ACADEMIC COUNCIL REPORT

ACTION REQUESTED:

Recommendation	☒
Decision	☒
Discussion/Direction	☐
Information	☐

DATE: **26 March 2024**

FROM: **Undergraduate Studies Committee**

SUBJECT: **New Program Proposal – Bachelor of Arts and Science in Sustainability**

COMMITTEE MANDATE:

In accordance with the Act and By-Law Number 2 the Academic Council (AC) has the delegated authority "to establish the academic standards and curricular policies and procedures of the University, and to regulate such standards, policies and procedures, including…determining the contents and curricula of all programs and courses of study" and, further, to "make recommendations to the Board on matters including…the establishment or termination of degree programs".

In accordance with the Undergraduate Studies Committee (USC) Terms of Reference, USC has the responsibility "to examine proposals for new undergraduate degree and diploma programs" and "to recommend their approval, as appropriate, to the Academic Council". USC reviewed the New Program Proposal and recommends approval of the Bachelor of Arts and Science in Sustainability.

MOTION FOR CONSIDERATION:

That pursuant to the recommendation of the Undergraduate Studies Committee, Academic Council hereby approves the Bachelor of Arts and Science in Sustainability program and recommends approval of the program to the Board of Governors.

BACKGROUND/CONTEXT & RATIONALE:

The Sustainability program at Ontario Tech will give every graduate a solid foundation in "pan-disciplinary" sustainability across the Natural Sciences and Engineering, Social Sciences, and Health Sciences. The experiential learning elements throughout all four years of the program, coupled with rigorous hard and soft skills development, will prepare graduates to be leaders in a broad array of career paths where they will contribute solutions to the sustainability challenges of our time.

The core courses in the program build the necessary broad and deep background, while carefully chosen elective paths provide each student with the opportunity to grow expertise and experience in the area of sustainability that aligns with their passion and career goals. The unique "Sustainability Journal" will track the student's experience and development inside and outside the classroom, providing discussion points in an annual review with their Sustainability faculty advisor. The senior capstone project will enable a pan-disciplinary team to confront a significant sustainability challenge in the "real world".

In virtually all Ontario university programs with a focus on the “environment” or “sustainability”, there is either a social science (Environmental “Studies”) or science (Environmental “Science”) emphasis, with less attention paid to the interaction between these perspectives. Our BASc Sustainability program will deliver a thorough foundation in the natural sciences, social sciences, and health sciences aspects of sustainability while still giving each student the freedom to engage more deeply in the area that excites them most. There are very few comparable programs in Canada and Ontario, and none at Ontario Tech. This is the first program of any kind at Ontario Tech to bridge the divide among science, engineering, social science, and health science disciplines.

RESOURCES REQUIRED:

The main resource requirements of this new program will be faculty teaching in both new (SUST) and existing core courses. At steady state in 2030-2031, 16 incremental course sections will be required. This has been budgeted as PT faculty recognizing that these courses will be taught by a combination of existing FT and new PT hires. Any faculty hiring will continue to prioritize the areas of greatest need amongst involved Faculties; these will not be specific to Sustainability but will aim to bring further expertise in sustainability to the institution.

Because the program is relatively small (<100 students in 2030-2031), no additional staff or infrastructure resources are needed. The existing technology at Ontario Tech, including the Canvas learning management system and other software and networking capabilities (and their support by IT Services) will adequately serve the delivery of both new and existing core courses in the program. A modest budget for travel, promotion, and office supplies are included in the overall budget. Additional faculty service contributions are required from each of the collaborating Faculties to support the Sustainability Program Committee. The Academic Resource Committee (ARC) has reviewed the resource requirements and expressed no concerns.

CONSULTATION AND APPROVAL:

- ✓ ARC Review: 16 January 2023
- ✓ FEAS Faculty Council: 30 November 2023
- ✓ FSC Faculty Council: 5 December 2023
- ✓ FHS Faculty Council: 6 December 2023
- ✓ FSSH Faculty Council: 19 December 2023
- ✓ Undergraduate Studies Committee (Recommendation): 16 January 2024
- Academic Council (Approval and Recommendation): 26 March 2024
- Board of Governors (Approval): 18 April 2024

NEXT STEPS:

- Pending the approval and recommendation of Academic Council, the new program will be presented to the Board for final approval.
- The proposal must proceed through the following approval steps subsequent to AC:
    - Board of Governors
    - Ontario Universities Council on Quality Assurance
    - Ontario Ministry of Colleges and Universities

The preferred date of implementation is in the Fall 2025.

