		¨	KINE-4780	Undergraduate Thesis (6 units)
¨	KINE-4100	Physical Activity for Special Populations		¨	KINE-4800	Advanced Biomechanics
¨	KINE-4530	Perceptual Motor Development		¨	KINE-4850	Group Dynamics in Sport
¨	KINE-4580	The Endocrine System in Sport				
Take 1 (# dependent on courses taken in year 1 and 2):						
¨	____-____	Non-Kin-MS Option				

Courses used to calculate the major average are: N/A

Provide requirements for the Co-op/Experiential Learning Component (if applicable): N/A

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

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.*

We have had long standing degree completion programs with other colleges that feed into our other major (Sport Management and Leadership) and more recently, with the Fitness and Health Promotion (FHP) diploma program at St. Clair College. These students have always performed well in the past. Consequently, we believe the same to hold true for students entering from this diploma program. It should be noted that students graduating will be given several credits for experiential work (i.e. practice theory and analysis courses, and internship). Moreover, student will be required to take 3 of our 4 core Human Kinetics courses, 7 of 9 foundational Kinesiology-Movement Science major courses, and 6 courses from within the major.

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B.   RATIONALE

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

Our Home and Mission

In national assessments of post-secondary academics, the Department of Kinesiology in the Faculty of Human Kinetics has been, and continues to be, listed as a standout program at The University of Windsor. Since its inception, our Faculty has been a leader in the initiation of student-centered initiatives such as our co-operative education program, KinOne student mentoring program, Kinesiology Research Day, and Scholar's Evening. Students graduate with high levels of satisfaction and experience high rates of employment in related fields once leaving our halls.   We put students first. In fact, at the door to the Faculty of Human Kinetics main office is a declaration that begins:
"**Welcome students! You are the most important people in this office…**"

The demand for degrees in Kinesiology remain steady as there is consistent demand for programming in Kinesiology, recreation and physical education. Students entering this field typically aspire to medical, allied health (physiotherapy, occupational therapy, kinesiology, chiropractic, athletic trainer, sport psychology consultant, ergonomist, etc.), and professions in education, all of which our curriculum provides a strong foundation for entry and success. In particular, to register with the College of Kinesiologists of Ontario (CKO), prospective students must have completed a 4-year bachelor's degree in Kinesiology prior to successfully challenging an entry-to-practice exam ([College of Kinesiologists of Ontario (coko.ca)](#)).   Registered kinesiologists go on to placements in clinical, assessment, and ergonomic fields that include work in hospitals, rehabilitation clinics, insurance agencies, fitness and recreation centres, elite and professional sport, occupational health and safety, among many others ([Home - OKA | Ontario Kinesiology Association](#)).   The Fitness and Health Promotion diploma program at St. Clair College trains students in many of the applied and practical experiences necessary for successful employment in the aforementioned careers. Combined with the theoretical, foundational, and practical knowledge attained in the Bachelor of Human Kinetics Honours Kinesiology – Movement Science major, this degree completion pathway is a natural partnership for student success.

Moreover, our long-standing degree completion programs with both Lambton and Durham College, and recently approved degree completion program with St. Clair College, have resulted in a handful of transfer students each year. This proposal aims to create a relationship with a nearby college and is expected to at least bring as many students as from these other programs. Indeed, the coordinator of the program is excited to see this relationship get off the ground (see Fanshawe coordinator letter in appendix).

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

The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the [Truth and Reconciliation Report](#) (2015) (page 1), the unique legal requirements of the [Constitution Act 1982](#) (Sections 25, 35), the provincial legal requirements of the [Ontario Human Rights Code](#), 1990, and provincial legislation [Bill Pr36](#) (1967).

*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?*

Please consider these prompt questions and [additional Resources](#) including disciplinary examples:
- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*

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- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?*

The Faculty of Human Kinetics is committed to academic study about and engagement with the Indigenous community, while acknowledging that there is significant room for growth in this area within our unit. Indigenous (First Nations, Metis and/or Inuit) content, perspectives and materials are included in our curriculum as part of historical, social, and critical discussions, highlighting local, national, and/or international Indigenous communities and their cultural practices primarily in relation to sport, exercise, and health. While we have offered a course specific to sport and Aboriginal peoples in Canada, several courses in our curriculum include the delivery of Indigenous-specific content in standard lecture format, and we also engage students in the following ways: instructor led discussion, assigned readings and exams, online engagement of Indigenous issues, assignments specific to the Truth and Reconciliation Commission of Canada (TRC), guest speakers, faculty participation in workshops, and by addressing calls to action through the TRC. Specific to this program, we have reached out to the President of Indigenous Sport & Wellness Ontario, who also serves on the North American Indigenous Games (NAIG) Council Board of Directors.

As an example of the content in the current degree completion program: Students will be required to take KINE-2250: Ethics in Sport and Physical Activity in their first year. Within this course, the instructor has consulted with the Indigenous Curriculum and Pedagogy Project Coordinator from the Centre of Teaching and Learning to discuss options for providing Indigenous curriculum to the course. This includes guest lecturers such as Rain Van Dusen, an Indigenous and Black athlete, who provided a lecture on "Lacrosse as Medicine" to the students and has agreed to provide a Lacrosse workshop for students at the University, community and from Walpole Island when CoVid restrictions have lifted. These opportunities have been made possible by the Nanadagikenim- Seek to Know Grant. Moreover, within the class there are "Ethical Dilemmas" discussion topics and case studies of current issues for students to analyze that introduce diverse concepts to the students.

Over the past year, the Faculty of Human Kinetics has undertaken an EDI audit that examined strengths, deficiencies, and barriers to EDI in our program.   We have identified courses that are rich in introductory content and explored ways to increase student exposure to a diverse curriculum.   This includes the intent to modify our learning outcomes and program requirements to ensure our students are learning diverse content at higher levels.   Moreover, the following summarized recommendations were made to the Faculty:

1. Instructors are strongly encouraged to highlight where EDI content is found in their courses.

2. Instructors are strongly encouraged to Include a land acknowledgement and some form of commitment to EDI practices on course syllabi
   - UWindsor land acknowledgement (https://www.uwindsor.ca/indigenous-peoples/)

3. Instructors with considerable EDI content or assignments in their courses should strongly consider updating their course learning outcomes to better reflect the expectations of students.

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4. Instructors are strongly encouraged to increase the diversity of imagery, examples, cases, etc. used in their courses, while staying away from stereotypical imagery (e.g., female nurses, racialized housekeepers, etc.).
    - It is important to note, however, that there are other ways of introducing diversity that can be quite rewarding to the course and students who take them, but also encourage a greater degree of learning. For example:
        i. Ensure that course readings come from a diverse group of authors.
        ii. Move from imagery to discussion or higher-level pedagogy (e.g., debate, reflection, critical evaluation, etc.)
        iii. Invite diverse speakers into classes and consult with community members
        iv. Consult with experts or members of underrepresented groups for course content
        v. Ensure that students can work interactively in diverse and mixed groups
        vi. Ensure that students are encouraged to share diverse perspectives and interpretations of course material

5. Consideration should be given for religion and religious practices within the curriculum.

6. Read and try to incorporate some of the suggestions from the "inclusive teaching syllabus" .

7. Instructors can use the following institutional and/or other resources to find diverse subject experts and/or for help with course design (please note that this list is not the only place to find information and instructors are encouraged to actively seek out diverse researchers and content in their subject areas):
    - UWindsor - Indigenous Knowledges   (contact: Jamie Kechego)
    - UWindsor - Aboriginal Education Centre (contact: Russell Nahdee)
    - UWindsor - Anti-Black Racism Resources   (contact: Marium Tolson-Murtty)
    - UWindsor - Anti-Black Racism Teaching and Learning   (contact: Dr. Andrew Allen)
    - UWindsor - EDI Office   (contact: Dr. Clinton Beckford)
    - Sport Information Resource Centre (SIRC)
    - Black Scientists and Inventors | Black History Month (nationalgeographic.com)
    - HOME | CanadianBlackScientists
    - Indigenous History-Makers (rcaanc-cirnac.gc.ca)
    - Indigenous Sport and Wellness Ontario
    - Ontario Federation of Indigenous Friendship Centres - OFIFC
    - Indigenous Sport for Life
    - North American Indigenous Games (naigcouncil.com)
    - Closeted discoverers: Lesbian, gay, bisexual, and transgender scientists | Science | AAAS (sciencemag.org)
    - LGBTQ Student Athletes - NCAA
    - Canadian Women & Sport | Powering Better Sport Through Gender Equity (womenandsport.ca)
    - Leadership Through Sport #STRONGERTOGETHER | Leadership à Travers Le Sport #FORTENSEMBLE (thebcca.com)
    - 100 Women - BBC News
    - Canadian Journal for Women in Coaching | Coach
    - Rick Hansen Foundation

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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 articulation agreement/degree completion pathway. Please do not name specific individuals.*

The Faculty of Human Kinetics faculty and staff are all committed to supporting the program.

The majority of our courses are taught by tenured or tenure-track faculty with active research programs.

Research areas of Human Kinetics faculty members include:

BHK - Honours Kinesiology - Movement Science major
- Health & wellness
- Healthy body weights
- Nutrition and physical activity patterns, behaviours, and attitudes
- Environmental influences on health outcomes
- Nutrition and physical activity assessment methodologies
- Sport Performance
- Workplace Health and Safety
- Skill Acquisition and Maintenance through the Lifespan
- Sport Involvement, Physical Activity and Healthy Aging
- Adapted Physical Exercise
- Sport commitment, motivation and lifelong training in Masters athletes
- The effect of attentional focus on motor skill acquisition
- Balance and gait disorders
- Cognitive and sensorimotor factors influencing upper-limb movement control
- Sport psychology
- Exercise psychology
- Psychological influences contributing to sport and exercise involvement
- Team dynamics
- Evaluation of soft and rigid tissue effects on force transmission through the body following impact
- Mechanisms of upper extremity injury resulting from falling
- Development and evaluation of workplace physical demands assessment methods
- Ergonomics evaluations in workplace populations (nursing, agriculture, automotive)
- Ligamento-muscular reflexes
- Pain and pain mechanisms in various injuries
- Quantification of mechanical joint stabilization
- Neuromuscular (reflex) contribution to knee and lumbar spine joint robustness/integrity during motion
- Knee, lumbar & cervical spine joint biomechanical model development
- Cognitive Ergonomics
- Cardiovascular function
- Cerebrovascular physiology
- Skeletal muscle function and structure
- The expression and regulation of circulating hormones or hormone-like factors in response to exercise
- Biological sex differences in human performance and health
- Cellular and molecular regulation of skeletal muscle repair following injury
- Interventions that target the pathological mechanisms of autonomic and vascular dysfunction in cardiovascular disease and associated risk factors

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Tenured and tenure track instructors are available and willing to teach these courses and no new staff resources are needed.

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.

We do not expect a change from our current faculty infrastructure and instructor needs.

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

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

Staff Support, Teaching and Learning support, and Student Support Services: No change required in our current level of staff, teaching and learning and student support services.

Our Undergraduate Coordinator is available on a full-time basis to all undergraduate students, regardless of year, to assist with career planning and academic concerns related to the majors in the BHK, including this and other articulation agreements. Moreover, the Undergraduate Coordinator, Department Head, and Associate Dean of Academic Programs within the Faculty of Human Kinetics will ensure that students are advised on matters related to completing this articulation including course sequencing and course selection.

The Applied Learning Coordinator and Laboratory Coordinator will oversee and provide support to students opting to take internship or undergraduate thesis option courses.

Library: No change required in our current level of library support.

Space: Our proposed space needs do not differ from our current needs that adequately support our program needs. Our largest classroom (HK140) holds approximately 230 students and our current and proposed core courses take place in this room.

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 proposed program changes have no influence on the existing resources of other campus units.

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.*

This program relies on existing resources within the Department of Kinesiology.

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 <u>internal reallocation of resources and cost savings</u> 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.).

This program relies on existing resources within the Department of Kinesiology. Students partaking in the degree completion program will naturally fit into the course offerings associated with the BHK Honours Kinesiology – Movement Science

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.

Faculty:	N/A
Staff:	N/A
GA/TAs:	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 <u>all affected</u> 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.

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A
Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	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
ARTICULATION AGREEMENT/DEGREE COMPLETION PATHWAY
FORM C1
APPENDIX A

COURSE OR PROGRAM EQUIVALENCIES

[Include all course equivalencies (for articulation agreements) and program equivalencies (for degree completion pathways) 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]

		Fanshawe FHP		UWindsor BHK
Semester	Code	Title	Code	Title
1	ANAT-1042	Anatomy & Physiology	KINE-1650	Functional Anatomy I
1	ANAT-1041	Functional Anatomy	KINE-2600	Physiology of Human performance
2	PHRE-3054	Physiology of Exercise		
2	NUTR-1022	Nutrition	KINE-1000	Health and Wellness
3	HLTH-3060	Health & Behaviour Change		
3	PHRE-3043	Functional Movement & Conditioning	KINE-3700	Scientific Basis of Conditioning
3	PHRE-3044	Exercise for Special Populations	KINE-4100	Physical Activity for Special Populations
2	PHRE-3055	Cardiovascular Training		
1	PHRE-1045	Resistance Training	KINE-3980	PTA-Physical Fitness
3	FLDP-3032	Personal Training & Field Practice		
4	PHRE-3045	Sports Injuries	KINE-3XXX	Unassigned 3rd Year Kinesiology course (PTA)
2	PHRE-3042	Group Exercise		
2	EDUC-1101	Coaching & Group Dynamics		
4	PHRE-5003	High Performance Training for Sport	KINE-4150	Exercise Prescription for Athletic Populations**
4	HLTH-3061	Health Promotion	KINE-1XXX	Special topics
3	EDUC-3016	Professional Practice	KINE-2XXX	Unassigned 2nd Year Kinesiology Course
4	ENTP-3002	Entrepreneurship-Fitness Professionals	KINE-2XXX	Unassigned 2nd Year Kinesiology Course
4	PLAN-3010	Recreation & Event Planning	KINE-2XXX	Unassigned 2nd Year Kinesiology Course
1	WRIT-1048	Reason & Writing 1 for Health Sciences	GART 1500	Effective Writing I
2	COMM-3067	Professional Communications	GART 1510	Effective Writing II or MGMT 1000 Business Communications
4	FLDP-3018	Field Placement	KINE-4980	Internship

University of Windsor
Program Development Committee

*5.5:   **Mathematics and Statistics – Minor Program Change (Form C)**

Item for: **Approval**

MOTION: **That the requirements for Minor in Statistics be changed in accordance with the program/course change forms.^**

^Subject to approval of the expenditures required.