SUPPORTING REFERENCE MATERIALS:

- New Program Proposal with Appendices
- Reports from External Review

New Undergraduate Program Proposal

Name of proposed program (as it will appear on the student's transcript):	Bachelor of Arts and Science in Sustainability
Degree Designation/Credential (e.g. BA, BSc, BEng, etc.):	BAS
Cost Recovery Program?	☐ Yes X No
Professional Program?	☐ Yes X No
Faculty (where the program will be housed):	Faculty of Science
Collaborating Faculty (if applicable):	Faculties of Health Sciences, Social Science & Humanities, Engineering & Applied Science
Program Delivery Location:	Ontario Tech University North and South Locations
Collaborating Institution(s) (if applicable):	N/A
Proposed Program Start Date:	Fall 2025
Proposal Contact:	Dr. Robert Bailey
Approved by Dean: (signature and date)	

For CIQE Use Only:

Date of Institutional Approval:	
QAF Version Used:	2021 QAF
☐Faculty CVs provided to the external reviewers and therefore not included in submission package	☐Requirement for two external reviewers for all proposed programs
Items Included in this Submission:	
☐External reviewer information ☐External reviewers' report ☐Program and Dean's response (with dates)	☐Summary of changes ☐Final, revised proposal ☐CVs, course outlines, and other supporting material (if required, as appendices)

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1 Introduction

a) Program Abstract

Please provide a brief overview of the proposed program, to be shared with the public, in 1000 characters or less (including spaces), including:

- *A clear statement of the purpose of the program*
- *Any program components, such as specializations, pathways, micro-credentials, or other offerings in addition to the major*
- *Any distinctive elements, including alternative modes of delivery (including online)*
- *Note that this statement is for external purposes; what do you want potential students/advisors to know about this program?*

The Sustainability program at Ontario Tech will give every graduate a solid foundation in "interdisciplinary" sustainability across the Natural Sciences and Engineering, Social Sciences, and Health Sciences. The experiential learning elements throughout all four years of the program, coupled with rigorous hard and soft skills development, will prepare graduates to be leaders in a broad array of career paths where they will contribute solutions to the sustainability challenges of our time.

The core courses in the program build the necessary broad and deep background, while carefully chosen elective paths provide each student with the opportunity to grow expertise and experience in the area of sustainability that aligns with their passion and career goals.

The unique "Sustainability Journal" will track the student's experience and development inside and outside the classroom, providing discussion points in an annual review with their Sustainability faculty advisor. The senior capstone project will enable an interdisciplinary team to confront a significant sustainability challenge in the "real world".

b) Background and Rationale

- *Identify what is being proposed, what are the program objectives, and provide an academic rationale for the proposed program*
- *Explain the appropriateness of the program name and degree nomenclature as they relate to the program objectives; list any program specializations, pathways, etc.* ***(QAF 2.1.2.1a/b)***
- *Describe the mode of delivery (in-class, hybrid, online) and how it will support students in achieving the Degree Level Expectations and learning objectives of the program* ***(QAF 2.1.2.2c)***
- *Describe the ways in which the program fits into the broader array of program offerings within the Faculty and the University*
- *Describe any unique curriculum or program innovations, creative components, or significant high impact practice*

Program Proposal – *The Bachelor of Arts & Science in Sustainability, a truly interdisciplinary program, will produce graduates with the skills and experience to lead in developing solutions to sustainability challenges from remote communities to mega-cities, from local to global scales.*

Program Objectives

- Provide core courses that give every graduate a interdisciplinary foundation in the breadth of sustainability including the natural sciences and engineering as well as social, and health sciences.
- Provide elective courses that give every graduate an opportunity to pursue the area of sustainability that aligns with their passion and career goals.
- Provide core and elective courses chosen to deliver experiential learning with application to the challenges of sustainability locally, regionally, nationally, and globally
- Provide graduates with a credible approach to define and measure sustainability