Rationale/Approvals:
▪ The changes have been approved by the Department of Mathematics and Statistics and the Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council)*.
▪ *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	Minor in Statistics
DEPARTMENT(S)/SCHOOL(S):	Mathematics and Statistics
FACULTY(IES):	Faculty of Science

Proposed change(s) effective as of* [Fall, Winter, Spring]: *(subject to timely and clear submission)*	Winter 2022

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) 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.*

Minor in Statistics

A minor in Statistics can be obtained upon completion of six courses from the following list, with a minimum of 60% in each course: (a) MATH-1250 or MATH-1260 or MATH-1270, (b) MATH-1720 or MATH-1760, (c) MATH-1730, (d) STAT-2920, (e) STAT-2950, and (f) any 3XXX or 4XXX STAT course. A grade of at least 60% must be obtained in all of the courses taken. and (b) three courses from STAT-2920, STAT-2950, STAT-3XXX, STAT-4XXX

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.***

The proposed changes have no financial impact. All courses listed in the minor are offered on a regular basis.

B.   RATIONALE

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

The rationale is to improve clarity and to make a small modification to the requirements so that both STAT-2920 and STAT-2950 are required.

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

*The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967). In revising this program, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Please consider these prompt questions and additional Resources including disciplinary examples:

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form such as learning outcomes and/or in the syllabus where appropriate?*

Given that this change is to remove courses from the program requirements, th is not applicable.

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.

There are sufficient resources to support for the proposed chane.

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

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

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

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 <u>other</u> 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 <u>internal reallocation of resources and cost savings</u> 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.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	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 <u>all affected</u> 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.*

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

University of Windsor
Program Development Committee

*5.6:   **Music – Minor Program Change (Form C)**

Item for: **Approval**

MOTION: That the Music Program Regulations be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:
- The changes have been approved by the School of Creative Arts (SoCA) and the Faculty of Arts, Humanities and Social Sciences Coordinating Council.
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	Music
DEPARTMENT(S)/SCHOOL(S):	School of Creative Arts
FACULTY(IES):	Faculty of Arts, Humanities and Social Sciences

Proposed change(s) effective as of* [Fall, Winter, Spring]: *(subject to timely and clear submission)	Winter 2022

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) 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.

SCHOOL OF CREATIVE ARTS

MUSIC PROGRAM REGULATIONS

1) Advanced Standing Examinations: Upon admission to a Music program a student may petition to write advanced standing examinations in MUSC-1120, MUSC-1130, MUSC-2120, MUSC-2220, MUSC-2230, MUSC-3220, MUSC- 3230, and MUSP-1110.

2) Program Approval: B.Mus **and Concurrent Bachelor of Music/Education** ~~,B.A. Combined Four-Year Honours~~ students must have their programs approved by an advisor prior to registration. All applications for graduation will be subject to approval and such approval will be granted only when the academic program completed is identical with that previously approved by the academic advisor in consultation with the student.

3) Keyboard Proficiency Requirement: Keyboard skill is a valuable tool for learning in all aspects of music, and is an asset for careers in music. Students in the B.Mus. program are required to demonstrate this skill by meeting a keyboard proficiency requirement **within core music courses (Basic and Advanced Skills)**. The requirement includes playing scales, chords, arpeggios; sight reading**,** ~~a four-part chorale; and playing a prepared composition of approximately Grade 6 Conservatory level~~ **and keyboard harmony practices**. ~~The requirement must be met before students in the B.Mus program register for any Music course beyond their second term. Instruction is offered in the lab portion of Theory I and II (MUSC-1120 and MUSC-1130).~~

4) Concert/Recital Viewing Policy: Attendance at a significant number of live musical performances will enrich students' musical experience and contribute to applied musical and academic success. Therefore, a Concert/Recital Viewing Requirement is included in ~~all~~ applied lessons syllabi ~~for embracing outside music events in addition to recitals and special events offered internally~~. This policy applies to all full-time students in B.Mus programs during each year of registration. ~~Details for the current academic year (i.e., number of concerts and other events to be attended) are announced during the first week of classes in September~~

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.**

None

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

B.   RATIONALE

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

SoCA is reducing several practices that produced administrative bottlenecks or are no longer efficient to run financially. The language also include updates that speak to SoCA's current program offerings in music. This language represents the current practices of SoCA. The language needs to be changes as soon as possible as some of the old language is appearing in recruiting materials and are inaccurate.

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

The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the <u>Truth and Reconciliation Report</u> (2015) (page 1), the unique legal requirements of the <u>Constitution Act 1982</u> (Sections 25, 35), the provincial legal requirements of the <u>Ontario Human Rights Code</u>, 1990, and provincial legislation <u>Bill Pr36</u> (1967).

*In <u>revising this program</u>, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Please consider these prompt questions and <u>additional Resources</u> including disciplinary examples:
- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the <u>TRC</u> and <u>University Principles</u> documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which <u>literatures</u>, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form such as learning outcomes and/or in the syllabus where appropriate?*

Given that this change is to remove courses from the program requirements, this question is not applicable.

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 <u>do not</u> 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

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

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.

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.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	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.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

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

University of Windsor
Program Development Committee

*5.7   **Philosophy – Minor Program Change (Form C)**

Item for: **Approval**

MOTION: That the degree requirements for Honours Philosophy and Combined Honours Philosphy programs be changed in accordance with the program/course change forms.^

^Subject to approval of the expenditures required.

Rationale/Approvals:

- The changes have been approved by the Department of Philosophy and the Faculty of Arts, Humanities and Social Sciences Coordinating Council.
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	Honour Philosophy, Combined Honours Philosophy
DEPARTMENT(S)/SCHOOL(S):	Department of Philosophy
FACULTY(IES):	Faculty of Arts, Humanities and Social Sciences

Proposed change(s) effective as of* [Fall, Winter, Spring]: *(subject to timely and clear submission)*	Winter 2022

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) 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 Philosophy
(a) twenty Philosophy courses, at least 18 of which must be at the 2000-level or above, including: PHIL-1100; PHIL-2210; one of PHIL-2500 or PHIL-2540; PHIL-2730 and PHIL-2760; one 3000-level Philosophy course with '5' as the middle digit; PHIL-3760 and PHIL-4770; ~~one of PHIL-4700 or~~ PHIL-4710; ~~one of~~ PHIL-4720 ~~or PHIL-4730;~~ one additional 3000-level or above Philosophy course with '7' as a middle digit; two of PHIL-2600, PHIL-2610, PHIL-2620, PHIL-3600, or PHIL-3520; PHIL-4910; six additional Philosophy courses, at least three of which are at the 3000-level or above.

Combined Honours Philosophy
a)sixteen Philosophy courses, at least 14 of which must be at the 2000-level or above, and including: PHIL-1100; PHIL-2210; one of PHIL-2500 or PHIL-2540;one additional Philosophy course with '5' as the middle digit; PHIL-2730; PHIL-2760; PHIL-4720 or ~~PHIL-4730~~; ~~PHIL-4700 or~~ PHIL-4710; one additional 3000-level or above Philosophy course with '7' as the middle digit; one of PHIL-2600, PHIL-2610, or PHIL-2620; PHIL-4910; any five additional Philosophy courses, at least two of which are at the 3000-level or above.

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.***

None

B.   RATIONALE

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

Currently, we offer four 4000-level courses on topics in contemporary Continental and Anglo-American (Analytic and Pragmatist) philosophy. These were offered on a two-part two year rotation (4700 and 4720 one year, 4710 and 4730 the next). Due to retirements, the department needs to consolidate its 4000-level offering. We will thus be deleting PHIL 4700 (Recent German Philosophy) and PHIL 4730 (Pragmatist Philosophy) and renaming 4710 and 4720. These changes make no material difference to the philosophical content of the courses or the program as a

whole. Instead of French and German in alternating years and Analytic and Pragmatist Philosophy in alternating years, we will offer one consolidated course in Continental Philosophy every year and one consolidated course in Analytic or Pragmatist philosophy every year (the content will be up to the instructor, as it always was).

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

> *The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967).*
>
> *In revising this program, how has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*
>
> *Please consider these prompt questions and additional Resources including disciplinary examples:*
> * *What process has your department/Faculty used to consider Indigenization?*
> * *How have you considered the importance or relevance to the course/program?*
> * *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
> * *What do the TRC and University Principles documents suggest relevant to your course?*
> * *What have other similar courses/programs done that might be relevant to your course/program?*
> * *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
> * *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
> * *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
> * *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
> * *Have you included the information in the other relevant areas in the PDC form such as learning outcomes and/or in the syllabus where appropriate?*

Given that this change is to remove courses from the program requirements, this question is not applicable.

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.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

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 <u>other</u> 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 <u>internal reallocation of resources and cost savings</u> 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.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	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 <u>all affected</u> 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.*

Library Resources and Services:	N/A
Teaching and Learning Support:	N/A

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

Student Support Services:	N/A
Space and Facilities:	N/A
Equipment (and Maintenance):	N/A

University of Windsor
Program Development Committee

*5.8   **Science – Minor Program Change (Form C)**

Item for: **Approval**

MOTION: **That the degree requirements for General Science program be changed in accordance with the program/course change forms.^**

^Subject to approval of the expenditures required.

Rationale/Approvals:
- The changes have been approved by the Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council).
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

TITLE OF PROGRAM(S)/CERTIFICATE(S):	BSCG – General Science
DEPARTMENT(S)/SCHOOL(S):	Faculty of Science
FACULTY(IES):	Faculty of Science

Proposed change(s) effective as of* [Fall, Winter, Spring]: *(subject to timely and clear submission)*	Winter 2022

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) 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.

Bachelor of Science – General Science

Degree Requirements
Total courses: thirty
   (a) two sets of six courses from two different Departments or School as listed:
      • Biological Sciences: BIOL-1101 and BIOL-1111; and *four BIOL-XXXX **or BIOM-XXXX** courses at the 2000 level or above

[…]

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.***

None

B.   RATIONALE

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

Correcting minor grammatical errors and adding the new BIOM course code to requirements.

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

The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967).

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

*In revising this program, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Please consider these prompt questions and additional Resources including disciplinary examples:
- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form such as learning outcomes and/or in the syllabus where appropriate?*

Given that this only a change to the course code (ex: BIOL or BIOM), this question is not applicable.

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.

There are sufficient faculty and staff resourses to support this revision.

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

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

PROGRAM DEVELOPMENT COMMITTEE
MINOR PROGRAM CHANGES
FORM C

> *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 <u>other</u> 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 <u>internal reallocation of resources and cost savings</u> 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.*

Faculty:	N/A
Staff:	N/A
GA/TAs:	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 <u>all affected</u> 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.*

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

University of Windsor
Program Development Committee

*5.9   **Chemistry and Biochemistry - New Course Proposals (Form Ds)**

Item for: **Approval**

MOTION: **That the following courses be approved:^**
            CHEM-3510. Heavy Metal Easy Listening.
            CHEM-4599. Applications of Inorganic Spectroscopy

^Subject to approval of the expenditures required.

Rationale/Approvals:
- This course has been approved by the Department of Chemistry and Biochemistry and Science Program Development Committee (SPDC) (as delegated by the Faculty of Science Coordinating Council).
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

TITLE OF PROGRAM(S)/CERTIFICATE(S):	N/A
DEPARTMENT(S)/SCHOOL(S):	Chemistry & Biochemistry
FACULTY(IES):	Science

Proposed change(s) effective as of* [Fall, Winter, Spring]: **(subject to timely and clear submission)*	Winter 2022

A.   NEW COURSE PROFILE

Course # and Title: CHEM-3510. Heavy Metal Easy Listening.

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.

What are all those metals in the periodic table good for? The course focuses on applications of metals and inorganic in the modern society, with the assumption that the audience are not specialists and thus requires only a basic background in chemistry. Select topics include: metals in medical diagnosis/imaging; treatment of diseases such as cancer; the irreplaceable roles metals play in modern drug synthesis; electronic and clean energy applications; and a balanced consideration of the impacts of metals in the environment. The course will also consider how scientific discoveries are presented to non-specialized audiences in the modern media. (Prerequisite: BIOC-2010/2015.) (3 lecture hours a week.)

A.2 Experiential Learning Categories

Does the course include experiential learning? Check all that apply.
For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

☐ applied research

☐ capstone

☐ clinic

☐ co-op

☐ community service learning

☐ creative performance or exhibit (*for visual and performing arts*)

☐ entrepreneurship

☐ field experience or site visit

☐ labs

☒ No experiential learning in this course

☐ field work

☐ industry/community consulting project

☐ interactive simulations

☐ internship – full-time

☐ internship – part-time

☐ professional practicum

☐ research project

☐ study abroad

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

A.3 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 *[please specify]*	Lecture	Lab/ Tutorial	Online	Co-op/ practicum/ experienti al learning
3	36	X	N/A	N/A	N/A	3 h	N/A	N/A	N/A

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** *[provide old course number]*
BIOC-2010/2015.	N/A	N/A	N/A	No	N/A

***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 course is intended as an upper year elective course for students with a modest background in chemistry. The course reveals the extensive role of inorganic chemistry in modern applications of interest to students (e.g. medical diagnosis, cancer treatment, modern electronic devices, clean energy) while also remaining cognizant of modern environmental issues. The course will also discuss how scientific discoveries are presented to non-specialized audiences in the media.

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

*The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967). In revising this program, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Please consider these prompt questions and additional Resources including disciplinary examples:
- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

- *Which [literatures](), sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?*

The Department of Chemistry and Biochemistry, led by the current Head of Department, has started conversations with members of the University's Aboriginal Education Council (AEC) to create a knowledge base which can support not only appropriate curriculum changes but also identify indigenous examples which faculty can implement to contextualize course content. The Department, in partnership with the members of the University's AEC, will cyclically review its programs to identify aspects of various courses which have direct application or relevance to our indigenous communities. These might include examples drawn from historical indigenous knowledge of the natural world and/or material relevant to contemporary indigenous societies. Appropriate examples will first be discussed with the AEC prior to integration into the curriculum to ensure the topic and content are incorporated in a fashion appropriate to our indigenous cultures. The Department is actively striving to increase participation of indigenous peoples as part of a process of engaging with all under-represented groups. Specifically, we will seek advice and guidance on the impacts that heavy metals have had on Indigenous communities.

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 *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A U of Windsor graduate will have the ability to demonstrate:
A. Explain the sources and distribution of elements on earth; the history of the grouping of elements; the properties of elements that render them useful in a range of applications; the factors that drive ligand design strategies for different applications; medical applications of metal including diagnosis/imaging and treatment; the important of metals in electronic devices and clean energy; the sources of metals in the environment and approaches to mitigating environmental impacts.	A. the acquisition, application and integration of knowledge
B.Access scientific databases, journal papers and media sources to retrieve information. C.Recognize the shortcomings in media reporting of scientific breakthroughs.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

Course Learning Outcomes *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A U of Windsor graduate will have the ability to demonstrate:
D. Critically consider the shortcomings, downsides and long-term impacts of modern scientific results in balance with the possible benefits	C. critical thinking and problem-solving skills
E. N/A	D. literacy and numeracy skills
F. Explain the balance of impacts of science in society (also relevant to H)	E. responsible behaviour to self, others and society
G. Generate non-specialized scientific presentations/media in a variety of formats.	F. interpersonal and communications skills
H. produce non-specialized scientific presentations in collaboration with others	G. teamwork, and personal and group leadership skills
I. Perceive and express the balance of hype, reality and negative impacts in scientific discoveries.	H. creativity and aesthetic appreciation
J. Point out the space for new discoveries in science, and well as explain the importance of less groundbreaking discoveries.	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   20
Year 2   20
Year 3   25
Year 4   30
Year 5   35

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?
No anticipated impact.

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

1	Reading for the course
1	Work for assessment (essays, papers, projects, laboratory work)
1	Meeting with others for group work/project assignments
.5	Studying for tests/examinations
N/A	Other: *[specify]* N/A

How does the student workload for this course compare with other similar courses in the department/program area?	**Similar**

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.

Course will be taught by an existing faculty member in Chemistry & Biochemistry

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.

Faculty is available for course delivery

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.

There is no reliance on existing resources form other campus units

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.*

No additional resources are required

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.

Faculty:	N/A
Staff:	N/A

GA/TAs:	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 <u>all affected</u> 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.*

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

TITLE OF PROGRAM(S)/CERTIFICATE(S):	BSc Honours Chemistry (co-op and thesis) BSc Honours Biochemistry (co-op and thesis)
DEPARTMENT(S)/SCHOOL(S):	Chemistry & Biochemistry
FACULTY(IES):	Science

Proposed change(s) effective as of* [Fall, Winter, Spring]: *(subject to timely and clear submission)*	Winter 2022

A. NEW COURSE PROFILE

Course # and Title: CHEM-4599. Applications of Inorganic Spectroscopy

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 field of Inorganic Chemistry has relied on spectroscopy to gain insight into the structure and dynamics of species from small molecules to the active sites of metalloenzymes. The objective of this course is to learn different spectroscopic techniques that can be used in combination to identify and characterize inorganic compounds. This course will focus on three techniques with vastly different energies, spectroscopic timescales and resolution: NMR, EPR, and Mössbauer spectroscopy. All these spectroscopies have the influence of nuclear spin states in common, and are among the most informative available for the study of molecules. The course in aimed to be practical, with an emphasis on problem solving, so that it may aid you in your own research endeavours. (Prerequisite: CHEM-3500) (3 lecture hours a week.) (Cross-listed with CHEM-8599)

A.2 Experiential Learning Categories

Does the course include experiential learning? Check all that apply.
For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

☐ applied research	☐ field work
☐ capstone	☐ industry/community consulting project
☐ clinic	☐ interactive simulations
☐ co-op	☐ internship – full-time
☐ community service learning	☐ internship – part-time
☐ creative performance or exhibit (*for visual and performing arts*)	☐ professional practicum
☐ entrepreneurship	☐ research project
☐ field experience or site visit	☐ study abroad

☐ labs

☒ No experiential learning in this course

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

A.3 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 *[please specify]*	Lecture	Lab/ Tutorial	Online	Co-op/ practicum/ experienti al learning
3	36	X				3 h			

Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** *[provide old course number]*
CHEM 3500			**CHEM-8599**	No	Was taught under generic "topics in" course code CHEM-4660 and CHEM-8518

***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 course is an advanced course with an emphasis on problem solving. The students gain insight into the unique spectroscopic techniques available and phenomena observable in inorganic chemistry. The course is presented in a way so as to give skills directly applicable to students doing in-lab research projects, where the interpretation of spectra is a key component. The course also gives a larger canvas for students to apply their previous years knowledge in making reasonable assignments of structures and dynamic behavior consistent with the observed spectra, and thus also serves to solidify concepts from previous courses.

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

*The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967). In revising this program, **how** has consideration been given to incorporating Indigenous (First Nations, Métis, or Inuit) content, perspectives, or material into the curriculum?*

Please consider these prompt questions and additional Resources including disciplinary examples:
- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the TRC and University Principles documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?*

The Department of Chemistry and Biochemistry, led by the current Head of Department, has started conversations with members of the University's Aboriginal Education Council (AEC) to create a knowledge base which can support not only appropriate curriculum changes but also identify indigenous examples which faculty can implement to contextualize course content. The Department, in partnership with the members of the University's AEC, will cyclically review its programs to identify aspects of various courses which have direct application or relevance to our indigenous communities. These might include examples drawn from historical indigenous knowledge of the natural world and/or material relevant to contemporary indigenous societies. Appropriate examples will first be discussed with the AEC prior to integration into the curriculum to ensure the topic and content are incorporated in a fashion appropriate to our indigenous cultures. The Department is actively striving to increase participation of indigenous peoples as part of a process of engaging with all under-represented groups.

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 *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A U of Windsor graduate will have the ability to demonstrate:
A. use spectra to solve problems regarding chemical identity, structure and dynamics via their knowledge of the fundamentals of NMR, EPR, and Mössbauer spectroscopy;	B. the acquisition, application and integration of knowledge
B. determine the structure or dynamics of unknown complexes from spectra; devise experiments to probe structure and dynamics; acquire and process data to provide maximum insight; model complex spectra	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)

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Course Learning Outcomes *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A U of Windsor graduate will have the ability to demonstrate:
C. propose and critically analyze structural assignments based on spectra; propose alternate and confirmatory spectroscopic experiments.	C. critical thinking and problem-solving skills
D. read and interpret questions about molecular structure; predict or fit spectra by applying statistics and quantum mechanics-based models..	D. literacy and numeracy skills
E. N/A	E. responsible behaviour to self, others and society
F. critique and refine multiple hypotheses as small groups; work as small groups modelling spectra.	F. interpersonal and communications skills
G. take multiple hypotheses and apply scientific method to refine solutions in groups	G. teamwork, and personal and group leadership skills
H. solve problems that go beyond algorithmic approaches.	H. creativity and aesthetic appreciation
I. creatively apply course material to research (e.g. to gain insight about structure and dynamics).	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	8	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?

Minimal change, course has existed under the generic "Special Topics" description previously.

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
	Tutorials
	Labs
	Practical experience
	Independent Study

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1	Reading for the course
1	Work for assessment (essays, papers, projects, laboratory work)
.5	Meeting with others for group work/project assignments
.5	Studying for tests/examinations
	Other: *[specify]*
How does the student workload for this course compare with other similar courses in the department/program area?	Similar for courses at this level

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.

Course will be taught by an existing faculty member in Chemistry & Biochemistry

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.

Faculty is available for course delivery

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.

There is no reliance on existing resources form other campus units

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.*

No additional resources are required

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.

Faculty:	N/A
Staff:	N/A

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
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GA/TAs:	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 <u>all affected</u> 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.*

Library Resources and Services:	No additional resources are needed, but will use existing resources
Teaching and Learning Support:	No additional resources are needed, but will use existing resources
Student Support Services:	No additional resources are needed, but will use existing resources
Space and Facilities:	No additional resources are needed, but will use existing resources
Equipment (and Maintenance):	No additional resources are needed, but will use existing resources

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

*5.10   **Philosophy - New Course Proposal (Form Ds)**

Item for: **Approval**

MOTION: That the following courses be approved:^
              PHIL 1350. Culture, Health, and Social Justice on Turtle Island

^Subject to approval of the expenditures required.

Rationale/Approvals:
- This course has been approved by the Department of Philosophy, the Faculty of Nursing, and the Faculty of Arts, Humanities and Social Science Coordinating Council.
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE
NEW COURSE PROPOSALS
FORM D

TITLE OF PROGRAM(S)/CERTIFICATE(S):	Bachelor of Nursing
DEPARTMENT(S)/SCHOOL(S):	Philosophy
FACULTY(IES):	FAHSS

Proposed change(s) effective as of* [Fall, Winter, Spring]: *(subject to timely and clear submission)*	Winter 2022

A. NEW COURSE PROFILE

Course # and Title: PHIL 1350. Culture, Health, and Social Justice on Turtle Island

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 explores the theory, research, and professional expectations regarding cultural competency, safety, and humility with respect to the nursing and healthcare of Indigenous people and communities. Students will investigate how colonialism figures prominently in the health disparities of contemporary Indigenous communities. This course emphasizes cultural competency, safety, and humility as part of an ongoing professional journey.

A.2 Experiential Learning Categories

Does the course include experiential learning? Check all that apply.
For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

- [ ] applied research
- [ ] capstone
- [ ] clinic
- [ ] co-op
- [ ] community service learning
- [ ] creative performance or exhibit (*for visual and performing arts*)
- [ ] entrepreneurship
- [ ] field experience or site visit
- [ ] labs
- [x] No experiential learning in this course

- [ ] field work
- [ ] industry/community consulting project
- [ ] interactive simulations
- [ ] internship – full-time
- [ ] internship – part-time
- [ ] professional practicum
- [ ] research project
- [ ] study abroad

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 *[please specify]*	Lecture	Lab/ Tutorial	Online	Co-op/ practicum/ experiential learning
3	36	X	X	N/A	N/A	1.5	N/A	1.5	N/A

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Pre-requisites	Co-requisites	Anti-requisites	Cross-listed with:	Required course?	Replacing old course*** [provide old course number]
None	None	None	N/A	Yes	N/A

***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.

In response to the Truth and Reconciliation Commission of Canada: Calls to Action (2015), and in keeping with the goals of the Canadian Association of Schools of Nursing/Canadian Indigenous Nurses Association task force, the purpose of this course is to provide nursing students (who are primarily non-Indigenous) with the resources needed for developing cultural competency as it pertains to Indigenous individuals and communities on Turtle Island.

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?

At the request of the School of Nursing, this course is developed by a President's Indigenous People Scholar with input from the FAHSS Indigenous Studies working group, and the Centre for Teaching and Learning. The majority of the materials for this course are comprised of Indigenous perspectives and content, including such topics as how colonialism plays a role in the health and welfare of contemporary Indigenous people; more specifically, federal treaty obligations, non-insured health benefits, and how the Indian Act, and Doctrine of Discovery impacts Indigenous health. Given that the focus of the course involves developing cultural competency with respect to Indigenous individuals and communities, the perspectives of Indigenous people in Canada and the USA will figure prominently.

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 *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A U of Windsor graduate will have the ability to demonstrate:
A. Examine the concept of colonialism and its impacts on Indigenous health, illness, and treatment.	A. the acquisition, application and integration of knowledge

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Course Learning Outcomes *This is a sentence completion exercise.* At the end of this course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A U of Windsor graduate will have the ability to demonstrate:
B. Identify personal and professional tendencies toward bias and stereotyping, using contemporary examples. (Also relevant to E.)	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Analyze and critique current systemic power relations in nursing and healthcare related to societal and professional understandings of Indigenous culture.	C. critical thinking and problem-solving skills
D. Formulate a scholarly commentary on an issue of social justice related to Indigenous culture and health. (Also relevant to I.)	D. literacy and numeracy skills
E.	E. responsible behaviour to self, others and society
F. Articulate the diverse perspectives of Indigenous people with respect to seeking and receiving healthcare.	F. interpersonal and communications skills
G. Explain the reasons supporting the provision of culturally appropriate care.	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.

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

This course is developed for the nursing program. There would be no change from the current enrollment or resources in nursing. It will however result in lower enrollment in several arts courses that are popular among our nursing students (WGST 1200 Gal Pals, etc.). It will not affect existing courses in the Philosophy Department.

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:

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3	Lectures
	Tutorials
	Labs
	Practical experience
	Independent Study
2	Reading for the course
2	Work for assessment (essays, papers, projects, laboratory work)
	Meeting with others for group work/project assignments
2	Studying for tests/examinations
	Other: *[specify]*
How does the student workload for this course compare with other similar courses in the department/program area?	The workload is comparable to other courses of similar nature (e.g. NURS 8800).

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.

Teaching—one professor from the Department of Philosophy will be teaching the course. These departments will provide the support for the course.

Requested 5 TA's/ GA's from philosophy for the course.

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.

If the primary instructor is on sabbatical or unable to teach the course and there is no instructor in the philosophy department to teach the course, it may be necessary to rely on a sessional.

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.

There is no reliance on existing resources from other campus units.

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.*

No new resources are expected for the development of this 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.).

This course will not involve streamlining or deleting courses.

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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.*

Faculty:	n/a
Staff:	n/a
GA/TAs:	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 <u>all affected</u> 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.