Academic Rationale – In virtually all Ontario university programs with a focus on the "environment" or "sustainability", there is either a social science (Environmental "Studies") or science (Environmental "Science") emphasis, with less attention paid to the interaction between these perspectives. Our BAS Sustainability program will deliver a thorough foundation in the natural sciences, social sciences, and health sciences aspects of sustainability while still giving each student the freedom to engage more deeply in the area that excites them most. There are very few comparable programs in Canada and Ontario, and none at Ontario Tech. This is the first program of any kind at Ontario Tech to bridge the divide among science, engineering, social science, and health science disciplines.

Degree Name - The Bachelor of Arts and Science Sustainability degree name proclaims the interdisciplinarity of the program and the broader expertise of its graduates. The simple title, *Sustainability*, shows the breadth of the program explicitly. The core courses include critical background on the theory and practice of sustainability in urban, rural, international, Indigenous, ecological, and global contexts, but also importantly encompasses the lessons each area has for the others. We consider this interaction as key to the program, since many of these areas are often experienced in isolation from the other. Anyone who has worked in *sustainability*, broadly defined, whether in academia, government agencies, NGOs, consulting firms, or industry, knows the limitations of policy and management professionals with little understanding of the science and technology of sustainability, and scientists and engineers with little understanding of policy and management. This program will generate graduates who speak, and understand, all of these "languages".

The Bachelor of Arts & Science in Sustainability will provide students with

competence in the theory and practice of Sustainability across its broad spectrum of application in natural sciences, social sciences, and health sciences. Students will also have the flexibility to go further and deeper into the aspect of Sustainability that excites them most, so that they will graduate equipped to make a real difference as a Sustainability professional in their chosen area of expertise.

Core principles:

- *Truly interdisciplinary* – deeply integrates natural sciences and engineering, social sciences, and health sciences perspectives
- *Multiple ways of knowing* – most obviously from both multiple disciplinary perspectives, but also including, for example, Indigenous knowledge in each of these broad disciplinary realms
- *Deeply experiential* – significant learning outside the classroom, from single-day field trips to year-long capstone projects
- *"Tech with a conscience"* – integrates innovative technology with triple bottom line (Environmental, Social, Economic) sustainability in theory and practice
- Complement 'applied sustainability' programs more typically associated with engineering programs.

Program Components

- Core courses that provide foundational expertise in natural sciences, social sciences, and health sciences aspects of sustainability
- Core courses include the new, first year, comprehensive Foundations of Sustainability courses (SUST1001U, SUST1002U) and a full year pair of courses dedicated to a capstone group project with an external industry, government agency, or NGO (SUST4001U/4002U)
- Core courses also include substantive foundations in Natural Sciences (21 credit hours), Social Sciences (15 credit hours), and Health Sciences (9 credit hours), as well as Research Methods (9 credit hours)
- Approved electives with a minimum number of courses in Natural Sciences (15 credit hours), Social Sciences (15 credit hours), and Health Sciences (6 credit hours) so a student can go deeper into the area of sustainability that interests them most
- Combination of core and elective courses that enable students to do a Minor in their particular area of interest (e.g., Indigenous Studies)
- Every student maintains a Sustainability Journal throughout the four years of the program that documents opportunities we provide outside the classroom to build their experience and knowledge of sustainability

Distinctive Elements

- Foundational sequence of new and existing core courses develops breadth of expertise

- Approved electives give each student deeper engagement in their chosen path
- Flagship 1st year courses taught by a multi-disciplinary team with multiple perspectives but unity of purpose
- Each student has a Sustainability Journal maintained throughout the program with reflections on readings and field trips and the student's individual sustainability journey both inside and outside
- Each student participates in an Interdisciplinary group capstone project that will help an external organization address a sustainability challenge
- Strong support from business, government and institutional partners

Mode of Delivery – The newly established, first year Sustainability courses (SUST1001U, SUST1002U) will be offered with hybrid delivery to maximize the quality, accessibility and reach of the program. Other core courses vary in their mode of delivery from standard lecture plus lab format to hybrid. There will be a significant experiential component, outside of the virtual or physical classroom, in single-day field trips and longer-term partnerships (e.g., interdisciplinary group capstone projects).