Library Resources and Services:	n/a
Teaching and Learning Support:	n/a
Student Support Services:	n/a
Space and Facilities:	Classroom
Equipment (and Maintenance):	Standard classroom set up

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

*5.11:   **Human Kinetics – Summary of Minor Course and Calendar Changes**

Item for: **Information**

Forwarded by: **Kinesiology/Human Kinetics**

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. Include the effective date*** *[Fall, Winter, Spring, 20XX]*. **(subject to timely and clear submission)* **These changes require no new resources.**	Undergraduate Winter 2022

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) 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**

KINE-4670. User Experience ~~for Ergonomics~~
[…]

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

The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the Truth and

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

> *Reconciliation Report (2015) (page 1), the unique legal requirements of the Constitution Act 1982 (Sections 25, 35), the provincial legal requirements of the Ontario Human Rights Code, 1990, and provincial legislation Bill Pr36 (1967). 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?*
> *Please consider these prompt questions and additional Resources including disciplinary examples:*
> - *What **process** has your department/Faculty used to consider Indigenization?*
> - ***How** have you considered the importance or relevance to the course/program?*
> - *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
> - *What do the TRC and University Principles documents suggest relevant to your course?*
> - *What have other similar courses/programs done that might be relevant to your course/program?*
> - *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
> - *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
> - *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
> - *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
> - *Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?*

The Faculty of Human Kinetics is committed to academic study about and engagement with the Indigenous community, while acknowledging that there is significant room for growth in this area within our unit. Indigenous (First Nations, Metis and/or Inuit) content, perspectives and materials are included in our curriculum as part of historical, social, and critical discussions, highlighting local, national, and/or international Indigenous communities and their cultural practices primarily in relation to sport, exercise, and health. While we have offered a course specific to sport and Aboriginal peoples in Canada, several courses in our curriculum include the delivery of Indigenous-specific content in standard lecture format, and we also engage students in the following ways: instructor led discussion, assigned readings and exams, online engagement of Indigenous issues, assignments specific to the Truth and Reconciliation Commission of Canada (TRC), guest speakers, faculty participation in workshops, and by addressing calls to action through the TRC.   At this time there is no specific Indigenous content within this course.

A.2 Experiential Learning Categories

> *Does the proposed course revision include the addition or deletion of an experiential learning component? For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions*

☒ **No** - the revision(s) does (do) not include the addition or deletion of experiential learning component(s).

☐ **Yes** - the revision(s) include(s) the addition or deletion of experiential learning component(s). Check all that apply:

Experiential Learning Categories	Addition	Deletion
applied research	☐	☐
capstone	☐	☐
Clinic	☐	☐
co-op	☐	☐
community service learning	☐	☐
creative performance or exhibit (*for visual and performing arts*)	☐	☐

entrepreneurship	☐	☐
field experience or site visit	☐	☐
field work	☐	☐
industry/community consulting project	☐	☐
interactive simulations	☐	☐
internship – full-time	☐	☐
internship – part-time	☐	☐
professional practicum	☐	☐
research project	☐	☐
study abroad	☐	☐
Labs	☐	☐

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.	
COURSE NUMBER AND TITLE:	KINE-4670. User Experience ~~for Ergonomics~~
SELECT ONE OF THE FOLLOWING:	
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/)	_____ 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 https://ctl2.uwindsor.ca/cuma/public/)	_____ 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.	**X** Learning outcomes need not be submitted. PROVIDE DATE LAST REVIEWED BY PDC/SENATE then go to the next course: **2020-10-09**(check CUMA database at: https://ctl2.uwindsor.ca/cuma/public/)

University of Windsor
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*5.12:   **Science -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

			Supportive	
AAU Consulted	**AAU Head/Directors**	**Date Consulted**	**Yes**	**No**

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.**	Winter 2022

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) 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**

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PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

SCIE-3800. Service Learning
Participation in experiential learning with community partners to provide students direct experience with the subject matter they are studying in the curriculum. Students are given an opportunity to enhance their academic learning by engaging with community partners to analyze and address community needs and solve problems related to social issues and community needs. Students will also reflect on their service experiences, and personal growth. ~~May be repeated 2 times for credit.~~ Prerequisite: Approval from the Course Instructor and the Dean of Science (or designate). This course will be graded Pass or Fail (3**.0** credits)**. Students may take 2 courses from SCIE 3800, 3900, and 3990 for credit, including repeating one of the three courses twice. However, students may not take more than one of the courses from SCIE 3800, 3900, and 3990 in the same semester.**

SCIE-3900. Undergraduate Research Experience
Participation in discipline specific research activities under the direction of a faculty member in the Faculty of Science. Students will gain experience in the methods, techniques and ethical conduct of research. ~~May be repeated 2 times for credit.~~ Grading as Pass/Fail based on successful participation in research and **submission of reflective assignments**. Prerequisite: Students need approval from the faculty mentor and the Dean of Science (or designate). This course will be graded Pass or Fail (3.0 credits)**. Students may take 2 courses from SCIE 3800, 3900, and 3990 for credit, including repeating one of the three courses twice. However, students may not take more than one of the courses from SCIE 3800, 3900, and 3990 in the same semester.**

SCIE-3990. Internship
Students will participate in a 12-week work placement and complete an Internship Report. The internship is designed to enhance and complement their academic learning. The course requirements are structured to enable students to make connections between academic learning and on-the-job training, to further develop analytical and interpersonal skills, and to practice business writing skills. The internship experience also helps students gain a clearer sense of potential career paths and provides an opportunity to build professional networks. ~~May be repeated 2 times for credit.~~ Prerequisite: Approval from the Course Instructor and the Dean of Science (or designate). This course will be graded Pass or Fail. (3**.0** credits)**. Students may take 2 courses from SCIE 3800, 3900, and 3990 for credit, including repeating one of the three courses twice. However, students may not take more than one of the courses from SCIE 3800, 3900, and 3990 in the same semester.**

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

The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the [Truth and Reconciliation Report](#) (2015) (page 1), the unique legal requirements of the [Constitution Act 1982](#) (Sections 25, 35), the provincial legal requirements of the [Ontario Human Rights Code](#), 1990, and provincial legislation [Bill Pr36](#) (1967).

*In 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?*

Please consider these prompt questions and [additional Resources](#) including disciplinary examples:
- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the [TRC](#) and [University Principles](#) documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*

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> - *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
> - *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
> - *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
> - *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
> - *Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?*

Given that this is only a change to the co-requisites, this question is not applicable.

A.2 Experiential Learning Categories

> *Does the proposed course revision include the addition or deletion of an experiential learning component?*
>
> *For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions*

☒ **No** - the revision(s) does (do) not include the addition or deletion of experiential learning component(s).

☐ **Yes** - the revision(s) include(s) the addition or deletion of experiential learning component(s). Check all that apply:

Experiential Learning Categories	Addition	Deletion
applied research	☐	☐
capstone	☐	☐
clinic	☐	☐
co-op	☐	☐
community service learning	☐	☐
creative performance or exhibit (*for visual and performing arts*)	☐	☐
entrepreneurship	☐	☐
field experience or site visit	☐	☐
field work	☐	☐
industry/community consulting project	☐	☐
interactive simulations	☐	☐
internship – full-time	☐	☐
internship – part-time	☐	☐
professional practicum	☐	☐
research project	☐	☐
study abroad	☐	☐
labs	☐	☐

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*

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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.	
COURSE NUMBER AND TITLE:	**SCIE-3800. Service Learning** **SCIE-3900. Undergraduate Research Experience**
SELECT ONE OF THE FOLLOWING:	
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/)	____ 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 https://ctl2.uwindsor.ca/cuma/public/)	____ 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.	**___x_** Learning outcomes need not be submitted. PROVIDE DATE LAST REVIEWED BY PDC/SENATE then go to the next course: **_____May 26, 2017** (check CUMA database at: https://ctl2.uwindsor.ca/cuma/public/)

University of Windsor
Program Development Committee

*5.13:   **Mathematics and Statistics – 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. Include the effective date*** *[Fall, Winter, Spring, 20XX]***.** **(subject to timely and clear submission)* **These changes require no new resources.**	Winter 2022

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) 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**

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~~MATH~~ **ACSC-**3980. Theory of Interest
This course will cover measurement of interest, elementary and general annuities, amortization schedules and sinking funds, bonds, depreciation, depletion, and capitalized cost. (Prerequisite: MATH-1730 or consent of instructor.) (3 lecture hours per week.)

~~MATH~~ **ACSC-**4980. Life Contingencies I
This course will cover life contingencies, survival distributions and life tables, life insurance, life annuities, net premiums, and net premium reserves. (Prerequisites: MATH-2780, MATH-2790, MATH-3980, and STAT-2950, or consent of instructor.) (3 lecture hours per week.)

~~MATH~~ **ACSC-**4981. Life Contingencies II
This course will cover advanced life contingencies, risk theory, survival models, and construction and graduation of mortality tables. (Prerequisite: MATH-4980 or consent of instructor.) (3 lecture hours per week.) With the renaming of the courses, other simple, though numerous, changes need to be made. We think it simpler to state the required changes rather than amend all the occurrences.

Notes:
1. Change all occurrences of "MATH-3980" to "ACSC-3980" including occurrences where the hyphen might be missing.
2. Change all occurrences of "MATH-4980" to "ACSC-4980" including occurrences where the hyphen might be missing.
3. Change all occurrences of "MATH-4981" to "ACSC-4981" including occurrences where the hyphen might be missing.
4. Change all occurrence of "MATH or STAT courses" to "MATH, STAT, or ACSC courses".
5. Change all occurrences of "Courses used to calculate the major average are: courses listed under requirement (a), and any courses taken in the major area(s) of study" to "Courses used to calculate the major average are all courses taken with the MATH, STAT, or ACSC prefix".

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

The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the [Truth and Reconciliation Report](#) (2015) (page 1), the unique legal requirements of the [Constitution Act 1982](#) (Sections 25, 35), the provincial legal requirements of the [Ontario Human Rights Code](#), 1990, and provincial legislation [Bill Pr36](#) (1967).

*In 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?*

Please consider these prompt questions and [additional Resources](#) including disciplinary examples:
- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the [TRC](#) and [University Principles](#) documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*

- *Which literatures, sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?*

Given that this is only a change to the course code (ie., MATH to ACSC), this question is not applicable.

A.2 Experiential Learning Categories

Does the proposed course revision include the addition or deletion of an experiential learning component? For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

☒ **No** - the revision(s) does (do) not include the addition or deletion of experiential learning component(s).

☐ **Yes** - the revision(s) include(s) the addition or deletion of experiential learning component(s). Check all that apply:

Experiential Learning Categories	Addition	Deletion
applied research	☐	☐
capstone	☐	☐
clinic	☐	☐
co-op	☐	☐
community service learning	☐	☐
creative performance or exhibit (*for visual and performing arts*)	☐	☐
entrepreneurship	☐	☐
field experience or site visit	☐	☐
field work	☐	☐
industry/community consulting project	☐	☐
interactive simulations	☐	☐
internship – full-time	☐	☐
internship – part-time	☐	☐
professional practicum	☐	☐
research project	☐	☐
study abroad	☐	☐
labs	☐	☐

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.***

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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 <u>bolding and underlining</u>.

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.	
COURSE NUMBER AND TITLE:	*~~MATH~~- ACSC-3980. Theory of Interest* *~~MATH~~- ACSC-4980. Life Contingencies I* *~~MATH~~- ACSC-4981. Life Contingencies II* *(Note: Learning outcomes were last updated November 8, 2019)*
SELECT ONE OF THE FOLLOWING:	

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/)	____ 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 https://ctl2.uwindsor.ca/cuma/public/)	____ 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.	___x_ Learning outcomes need not be submitted. PROVIDE DATE LAST REVIEWED BY PDC/SENATE then go to the next course: **November 8, 2019** (check CUMA database at: https://ctl2.uwindsor.ca/cuma/public/)

University of Windsor
Program Development Committee

*5.14:   **Philosophy – Summary of Minor Course and Calendar Changes**

Item for: **Information**

Forwarded by: **Faculty of Arts, Humanities and Social 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
N/A				

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.**	Undergraduate, 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) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **underlining and bolding**.*

*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**.*

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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**

~~**PHIL-4700. Recent German Philosophy**~~
~~Significant developments in German philosophy in the twentieth century will be examined. Portions of the course may be devoted to Husserl (the founder of the phenomenological school), Heidegger (a seminal figure in existentialism), Gadamer (a key figure in the development of hermeneutics), Critical Theory (a Freudian and Marxist approach to social and economic issues), and second-generation critical theorists such as Habermas. (Prerequisite: PHIL-1120, and one 2000-level or above Philosophy course, and semester 5 or above standing, or permission of instructor.) (Cross-listed with PHIL-8700.)~~

PHIL-4710. Recent ~~French~~ Continental Philosophy
A study of significant developments in recent ~~French~~ Continental thought. **The content of the course will vary according to the Instructor's interests and background. Traditions that might be examined include existential phenomenology, Marxism, deconstruction, and post-structuralism.** ~~as found in Bergson, Sartre, Merleau-Ponty, Bataille, and Levi-Strauss, for example.~~ (Prerequisite: PHIL-1100 or PHIL-1120, at least one 2000-level or above Philosophy course, and semester 5 or above standing, or consent of the instructor.) (Cross-listed with PHIL-8710.)

PHIL-4720. Analytic **or** Pragmatist **Philosophy**
Advanced study of themes and trends in **A**nalytic **or Pragmatist** philosophy. **Ordinarily, the topic will rotate on a yearly basis between Analytic Philosophy**, in which logic, language, and scientific evidence play central roles and **Pragmatist Philosophy** which takes practice, in a broad sense of the term, to have a central role in most if not all philosophical issues. (Prerequisite: PHIL-1100, or PHIL-1120, and at least one 2000-level or above Philosophy course, and semester 5 or above standing, or permission of instructor.) (Cross-listed with PHIL-8720.)

~~**PHIL-4730. Pragmatist Philosophy**~~
~~Advanced study of some of the major themes or figures in pragmatist philosophy, which takes practice, in a broad sense of the term, to have a central role in most if not all philosophical issues. (Cross-listed with PHIL-8730.)~~

NOTE: This change will also be made to the cross-listed graduate courses.

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 course PHIL-4710 focuses on philosophical traditions that developed primarily in Continental Europe, but whose representative thinkers may also lie outside that geographical region. Comparisons, contrasts, or complementarities between Continental traditions and Indigenous (or other) perspectives are possible. The course PHIL-4720 focuses on philosophical traditions that developed primarily in the United Kingdom and The United States of America, but whose representative thinkers may also lie outside those geographical regions. Comparisons, contrasts, or complementarities between Continental traditions and Indigenous (or other) perspectives are possible.

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

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*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 <u>bolding and underlining</u>.** **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.	
COURSE NUMBER AND TITLE:	**PHIL 4710. Recent Continental Philosophy** *(Note: These are revised learning outcomes. They were last updated May 25, 2018).*
SELECT ONE OF THE FOLLOWING:	

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/)	**____** Provide learning outcomes for the course by completing the Learning Outcomes Table below.
II. * There are changes to the course learning outcomes	**__X** 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 https://ctl2.uwindsor.ca/cuma/public/)	**____** 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: https://ctl2.uwindsor.ca/cuma/public/)

Course Learning Outcomes *This is a sentence completion exercise.* <u>At the end of the course, the successful student will know and be able to:</u>	**Characteristics of a University of Windsor Graduate** <u>A U of Windsor graduate will have the ability to demonstrate:</u>
A. Identify and distinguish some of the important concepts in recent ~~French~~ **Continental** philosophy.	A. the acquisition, application and integration of knowledge
B. Define key components of recent ~~French~~ **Continental** philosophy.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Apply different critical positions to specific issues in recent ~~French~~ **Continental** philosophy	C. critical thinking and problem-solving skills
D. Prepare and discuss reasoned positions on recent ~~French~~ **Continental** philosophy.	D. literacy and numeracy skills

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Course Learning Outcomes *This is a sentence completion exercise.* At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A U of Windsor graduate will have the ability to demonstrate:
E. Employ ideas from philosophical works to reflect on the nature of recent ~~French~~ **Continental** philosophy.	E. responsible behaviour to self, others and society
F. Discuss, philosophically, ideas of **recent Continental philosophy** presented by others and oneself .	F. interpersonal and communications skills
G.N/A	G. teamwork, and personal and group leadership skills
H.N/A	H. creativity and aesthetic appreciation
I.N/A	I. the ability and desire for continuous learning

COMPLETE THIS TABLE FOR EACH COURSE LISTED IN SECTION "A" ABOVE.	
COURSE NUMBER AND TITLE:	**PHIL 4720: Analytic or Pragmatist Philosophy** *(Note: These are revised learning outcomes. They were last updated May 25, 2018).*
SELECT ONE OF THE FOLLOWING:	
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/)	_____ Provide learning outcomes for the course by completing the Learning Outcomes Table below.
II. There are changes to the course learning outcomes	__**X**_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 https://ctl2.uwindsor.ca/cuma/public/)	_____ 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: https://ctl2.uwindsor.ca/cuma/public/)

Course Learning Outcomes *This is a sentence completion exercise.* At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A U of Windsor graduate will have the ability to demonstrate:
A. Identify and distinguish some of the important concepts in analytic **or pragmatist** philosophy	A. the acquisition, application and integration of knowledge

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Course Learning Outcomes *This is a sentence completion exercise.* At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A U of Windsor graduate will have the ability to demonstrate:
-Appreciate the role of arguments in defending a philosophical position.	
B. Define key components of analytic or pragmatist philosophy, including the role of logic **or practice** and the significance of language **and social experience** Review philosophical problems methodically.	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
C. Critically assess arguments made by analytical **or pragmatist** philosophers	C. critical thinking and problem-solving skills
D. Prepare and discuss reasoned positions on analytic **or pragmatist** philosophy.	D. literacy and numeracy skills
E. Employ ideas from philosophical works to reflect on the nature of analytic **or pragmatist** philosophy	E. responsible behaviour to self, others and society
F. Discuss, philosophically, ideas presented by others and oneself.	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

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*5.15   **Psychology – Summary of Minor Course and Calendar Changes**

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

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
Psychology	Dr. Patti Fritz	21 September 2021	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 2022

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) 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

PSYC-3130. Advanced Statistics
Required for students anticipating honours thesis projects in their fourth year. One-way, two-way, and higher order ANOVA, repeated measures ANOVA, multiple comparisons, correlation and univariate regression, introduction to multivariate regression and the general linear model, with an emphasis on computer data analysis. (Prerequisite: **70% or greater in both PSYC-2300 and** SOSC-2500.) (Credit can only be obtained for one of PSYC-3130 or SACR-3080.) (2 lecture hours, 1 laboratory hour a week.)

PSYC-3310. Conducting Research in Psychology
Required for students anticipating honours thesis projects in their fourth year. Topics include: how to generate research ideas, philosophy and place of research in psychology, utilizing research advisors and supervision, using library resources, writing research reports, ethical issues in student research, planning effective research designs, dealing with participant recruitment and data collection, locating research measures, making data analysis decisions, using statistical packages such as SPSS, disseminating research ideas and findings. (Prerequisites: **70% or greater in both** ~~SOSC-2500~~ PSYC-2300 and **PSYC.3200**; and consent of instructor or the Undergraduate Program Chair.)

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

The University of Windsor is committed to building and sustaining stronger, more meaningful inclusive partnerships with Indigenous students, scholars, and communities. Indigenization of curriculum takes place in a larger context, including a requirement to respond to the four Calls to Action in education of the [Truth and Reconciliation Report](#) (2015) (page 1), the unique legal requirements of the [Constitution Act 1982](#) (Sections 25, 35), the provincial legal requirements of the [Ontario Human Rights Code](#), 1990, and provincial legislation [Bill Pr36](#) (1967).

*In 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?*

Please consider these prompt questions and [additional Resources](#) including disciplinary examples:
- *What **process** has your department/Faculty used to consider Indigenization?*
- ***How** have you considered the importance or relevance to the course/program?*
- *How has your department or faculty approached raising awareness for Indigenous knowledges in your area?*
- *What do the [TRC](#) and [University Principles](#) documents suggest relevant to your course?*
- *What have other similar courses/programs done that might be relevant to your course/program?*
- *In what ways could your course/program have flexibility to include new ways of learning, or content for Indigenous approaches or knowledges?*
- *What is your awareness of the history or background to approaches you are considering, such as the land acknowledgement? How have you developed your awareness?*
- *Which [literatures](#), sources, or Indigenous Knowledge Holders have you consulted? (Please confirm you have permission to share any names, it may be helpful to have the person confirm the text if you will be submitting their name)*
- *Are you engaging in critical analysis of Settler Colonialism and/or Decolonization?*
- *Have you included the information in the other relevant areas in the PDC form (such as learning outcomes) or in the course syllabus where appropriate?*

Indigenous content, perspectives, and materials are not planned for this particular change. However, Psychology recognizes the need to take such perspectives into consideration in our curriculum and will be working with indigenous scholars to incorporate content into the overall curriculum.

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

Psychology is currently in talks with Indigenous co-ordinator of curriculum and pedagogy toward the Indigenization and Decolonization of all psychology undergraduate courses (forthcoming Winter/22).

A.2 Experiential Learning Categories

Does the proposed course revision include the addition or deletion of an experiential learning component? For definitions go to: https://www.uwindsor.ca/cces/1423/experiential-learning-definitions

☒ **No** - the revision(s) does (do) not include the addition or deletion of experiential learning component(s).

☐ **Yes** - the revision(s) include(s) the addition or deletion of experiential learning component(s). Check all that apply:

Experiential Learning Categories	Addition	Deletion
applied research	☐	☐
capstone	☐	☐
Clinic	☐	☐
co-op	☐	☐
community service learning	☐	☐
creative performance or exhibit (*for visual and performing arts*)	☐	☐
entrepreneurship	☐	☐
field experience or site visit	☐	☐
field work	☐	☐
industry/community consulting project	☐	☐
interactive simulations	☐	☐
internship – full-time	☐	☐
internship – part-time	☐	☐
professional practicum	☐	☐
research project	☐	☐
study abroad	☐	☐
Labs	☐	☐

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

PROGRAM DEVELOPMENT COMMITTEE
SUMMARY OF MINOR COURSE AND CALENDAR CHANGES
FORM E

(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.	
COURSE NUMBER AND TITLE:	PSYC-3130 – Advanced Statistics PSYC-3310. Conducting Research in Psychology
SELECT ONE OF THE FOLLOWING:	
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/)	__**X**__ 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 https://ctl2.uwindsor.ca/cuma/public/)	____ 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: https://ctl2.uwindsor.ca/cuma/public/)

See attached

PSYC-3310. Conducting Research in Psychology
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
review literature to effectively support rational hypotheses. **(Also applies to B, D.)**	**A.** the acquisition, application and integration of knowledge
recognize and identify ethical issues in research, and consider possible ways of handling problematic situations. **(Also applies to B, C, E.)**	
plan a strategy for recruiting participants. **(Also applies to B, C, E.)**	
formulate a data analysis strategy. **(Also applies to B, C, D.)**	
generate research ideas that may be used to develop future research studies. **(Also applies to B, C, I.)**	
locate research materials, such as relevant literature and measures. **(Also applies to C.)**	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
prepare a time management plan. **(Also applies to C, G.)**	
	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

	l. the ability and desire for continuous learning

University of Windsor
Program Development Committee

*5.16:   **Dramatic Art – Program Learning Outcomes**

Item for: **Information**

Forwarded by: **Faculty of Arts, Humanities and Social Science**

This package contains the following program learning outcomes:
BA General in Dramatic Art
Combined BA in Dramatic Art

PROGRAM TITLE: BA General in Dramatic Art
DEPARTMENT/FACULTY: Dramatic Art/ FAHSS

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	Characteristics of a University of Windsor Graduate <u>A UWindsor graduate will have the ability to demonstrate:</u>	COU-approved Undergraduate Degree Level Expectations
A. Identify and analyze various critical theories and methodologies and connect them to examples of theatre and performance	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
B. Use performance, design, and/or embodied research as instruments to explore critical issues and questions in Theatre and Performance Studies	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
C. Analyze and interpret plays and performance texts.	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
D. Communicate clear, accessible, and supported analyses of theatre performance in both oral and written forms	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge
E. Connect theatre practice and social awareness in all aspects of work.	E. responsible behaviour to self, others and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. Employ professional etiquette in studios, rehearsal processes, and productions	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
G. Practice collaborative and process skills in the production of knowledge in creative and theoretical settings.	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity
H. Employ the interrelationship between the various disciplines of theatre production (performance, direction, creation, management, and design)	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
I. Employ practice and reflection for continued professional development of a unique approach to theatre projects	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

PROGRAM TITLE: Concurrent Bachelor of Arts (Drama)/Bachelor of Education
DEPARTMENT/FACULTY: Dramatic Art/ FAHSS

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	Characteristics of a University of Windsor Graduate <u>A UWindsor graduate will have the ability to demonstrate:</u>	COU-approved Undergraduate Degree Level Expectations
A. Education: Make decisions based on an understanding of the development of children and youth (intellectual, physical, emotional, social, creative, spiritual, moral), and the nature of learning; -Respect and care for all students' physical, psychological, and educational well-being, guided by the nature and characteristics of the learners (Also applies to E, F & G) -Create and maintain inclusive classroom environments that engage and facilitate the learning of all students (also applies to E) -Design lesson and unit plans with clear curricular and pedagogical goals, and with appropriate assessment and evaluation metrics (also applies to C, E, G, & H) -Recognize, differentiate among, select, and apply general and subject-specific theories and models of teaching and learning (also applies to C, E, F, & G) Promote collegiality, cooperation, and professionalism in schools and among teachers in an equity-based context (also applies to F) Demonstrate inclusive and collaborative pedagogical praxis that values diversity and prepares students for living in a global, multicultural and equity-informed context (Also applies to A, C & H) **Drama:** Analyze and implement various critical theories and methodologies and connect	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

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	Characteristics of a University of Windsor Graduate <u>A UWindsor graduate will have the ability to demonstrate:</u>	COU-approved Undergraduate Degree Level Expectations
them to examples of theatre and performance Apply design theory and technical skills to create theatre designs Employ drama/theatre training and leadership skills in ways that will lead to innovative arts programing for a variety of demographics in educational and community settings design and deliver age, ability, and context appropriate drama/theatre experiences and activities, taking into consideration the diversity of populations and the needs of the community		
B. **Education:** Question alternative perceptions such as post-colonial bodies of knowledge (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
C. Think critically about issues in education and the role of teachers in society, informed by a sound knowledge of the social, historical, political and cultural foundations of public education (also applies to E) **Drama**: Use performance, design, and/or embodied research as instruments to explore critical issues and questions in Theatre and Performance Studies Apply critical and creative thinking to question and challenge existing constructs for the creation of more relevant and meaningful ways of working (also applies to A)	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

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* At the end of this program, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate A UWindsor graduate will have the ability to demonstrate:	COU-approved Undergraduate Degree Level Expectations
D. **Education:** Evaluate suitability of theory-based practices when developing curriculum and/or programing (also applies to A & C) **Drama:** Effectively communicate verbally and in writing how theory informs practice	D. literacy and numeracy skills	4. Communication Skills 5. Awareness of Limits of Knowledge
E. **Education**: Commit to the values of social justice, equity, and diversity in all aspects of their professional roles. **Drama**: Integrate social awareness in all aspects of theatre practice Analyze the application of skills in theatre creation and production within broader community and professional contexts Employ and evaluate the skills, values, practices, and approaches that will empower students to become agents of change and advocates in local and global communities	E. responsible behaviour to self, others, and society	5. Awareness of Limits of Knowledge 6. Autonomy and Professional Capacity
F. **Drama:** Reflect on and assess the specific qualities that create a distinct identity as an individual drama educator/practitioner	F. interpersonal and communications skills	4. Communication Skills 6. Autonomy and Professional Capacity
B. **Drama:** C. D. Make meaningful contributions to teams and successfully meet expected project goals	G. teamwork, and personal and group leadership skills	4. Communication Skills 6. Autonomy and Professional Capacity

Program Learning Outcomes (Degree Level Expectations) *This is a sentence completion exercise. Please provide a minimum of 1 learning outcome for each of the boxes associated with a graduate attribute.* <u>At the end of this program, the successful student will know and be able to:</u>	Characteristics of a University of Windsor Graduate <u>A UWindsor graduate will have the ability to demonstrate:</u>	COU-approved Undergraduate Degree Level Expectations
H. **Drama:** Explain ways that creative play as embodied experience is essential to all drama/theatre work.	H. creativity and aesthetic appreciation	2. Knowledge of Methodologies 3. Application of Knowledge 6. Autonomy and Professional Capacity
I. **Drama:** Demonstrate professional etiquette and become a contributing member of the arts and education community	I. the ability and desire for continuous learning	6. Autonomy and Professional Capacity

University of Windsor
Program Development Committee

*5.17:   **Chemistry and Biochemistry – Program Learning Outcomes**

Item for: **Information**

Forwarded by: **Faculty of Science**

This package contains the following program learning outcomes:
BSc Honours with Thesis in Biochemistry
BSc Honours with Thesis in Chemistry

BSc Honours with Thesis in Biochemistry
Program Learning Outcomes
Last Updated: August 31, 2021

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:	COU-approved Undergraduate Degree Level Expectations
Explain and apply the major theories and concepts of chemistry and biochemistry **(Also applies to D.)** Explain and apply the scientific method as it relates to biochemistry research and societal issues **(Also applies to B, C, H, 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
Operate standard and modern laboratory instruments for solving biochemical problems **(Also applies to C.)** Collect, read, evaluate, and analyze relevant scientific literature to address a specific biochemistry area **(Also applies to C, D.)** Develop an hypothesis and select an appropriate methodology to test the hypothesis **(Also applies to C, D, F, I.)**	**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 of knowledge
Access and effectively utilize the primary research literature for solving chemical and biochemical problems **(Also applies to D.)** Correctly interpret experimental 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

Write a formal scientific paper and report with the correct structure (e.g., include proper citations, references, etc.)	**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)	**E.** responsible behaviour to self, others and society	5. Awareness of limits of knowledge 6. Autonomy and professional capacity
Produce an effective oral and written communication on a scientific subject Qualitatively summarize and objectively present data Prepare written laboratory reports using conventional scientific style	**F.** interpersonal and communications skills	4. Communication skills 6. Autonomy and professional capacity
Participate constructively and cooperatively in small group activities	**G.** teamwork, and personal and group leadership skills	4. Communication skills 6. Autonomy and professional capacity
Describe examples that illustrate the functionality and diversity of chemistry and biochemistry Design innovative solutions to demonstrate scientific concepts	**H.** creativity and aesthetic appreciation	2. Knowledge of methodologies 3. Application of knowledge 6. Autonomy and professional capacity
	I. the ability and desire for continuous learning	6. Autonomy and professional capacity

BSc Honours with Thesis in Chemistry
Program Learning Outcomes
Last Updated: August 31, 2021

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:	COU-approved Undergraduate Degree Level Expectations
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, 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
Collect, read, analyze, synthesize and evaluate relevant scientific literature to address a specific science-relevant problem **(Also applies to C, D.)** Operate laboratory instruments for solving chemical problems **(Also applies to C.)** Develop an hypothesis and select an appropriate methodology to test that hypothesis **(Also applies to C, D, F, I.)**	**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 of knowledge
Access and effectively utilize the primary research literature for solving chemical problems **(Also applies to D.)** Correctly interpret experimental 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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Write a formal scientific paper and report with the correct structure (e.g., include proper citations, references, etc.)	**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)	**E.** responsible behaviour to self, others and society	5. Awareness of limits of knowledge 6. Autonomy and professional capacity
Produce an effective oral and written communication on a chemistry subject Qualitatively summarize and objectively present data Prepare written laboratory reports using conventional scientific style	**F.** interpersonal and communications skills	4. Communication skills 6. Autonomy and professional capacity
Participate and contribute constructively and cooperatively to team work activities	**G.** teamwork, and personal and group leadership skills	4. Communication skills 6. Autonomy and professional capacity
Describe examples that illustrate the functionality and diversity of chemical systems 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
	I. the ability and desire for continuous learning	6. Autonomy and professional capacity

University of Windsor
Program Development Committee

*5.18:   **Mathematics and Statistics – Learning Outcomes**

Item for: **Information**

Forwarded by: **Faculty of Science**

This package contains the following course learning outcomes:
MATH-4000. Topics in Mathematics Learning Outcomes
STAT-4000. Topics in Statistics

MATH-4000. Topics in Mathematics
Learning Outcomes
Last Updated: September 14, 2021

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Illustrate a fundamental knowledge of an advance topic in mathematics. **(Also applies to D.)** Provide precise definitions for the mathematical terms and concepts. **(Also applies to D.)** State and prove the main theorems in the topic area **(Also applies to D.)**	**A.** the acquisition, application and integration of knowledge
Find and evaluate current published peer review articles in the topic area. **(Also applies to C, G, H, I.)**	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
	C. critical thinking and problem-solving skills
Discuss and solve problems in the topic area using appropriate terminology and notation. Compose organized and logical solutions to problems in the topic area.	**D.** literacy and numeracy skills
Recognize, evaluate and construct logically sound arguments and deductions in the topic area.	**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

PDF generated on November 3, 2021

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STAT-4000. Topics in Statistics
Learning Outcomes
Last Updated: September 14, 2021

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Illustrate a fundamental knowledge of an advance topic in statistics. **(Also applies to D.)**	**A.** the acquisition, application and integration of knowledge
Provide precise definitions for the mathematical terms and concepts. **(Also applies to D.)**	
State and prove the main theorems in the topic area **(Also applies to D.)**	
Find and evaluate current published peer review articles in the topic area. **(Also applies to C, G, H, I.)**	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
	C. critical thinking and problem-solving skills
Discuss and solve problems in the topic area using appropriate terminology and notation. Compose organized and logical solutions to problems in the topic area.	**D.** literacy and numeracy skills
Recognize, evaluate and construct logically sound arguments and deductions in the topic area.	**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

University of Windsor
Program Development Committee

*5.19:   **Psychology – Course Learning Outcomes**

Item for: **Information**

Forwarded by: **Faculty of Arts, Humanities, and Social Sciences**

This package contains the following learning outcomes:
PSYC-1150. Introduction to Psychology as a Behavioural Science
PSYC-1160. Introduction to Psychology as a Social Science
PSYC-2200. Introduction to Adjustment and Personality
PSYC-2230. Developmental Psychology: The Child
PSYC-2240. Developmental Psychology: Adolescence
PSYC-2250. Developmental Psychology: Adulthood   and Aging
PSYC-2280. Abnormal Psychology
PSYC-2300. Social Science Research Methods
PSYC-2360. Introduction to Social Psychology
PSYC-2400. Psychology of Sex and Gender
PSYC-2560. Introduction to the Brain and Human Behaviour
PSYC-3130. Advanced Statistics
PSYC-3200. Tests and Measurement
PSYC-3220. Child Psychopathology
PSYC-3230. Developmental Disabilities
PSYC-3240. Educational Psychology
PSYC-3270. Psychological Perspectives on Parenting
PSYC-3300. Personality Theory and Research
PSYC-3310. Conducting Research in Psychology
PSYC-3330. Introduction to Clinical Psychology
PSYC-3340. Applied Social Psychology
PSYC-3350. Human Sensation and Perception
PSYC-3390. Health Psychology
PSYC-3420. Culture and Psychology
PSYC-3530. Learning and Behaviour
PSYC-3580. Cognitive Processes
PSYC-4150. History and Systems of Psychology
PSYC-4210. The Psychology of the Family
PSYC-4220. Advanced Developmental Psychology: Emotional Development
PSYC-4230. Advanced Developmental Psychology: Cognitive Development
PSYC-4240. Advanced Developmental Psychology: Social Development
PSYC-4270. Methods of Behavioural Change
PSYC-4280. Practicum in Developmental Psychology
PSYC-4290. Practicum in Psychology
PSYC-4300. Clinical and Counselling Psychology
PSYC-4320. Community Psychology
PSYC-4330. Seminar in Law and Psychology
PSYC-4360. Seminar in Psychopathology
PSYC-4400. Seminar in the Psychology of Women
PSYC-4410. Special Topics in Health Psychology
PSYC-4450. Stereotyping, Prejudice, and Discrimination
PSYC-4570. Comparative Cognition

PSYC-4750. Popular Literature in Psychology
PSYC-4960. Thesis: Seminar
PSYC-4970. Thesis: Research

PSYC-1150. Introduction to Psychology as a Behavioural Science
Formerly known as: 02-46-115
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Recognize and explain the practical, theoretical, and scientific value of psychology	**A.** the acquisition, application and integration of knowledge
Apply the six key principles of critical thinking. **(Also applies to C.)**	
Describe the most common research designs used in psychological research and give examples of basic statistics used in psychological research. **(Also applies to D.)**	
Explain the ethical obligations of researchers toward their research participants both human and non-human. **(Also applies to E.)**	
Identify the main structures of the brain and describe the main functions of those structures.	
Identify the basic principles that apply to all senses.	
Identify the basic principles that apply to states of consciousness.	
Explain the major principles and terminology associated with classical and operant conditioning.	
Identify the basic principles of how memory operates in humans.	
Describe the major theories of emotion and motivation.	
Cite information correctly following the American Psychological Association style guidelines. **(Also applies to B, D.)**	

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	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

PSYC-1160. Introduction to Psychology as a Social Science
Formerly known as: 02-46-116
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Describe the basic principles of thinking, reasoning, and language. Identify different models and types of intelligence and intelligence testing. Track the trajectory of typical human development and describe the major theories of human development. Describe the mind-body interconnection in the management of stress and how this impacts coping and health. Identify the ways that individuals are affected by social situations. Describe the main theories of personality development and assessment. Describe the history, diagnosis, and expression of mental disorders and the theories pertaining to the development of mental disorders. Describe the basic principles of psychological and biological treatments of mental disorders. Cite information correctly following the American Psychological Association style guidelines. **(Also applies to B, D.)**	**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

PSYC-2200. Introduction to Adjustment and Personality
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Identify and describe how psychological concepts, theoretical perspectives, and empirical findings relate to everyday problems and challenges. Apply scientific reasoning and skepticism concerning psychological and behavioral concepts and issues. **(Also applies to C.)** Identify factors that can affect one's own psychosocial development and ability to cope with everyday stress in everyday life Identify and explain where psychological explanations may apply only to specific populations, cultural contexts, and eras.	**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
Communicate effectively and respectfully with diverse others. **(Also applies to G.)**	**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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PSYC-2230. Developmental Psychology: The Child
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Recognize and define key concepts and developmental milestones in child development	**A.** the acquisition, application and integration of knowledge
Evaluate the suitability, relevance, accuracy, and credibility of informational sources **(Also applies to D.)**	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
Analyze and critically evaluate empirical findings related to child development and their implications for real life situations **(Also applies to A.)** Integrate cultural and contextual knowledge in addressing issues related to child development **(Also applies to A.)**	**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
Facilitate group discussions effectively **(Also applies to F.)**	**G.** teamwork, and personal and group leadership skills
	H. creativity and aesthetic appreciation
	I. the ability and desire for continuous learning

PSYC-2240. Developmental Psychology: Adolescence
Formerly known as: 46-224
Learning Outcomes
Last Updated: October 07, 2019

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
1. Recognize and define key concepts in adolescent and emerging adulthood development	**A.** the acquisition, application and integration of knowledge
5. Evaluate the suitability, relevance, accuracy, and credibility of informational sources **(Also applies to D.)**	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
3. Integrate cultural and contextual knowledge in addressing issues related to adolescent and emerging adulthood development **(Also applies to A.)** 4. Analyze and critically evaluate empirical findings related to adolescent and emerging adult development and their implications for real life situations **(Also applies to A.)**	**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
6. Facilitate group discussions effectively **(Also applies to F.)**	**G.** teamwork, and personal and group leadership skills
	H. creativity and aesthetic appreciation
	I. the ability and desire for continuous learning

PSYC-2250. Developmental Psychology: Adulthood and Aging

Learning Outcomes

Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Explain crucial definitions within lifespan psychology, including the different periods of the lifespan, senescence, longevity, and health span. Describe, compare, and critically analyze the major biological, personality, socioemotional, and systems theories associated with aging **(Also applies to C.)** Identify major biological and psychological disorders within each period of the lifespan, as well as the factors that contribute to health and longevity over the lifespan Explain important life roles and experiences within different phases of the lifespan (e.g. parenthood, dying, bereavement), as well their impact on physical and mental health.	**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)
Accurately apply psychological theories associated with lifespan psychology to everyday life situations, and reflect on the strengths/weaknesses of the different theoretical perspectives to aging **(Also applies to A.)** Critically analyze and reflect on current theoretical frameworks within lifespan psychology and their applicability to marginalized groups (e.g. LGBTQ2S, racialized communities, persons with disabilities) **(Also applies to A.)**	**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

PSYC-2280. Abnormal Psychology
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Define and critique the concepts of psychopathology in psychology. **(Also applies to C.)** Appraise and synthesize current biological, psychological, and sociocultural perspectives of psychopathology. **(Also applies to E.)** Define and identify the features of psychological disorders.	**A.** the acquisition, application and integration of knowledge
Critically engage with, and synthesize, scientific research. **(Also applies to D, E, F, I.)**	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
Describe and critically appraise current perspectives on the nosology of psychopathology, such as the DSM-5, ICD-11 and dimensional diagnostic formulations. **(Also applies to B.)**	**C.** critical thinking and problem-solving skills
	D. literacy and numeracy skills
	E. responsible behaviour to self, others and society
Communicate original perspectives on psychological science through a paper written in APA format. **(Also applies to B, C, D, I.)**	**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

PSYC-2300. Social Science Research Methods
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
	A. the acquisition, application and integration of knowledge
Analyze the contributions and limitations of empirical research in Psychology Explain the limitations of specific qualitative or quantitative methodologies and methods **(Also applies to A.)** Locate and summarize credible research relevant to Psychology	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
Synthesize relevant theory and empirical research to support conclusions	**C.** critical thinking and problem-solving skills
Evaluate the suitability, relevance, accuracy, and credibility of informational sources. **(Also applies to B.)** Cite sources correctly in APA style.	**D.** literacy and numeracy skills
Describe and apply (in the design of a research project) the Tri-Council Policy Statement of ethical conduct of research involving human participants.	**E.** responsible behaviour to self, others and society
Prepare documents and reports in clear and effective language using APA publication standards	**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

PSYC-2360. Introduction to Social Psychology
Formerly known as: 46-236
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Outline common research methods used in social psychology. **(Also applies to B, D.)** Describe theories fundamental to the social psychology discipline including those linking attitudes and behaviour; social beliefs and judgements; group influence; altruism; aggression; attraction; and prejudice, and discrimination. **(Also applies to B.)** Summarize key concepts, strengths, and limitations of major social psychological research findings. **(Also applies to B.)** Incorporate ethical decision-making into research design. **(Also applies to B, E.)**	**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)
Apply social psychology to real-world situations. **(Also applies to A.)**	**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

PSYC-2400. Psychology of Sex and Gender
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Identify, describe, and critique the typical categories, range of diversity, and social issues present within the realms of sex and gender. **(Also applies to C.)** Think critically about sociocultural issues as they align with sexuality, its range and diversity, and how this intersects with sex and gender. **(Also applies to C.)** Describe, explain, and critique the historical, philosophical, and scientific development of the concepts and methodologies that are involved in the scholarly inquiry into sex, gender, and sexuality. **(Also applies to B, C.)** Identify, describe, and critique the constructs and theories used for the study of sex, gender, and sexuality, and the resulting findings and analyses. **(Also applies to B, I.)** Describe, explain, and critique the interactive influences of nature and nurture on various aspects (e.g., physical, cognitive, psychological, occupational, interpersonal, social, and cultural) of sex, gender, and sexuality and be able to frame that discussion within the main over-arching theories, scientific findings, and perspectives in the field. **(Also applies to E.)**	**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

PSYC-2560. Introduction to the Brain and Human Behaviour
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
identify and define key concepts in biopsychology **(Also applies to B, C.)**	**A.** the acquisition, application and integration of knowledge
explain the biological and psychological foundations of typical and atypical behaviour and mental processes **(Also applies to B, C.)**	
evaluate the theoretical foundations of brain/behaviour relationships **(Also applies to B, C.)**	
analyze the contributions and limitations of empirical research in biopsychology **(Also applies to B, C.)**	
synthesize relevant theory and empirical research in biopsychology to support conclusions. **(Also applies to B, C.)**	
	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

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	l. the ability and desire for continuous learning

PSYC-3130. Advanced Statistics
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	**Characteristics of a University of Windsor Graduate** The University of Windsor graduate will have the ability to demonstrate:
Determine what type of statistical test is appropriate given a particular research design. **(Also applies to B, C.)**	**A.** the acquisition, application and integration of knowledge
Explain and interpret hypothesis testing. **(Also applies to C, D.)** Interpret the results of data analyses **(Also applies to C, D.)** Effectively communicate the results of data analysis to a scientific and lay audience. **(Also applies to D, F.)**	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
Articulate the limitations of conclusions that are drawn from the analyses of data **(Also applies to B, D, E, F.)**	**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

PSYC-3200. Tests and Measurement
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Explain the key concepts in psychometric theory Explain the steps necessary to create a sound psychometric instrument, such as item construction and analysis **(Also applies to B, C, D.)**	**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)
Conduct a psychometric analysis on computer, including data analysis and interpretation **(Also applies to D.)** Evaluate the psychometric strengths and weaknesses of a leading psychological instrument	**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

PSYC-3220. Child Psychopathology
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
1. Explain the DSM-5 classification systems for child and adolescent disorders **(Also applies to C.)**	**A.** the acquisition, application and integration of knowledge
2. Differentiate the psychosocial risk and protective factors related to child and adolescent psychological disorders **(Also applies to C.)**	
3. Describe clinical research design as it relates to child and adolescent psychopathology **(Also applies to B, C.)**	
4. Identify the important diagnostic, assessment, and treatment issues for conduct problems, anxiety disorders, mood disorders, learning disorders, health-related disorders, and eating disorders in children and adolescents **(Also applies to C, E.)**	
	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
	C. critical thinking and problem-solving skills
Cite resources correctly in APA style	**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

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	l. the ability and desire for continuous learning

PSYC-3230. Developmental Disabilities
Formerly known as: 02-46-323
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Define a developmental disability and describe the major features that distinguishes it from other childhood disorders. Identify the major risk factors for and protective factors against developmental disorders, including prenatal, perinatal, postnatal, and childhood factors. Describe key concepts, issues, trends, theories, and controversies in developmental disabilities research, practice, and advocacy.	**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)
Apply what the theoretical and empirical literature supports and does not support in terms of the identifying features, assessment, diagnosis, and treatment of developmental disorders.	**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

PSYC-3240. Educational Psychology
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Describe what educational psychology is and how it relates to the broader domain of psychology.	**A.** the acquisition, application and integration of knowledge
Discuss how adjacent domains of psychology (i.e., cognitive psychology, neuroscience) relate to and influence impact teaching and learning.	
Explain the fundamentals of human development (cognitive, emotional, social, and physical) as they apply to the context of learning and education.	
Describe the types of knowledge and understanding achieved by learners, including different approaches to learning, assessment models, and the application of knowledge.	
Describe how diversity, individual differences, and exceptionalities impact learning, learners, teachers, and educational settings.	
Describe major theories of educational psychology, such as behaviorism, constructivism, social constructivism, and social cognitive theory.	
	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
Interpret and apply major theories of educational psychology through the lens of the student's own teaching and learning experiences. (Also applies to I.)	**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

PSYC-3270. Psychological Perspectives on Parenting
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
	A. the acquisition, application and integration of knowledge
Critique and evaluate current research studies on issues pertaining to parent-child relationships. **(Also applies to F, I.)**	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
Examine and summarize the factors which facilitate or hinder positive parent-child interactions. **(Also applies to A, F.)**	**C.** critical thinking and problem-solving skills
Assess the dynamics of family relationships and analyze the potential changes to the impact of those family dynamics on individuals as they grow to adulthood. **(Also applies to A, C.)**	**D.** literacy and numeracy skills
	E. responsible behaviour to self, others and society
Articulate and appraise the family's role in the process of socializing a child through various parenting styles and approaches. **(Also applies to A, C.)** Break down and integrate the major developmental concepts, issues, and theories in parent-child relations from birth to adulthood. **(Also applies to C, H.)**	**F.** interpersonal and communications skills
	G. teamwork, and personal and group leadership skills
	H. creativity and aesthetic appreciation
Reflect on how parenting determinants have impacted contemporary parenting practices. **(Also applies to E, G.)**	**I.** the ability and desire for continuous learning

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PSYC-3300. Personality Theory and Research
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Explain the different theoretical perspectives in personality psychology, and evaluate their relative strengths and weaknesses Outline the key concepts and interconnected mechanics of leading theories in personality	**A.** the acquisition, application and integration of knowledge
Describe and evaluate research that supports the leading theories in personality	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
Critically examine current controversies in personality psychology.	**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
Apply the theories of personality psychology to increase self-understanding and meaning in one's life.	**I.** the ability and desire for continuous learning

PSYC-3310. Conducting Research in Psychology
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
review literature to effectively support rational hypotheses. **(Also applies to B, D.)**	**A.** the acquisition, application and integration of knowledge
recognize and identify ethical issues in research, and consider possible ways of handling problematic situations. **(Also applies to B, C, E.)**	
plan a strategy for recruiting participants. **(Also applies to B, C, E.)**	
formulate a data analysis strategy. **(Also applies to B, C, D.)**	
generate research ideas that may be used to develop future research studies. **(Also applies to B, C, I.)**	
locate research materials, such as relevant literature and measures. **(Also applies to C.)**	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
prepare a time management plan. **(Also applies to C, G.)**	
	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

	l. the ability and desire for continuous learning

PSYC-3330. Introduction to Clinical Psychology
Learning Outcomes
Last Updated: September 18, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Define the profession of a clinical psychologist in the context of related professions, and describe the career path to becoming a clinical psychologist. **(Also applies to I.)**	**A.** the acquisition, application and integration of knowledge
Critically examine current controversies in clinical psychology. **(Also applies to C.)**	
Apply the principles of the Canadian Code of Ethics for Psychologists to professional dilemmas. **(Also applies to E.)**	
Identify and critically discuss the methods used for conducting an assessment of mental health disorders. **(Also applies to C.)**	
Identify and describe the different types of clinical intervention and the theories that support them. **(Also applies to C.)**	
	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
	C. critical thinking and problem-solving skills
Write and build arguments clearly in APA style	**D.** literacy and numeracy skills
Recognize and describe the impact of cultural issues on mental health professions, as well as cultural competence and culturally appropriate clinical skills. **(Also applies to A, C.)**	**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

PSYC-3340. Applied Social Psychology
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Recognize and discuss the application of social psychology to real-world problems (e.g., physical and mental health, behavior, education, the environment, business settings, etc.)	**A.** the acquisition, application and integration of knowledge
Evaluate primary and secondary research sources relevant to social psychology	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
Analyze empirical findings in the field of applied social psychology and their implications for solving social issues **(Also applies to A, B.)** Reflect constructively and critically on practical experiences, and draw connections to relevant theories and disciplinary concepts	**C.** critical thinking and problem-solving skills
	D. literacy and numeracy skills
	E. responsible behaviour to self, others and society
Articulate, clearly and cogently, concepts, ideas, and theories, orally and in writing following APA publication standards.	**F.** interpersonal and communications skills
Collaborate effectively with people from diverse backgrounds and cultural perspectives.	**G.** teamwork, and personal and group leadership skills
Identify novel solutions to social problems **(Also applies to C.)**	**H.** creativity and aesthetic appreciation
	I. the ability and desire for continuous learning

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PSYC-3350. Human Sensation and Perception

Learning Outcomes

Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Describe basic perceptual process and outline their physiological underpinnings.	**A.** the acquisition, application and integration of knowledge
Explain psychophysics experimentation data in the context of relevant theory. **(Also applies to C.)** Generalize principles of processing across modalities **(Also applies to C, D.)**	**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

PSYC-3390. Health Psychology
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Identify, summarize, and critique key models, principles, and theories in Health Psychology. Explain the links between psychological and physiological factors in the initiation, elaboration, and attenuation of the stress response.	**A.** the acquisition, application and integration of knowledge
Describe the issues and problems involved in conducting psychological research on health and illness. **(Also applies to A.)**	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
Critically evaluate the role of psychological, social, and behavioural factors in health and illness. Evaluate how health care is delivered and describe and critique the philosophies that underlie our system. **(Also applies to A.)**	**C.** critical thinking and problem-solving skills
	D. literacy and numeracy skills
Identify and describe the various routes through which your cognitions, emotions, and behaviours influence your health and illness, and the role of the social context in which these factors may be shaped. **(Also applies to A.)** Detail why we engage in risky and unhealthy behaviours, what we can do to change this, and the health costs of poor health behaviours.	**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

PSYC-3420. Culture and Psychology
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Identify, articulate, and describe basic theories, concepts, and principles of cross-cultural psychology and multicultural psychology **(Also applies to C.)** Incorporate and apply critical cross-cultural and multicultural perspectives in evaluating and analyzing psychological phenomena and research **(Also applies to B, C.)** Identify and explain culture's influences on various domains of psychology, such as development, self identity, emotion, personality, psychopathology, social relationship etc. **(Also applies to B, F.)**	**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
Reflect on the range of cultural variations in human behaviours, including their own unique cultural characteristics and heritages and those of others **(Also applies to F, I.)**	**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

PSYC-3530. Learning and Behaviour
Formerly known as: 45-353
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
outline basic principles in the psychology of learning and behavior, and distinguish between different theoretical perspectives differentiate between radical behavioral and current cognitive-behavioral theories, and explain which provides a more empirically valid account of learning processes. **(Also applies to B.)** describe modified extensions of current experiments that can test alternative hypotheses. **(Also applies to B, C.)**	**A.** the acquisition, application and integration of knowledge
analyze data (graphically and statistically) and communicate empirical findings in acceptable standard (APA) approved ways **(Also applies to C, D, H.)**	**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
Apply basic principles of animal research to human behaviour and propose approaches aimed at alleviating various behavioural problems. Explain the principles and rationale for Tri-Council ethical standards for both human and non-human research	**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

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	l. the ability and desire for continuous learning

PSYC-3580. Cognitive Processes
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
identify and explain foundational concepts, theories, and experiments in cognitive psychology detect and classify the different cognitive processes used in everyday thinking situations	**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)
operationalize how unobservable cognitive processes can be examined using experimental design **(Also applies to B.)** evaluate the strengths and limitations of cognitive psychology experiments **(Also applies to B.)**	**C.** critical thinking and problem-solving skills
	D. literacy and numeracy skills
self-reflect on their own cognitive processes and apply knowledge of cognitive psychology to understand why these processes sometimes function well and sometimes fail **(Also applies to A, C.)**	**E.** responsible behaviour to self, others and society
write a lab report in a specified format adapted from APA that describes the components of a cognitive experiment **(Also applies to A, B, C, D.)**	**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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PSYC-4150. History and Systems of Psychology
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Discuss the philosophy of science underlying modern psychology. **(Also applies to B, C, E.)**	**A.** the acquisition, application and integration of knowledge
Identify the major historical systems and contemporary global trends that are relevant to psychology. **(Also applies to B, C, I.)**	
Explain the contributions of psychologists from various countries, including Canada, to psychology. **(Also applies to B, C, F, G, I.)**	
Analyze and synthesize the links between theory, research, and applied practice in the field of psychology. **(Also applies to B, C, F.)**	
	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

PSYC-4210. The Psychology of the Family
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Articulate the most influential theories of individual and family development and apply these theories to past and current family issues. **(Also applies to C, D.)**	**A.** the acquisition, application and integration of knowledge
Critique and evaluate current research studies on issues pertaining to family development and functioning. **(Also applies to F, I.)**	**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
Examine and summarize how families developed over time and will continue to change and adapt in response to various contextual factors in the future. **(Also applies to A, C.)**	**F.** interpersonal and communications skills
	G. teamwork, and personal and group leadership skills
	H. creativity and aesthetic appreciation
Integrate the individual and family development theories within multiple ecological levels. **(Also applies to E, G.)**	**I.** the ability and desire for continuous learning

PSYC-4220. Advanced Developmental Psychology: Emotional Development
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Describe the key events in the history of the study of emotion. **(Also applies to B, C, E, I.)**	**A.** the acquisition, application and integration of knowledge
Critically evaluate research on emotions from infancy through adulthood. **(Also applies to B, C, E, F.)**	
	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
Apply analysis of emotion to their daily interpersonal lives and work **(Also applies to F.)**	**E.** responsible behaviour to self, others and society
Communicate clearly, concisely and persuasively orally and in writing. **(Also applies to F, G, I.)**	
Differentiate and discuss issues related to human emotional experience, expression, and regulation. **(Also applies to G.)**	**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

PSYC-4230. Advanced Developmental Psychology: Cognitive Development
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Explain and compare concepts, major theories, and processes in the field of cognitive development. **(Also applies to B, C.)** Describe biological, social, and cultural factors that influence cognitive development. **(Also applies to B.)** Identify and critique research about cognitive development. **(Also applies to B, C, D.)** Apply cognitive developmental theories and concepts to current topics. **(Also applies to B, I.)** Communicate clearly, concisely and persuasively orally and in writing. **(Also applies to D, F.)**	**A.** the acquisition, application and integration of knowledge
Generate questions about cognitive development that develop future research directions. **(Also applies to A, C, I.)** Apply current APA Publication Style to written work. **(Also applies to D.)**	**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 |

PSYC-4240. Advanced Developmental Psychology: Social Development
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Explain concepts, major theories, and research in the field of social development Identify and critically evaluate research in the field of social development **(Also applies to B, C.)** Describe biological, social and cultural factors that influence social development Apply an integrated understanding of social development to their daily lives and work	**A.** the acquisition, application and integration of knowledge
Practice caution and thoughtfulness when consuming information about research on children and adolescents **(Also applies to C, D.)**	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
	C. critical thinking and problem-solving skills
Cite sources correctly in APA style	**D.** literacy and numeracy skills
	E. responsible behaviour to self, others and society
Clearly, accurately, and persuasively communicate orally and in writing.	**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

PDF generated on November 15, 2021

PSYC-4270. Methods of Behavioural Change
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Define and evaluate the theoretical foundations of and empirical research on behaviour modification as well as their application to clinical settings **(Also applies to B, C.)**	**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)
Reflect constructively and critically on practical experiences and apply them to relevant theories and disciplinary concepts	**C.** critical thinking and problem-solving skills
	D. literacy and numeracy skills
Describe ethical issues relevant to behaviour modification **(Also applies to C.)**	**E.** responsible behaviour to self, others and society
Articulate, clearly and cogently, concepts, ideas, and theories, orally and in writing and incorporate received feedback effectively into revised drafts **(Also applies to D.)**	**F.** interpersonal and communications skills
Facilitate group discussions effectively, establishing a positive environment and encouraging engagement and contributions from all participants **(Also applies to F.)**	**G.** teamwork, and personal and group leadership skills
Design data gathering and analytic strategies to address specific questions/issues and create charts and figures to clearly and accurately display the information **(Also applies to B, D.)**	**H.** creativity and aesthetic appreciation
	I. the ability and desire for continuous learning

PSYC-4280. Practicum in Developmental Psychology
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Define the key concepts related to behaviour modification, including theoretical foundations and application to clinical settings Identify and describe problems or needs within the context of an individual client's environment	**A.** the acquisition, application and integration of knowledge
Identify and select appropriate qualitative and quantitative research methods (including their limitations) to facilitate hypothesis testing **(Also applies to C.)**	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
Integrate cultural and contextual knowledge in addressing issues related to behaviour modification and human development	**C.** critical thinking and problem-solving skills
	D. literacy and numeracy skills
Describe ethical issues relevant to behaviour modification and human development Reflect on personal identity, considering cultural similarities and differences between self and others **(Also applies to C.)**	**E.** responsible behaviour to self, others and society
Prepare documents and reports in clear and effective language according to APA publication standards Communicate effectively through appropriate verbal and non-verbal means (e.g., charts and figures)	**F.** interpersonal and communications skills
Facilitate group discussions effectively, establishing a positive environment and encouraging engagement and contributions from all participants. **(Also applies to F.)**	**G.** teamwork, and personal and group leadership skills
Design data gathering and analytic strategies to address specific questions and issues **(Also applies to B.)**	**H.** creativity and aesthetic appreciation

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	l. the ability and desire for continuous learning

PSYC-4290. Practicum in Psychology
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Apply accumulated knowledge of psychology in an organizational setting, and articulate this application to theories and principles of psychology. **(Also applies to C, F, G.)** Explain the current issues in research, theory, and practice as they relate to work beyond the university setting. **(Also applies to B, C, E, G.)** Utilize both report writing and presentation skills when summarizing their practicum experiences. **(Also applies to B, C, F, G.)** Interact collegially and respectfully with diverse others, and adhere to workplace expectations. **(Also applies to E, F, G.)**	**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

PSYC-4300. Clinical and Counselling Psychology
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Identify and explain important concepts and significant issues related to effective helping, communication and counselling/psychotherapy Attend, observe, conceptualize, and respond to others within an interpersonal helping relationship **(Also applies to E, F.)** Evaluate and compare major theoretical schools/approaches of counselling and psychotherapy **(Also applies to B, C.)**	**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)
Reflect on one's own values, dispositions, limitations, and sociocultural backgrounds and that of others, both as a helper and as an individual **(Also applies to F.)**	**C.** critical thinking and problem-solving skills
	D. literacy and numeracy skills
Implement basic interviewing and counselling skills in communication and social interaction with others **(Also applies to F, G.)**	**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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PSYC-4320. Community Psychology
Formerly known as: 02-46-432
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Describe the major types of prevention and mental health promotion in the development of community mental health.	**A.** the acquisition, application and integration of knowledge
Describe the history and development of the field of community psychology and relate it to public health.	
Interpret how the concepts of risk, resilience, and protection are critical for understanding community mental health prevention programs and interventions. **(Also applies to C.)**	
Evaluate the effectiveness of Canadian policies on prevention and mental health promotion. **(Also applies to B, C, D.)**	
Communicate current issues in theory, research, and practices in community psychology. **(Also applies to B, C, D, F, H.)**	
Cite information correctly following the American Psychological Association style guidelines. **(Also applies to 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. 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

PSYC-4330. Seminar in Law and Psychology
Learning Outcomes
Last Updated: September 18, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Recognize and discriminate between key concepts, theories, methodologies, authorities, and findings in forensic psychology **(Also applies to B, D, F.)**	**A.** the acquisition, application and integration of knowledge
Summarize, analyze, and critique the contributions, limitations, and implications of empirical research in forensic psychology **(Also applies to C, D, F, G.)**	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
Integrate forensic, clinical, cultural, and contextual knowledge in addressing issues arising from empirical research in forensic psychology **(Also applies to D, F.)**	**C.** critical thinking and problem-solving skills
Identify and critique quantitative and qualitative data analytic procedures used to investigate research questions in empirical research in forensic psychology **(Also applies to C, F.)**	**D.** literacy and numeracy skills
Explain and evaluate ethical issues and dilemmas in forensic research and practice **(Also applies to F, H.)**	**E.** responsible behaviour to self, others and society
Articulate, clearly and cogently, concepts, ideas, theories, and findings, orally and in writing **(Also applies to G, H, I.)** Prepare materials in clear and effective language, following APA publication standards **(Also applies to D.)**	**F.** interpersonal and communications skills
Contribute productively to the planning and execution of a collaborative synthesis of forensic research on a specified topic **(Also applies to C, H, I.)**	**G.** teamwork, and personal and group leadership skills
	H. creativity and aesthetic appreciation
	I. the ability and desire for continuous learning

PSYC-4360. Seminar in Psychopathology
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Describe and synthesize biological, psychological, and social bases of psychopathology. **(Also applies to C.)** Explain and evaluate the epidemiology, phenomenology, and distinguishing features of major clusters of psychopathology.	**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)
Critically appraise theoretical models for the etiology and development of psychopathology. **(Also applies to A.)**	**C.** critical thinking and problem-solving skills
	D. literacy and numeracy skills
	E. responsible behaviour to self, others and society
Summarize and explain relevant empirical and theoretical scientific literature concisely in writing. **(Also applies to B, D, I.)**	**F.** interpersonal and communications skills
	G. teamwork, and personal and group leadership skills
	H. creativity and aesthetic appreciation
Develop knowledge of empirical research on a specific topic within psychopathology. **(Also applies to B, C, D.)**	**I.** the ability and desire for continuous learning

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PSYC-4400. Seminar in the Psychology of Women
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Define and explain the distinctions between key concepts in the field (Psychology of Women/Feminist Psychology)	**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)
Identify and evaluate sexist bias when it occurs in research and theory in psychology and in popular media reports of research **(Also applies to A, B.)**	**C.** critical thinking and problem-solving skills
Explore current knowledge about various issues in the psychology of women and communicate these ideas effectively to others verbally and in writing **(Also applies to A, F.)**	**D.** literacy and numeracy skills
Engage with issues in psychology of women with a balanced perspective based on personal perceptions and experiences, feminist psychological theory, and data from good research **(Also applies to A, B, C, F.)**	**E.** responsible behaviour to self, others and society
Apply theories and key concepts learned in one context of the psychology of women to a range of situations and topics, orally and in writing **(Also applies to C, I.)**	**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

PSYC-4410. Special Topics in Health Psychology
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Define and explain the distinctions between key concepts in health psychology	**A.** the acquisition, application and integration of knowledge
Critically evaluate research findings on various topics in health psychology **(Also applies to B, C.)**	
Outline current knowledge about various issues in health psychology and communicate these ideas effectively to others verbally and in writing **(Also applies to D, F.)**	
Apply theories and key concepts from one topic in health psychology to a range of situations and topics, orally and in writing **(Also applies to F, I.)**	
	B. research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
Critically examine current controversies in health psychology	**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

PSYC-4450. Stereotyping, Prejudice, and Discrimination
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
describe and evaluate contemporary psychological theories regarding the formation and function of stereotypes, prejudice, and discrimination. **(Also applies to C.)**	**A.** the acquisition, application and integration of knowledge
identify individual and sociocultural factors associated with stereotypes, prejudice, and discrimination. **(Also applies to A.)** analyze and apply psychological interventions designed to reduce stereotyping, prejudice, and discrimination. **(Also applies to C.)**	**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
recognize their own stereotypes, prejudices, and discriminatory behaviours. **(Also applies to E, I.)**	**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

PSYC-4570. Comparative Cognition
Also known as: Also known as: PSYC-8570, BIOL-8470
Formerly known as: 46-457, 46-557, 55-557
Learning Outcomes
Last Updated: December 13, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Compare and contrast cognitive processes in human and non-human organisms within ecological context. **(Also applies to C.)** Describe theories of ecological and evolutionary bases for cognitive processes in human and non-human organisms.	**A.** the acquisition, application and integration of knowledge
Locate and critique research related to contrasting cognitive processes between organisms.	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
Critique theories of cognitive processing in light of research evidence.	**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

PSYC-4750. Popular Literature in Psychology
Formerly known as: 02-46-475
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Integrate some of the most popular and famous works of classical and contemporary literature with psychological theory and concepts. **(Also applies to B, C, H.)**	**A.** the acquisition, application and integration of knowledge
Recognize and critically analyze psychological themes as they appear in literary works. **(Also applies to C.)**	
Evaluate literary themes and author biographies and relate them to the major schools of psychological thought. **(Also applies to B, C.)**	
Present a literature analysis that represents the integration of a work of literature and the biography of the writer with one or more major theoretical frameworks in psychology. **(Also applies to B, C, F, G, H.)**	
	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

	l. the ability and desire for continuous learning

PSYC-4960. Thesis: Seminar
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
	A. the acquisition, application and integration of knowledge
Generate a research idea and plan that is relevant to a specific field of study and manageable. **(Also applies to A, C.)** Locate and select research materials that are appropriate to one's specific project **(Also applies to A, C.)** Review literature effectively to support one's research idea **(Also applies to A, C, D.)** Describe the appropriate methods that will be used to test one's research question **(Also applies to C, F.)** Write a research proposal for an empirical research investigation **(Also applies to C, F.)**	**B.** research skills, including the ability to define problems and access, retrieve and evaluate information (information literacy)
	C. critical thinking and problem-solving skills
Identify and justify the appropriate statistical techniques or other analytic methods for one's research questions **(Also applies to B.)**	**D.** literacy and numeracy skills
Prepare an application for Tri-Council research ethics review **(Also applies to B, F.)**	**E.** responsible behaviour to self, others and society
Clearly and concisely propose a research idea and methodology. **(Also applies to H.)**	**F.** interpersonal and communications skills
	G. teamwork, and personal and group leadership skills
	H. creativity and aesthetic appreciation

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	l. the ability and desire for continuous learning

PSYC-4970. Thesis: Research
Learning Outcomes
Last Updated: September 14, 2020

Learning Outcomes At the end of the course, the successful student will know and be able to:	Characteristics of a University of Windsor Graduate The University of Windsor graduate will have the ability to demonstrate:
Integrate research findings in the context of a relevant body of literature **(Also applies to B, C, D.)**	**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
Apply appropriate empirical methods to test specific research questions or hypotheses **(Also applies to B.)**	**D.** literacy and numeracy skills
Apply ethical principles to the conduct of research, the treatment of participants or data sources, and the writing and dissemination of findings **(Also applies to B.)**	**E.** responsible behaviour to self, others and society
Communicate research findings through written, oral, and visual means **(Also applies to H.)**	**F.** interpersonal and communications skills
Write a research project that adheres to current APA manuscript style. **(Also applies to B, C.)**	
Prepare and present a scientific research poster **(Also applies to B, H.)**	
	G. teamwork, and personal and group leadership skills
	H. creativity and aesthetic appreciation
	I. the ability and desire for continuous learning

University of Windsor
Program Development Committee

*5.20:   **Department of Sociology, Anthropology and Criminology - Proposed Name Change**

Item for: **Approval**

MOTION: **That the Department of Sociology, Anthropology and Criminology be renamed the *Department of Sociology and Criminology.***

Rationale:
- As of Fall 2013 and Fall 2014, there have been no new admissions to Anthropology Honours programs and to the Anthropology General program, respectively. The General degree program was subsequently discontinued effective Fall 2016 and the Honours programs were discontinued effective Fall 2021.
- There is no prospect at the present time that Anthropology programs will be reinstated.
- The continued inclusion of "Anthropology" in the department name is thus inaccurate and misleading for prospective students.
- The Department of Sociology, Anthropology and Criminology approved a motion on September 21, 2021 to change its name to the Department of Sociology and Criminology. The proposal was approved by the FAHSS Coordinating Council on Oct. 21, 2021.