Similar Programs at Ontario Tech – Currently, the Faculty of Science has a BSc Biological Science with an Environmental Biology Specialization which is the closest to the proposed BAS Sustainability program at Ontario Tech. There may be some loss of students from this program to the BAS, but the Environmental Biology Specialization provides a deeper biological science background that will be appropriate for some students. The Faculty of Social Science & Humanities has a Minor in Sustainability Studies that will be complementary to this program. Many students will continue to choose the Minor in conjunction with their primary degree program.

c) Consistency of Program Objectives with University Mission, Vision, Integrated Plan, and Strategic Mandate Agreement (QAF 2.1.2.1c)

- *Describe how the program contributes to the University's Mission and Vision*
- *Explain how the program aligns with the goals and priorities outlined in the Faculty's(ies') and University's Integrated Plan*
- *Identify how the program fits within one or more areas of strength or growth in Ontario Tech University's Strategic Mandate Agreement*

Ontario Tech's Vision is ***Embracing technology with a conscience to advance knowledge and promote sustainability.*** With its combination of technological tools and societal and policy application to the challenges of sustainability at multiple scales, we feel the BAS Sustainability epitomizes this vision.

Ontario Tech's Mission is to "leaders to solve complex problems".
The Integrated Academic Plan fleshes out these ideas with commitments for development in key areas. The BAS Sustainability will help achieve this through:

- *Tech with a conscience* – equipping graduates with the latest technology to aid communities and industry in confronting sustainability challenges

    - ***How?*** *Our courses will equip our graduates with skills including collecting, analysing, and interpreting both quantitative* ***and*** *qualitative data, and virtual and face-to-face professional communication. Students will learn through doing how to use tech efficiently, effectively, and ethically to increase diverse community participation in and access to sustainability initiatives.*

- *Learning reimagined* – through hybrid and experiential academic experiences we are redefining our campus learning space and more deeply engaging our students

    - ***How?*** *In this program, the distinction between online, face-to-face, and experiential learning will be innovatively blurred. A class gathering at Alderville Black Oak Savanna centre may be attended by several students in person, a few at home in Durham Region, and others scattered around the world.*

- *Creating a Sticky Campus* – providing opportunities in all of our campus spaces, from Oshawa Creek to Oshawa downtown, to apply sustainability learning and help it become sustainability practice for graduates of the program.

    - ***How?*** *In this program our campus includes both south and north locations, but also encompasses the environment and infrastructure of both, from trees and streams to heating and waste management systems. These environments are our "classrooms".*

- *Partnerships* – foster partnerships with non-government, municipal, provincial, federal, and Indigenous agencies and communities to create deep experiential learning opportunities for our students.

    - ***How?*** *Partnerships will be developed and nurtured from a one-time guest lecture by a Toronto urban planner or Curve Lake wild rice harvester to one-day field trips to term-long capstone projects. Ultimately, a graduate's "favourite prof" may be an Elder from Hiawatha First Nation or a Nuclear Engineer from Darlington Nuclear Generating Station.*

Strategic Mandate Agreement – Ontario Tech's 2020-2025 Strategic Mandate Agreement emphasizes our institutional strength in not only teaching "tech with a conscience" but walking the talk in how we sustainably manage our institution. Students in our proposed BAS Sustainability program will apply their learning in

contexts from the university itself to regional communities and industries. They will marry the technical expertise essential to confronting the sustainability challenges of our time with the social science learning necessary to execute effective solutions. Consistent with our SMA3 priorities, our graduates will be in high demand, ready to make a positive impact regionally, provincially, nationally, and globally.

d) Student Demand

- *Provide evidence of student demand, including number of prospective student inquiries; applications and registrations for similar programs; results from surveys/focus groups of existing students, graduates, or professionals in the field*
- *Include information about domestic vs. international student interest*

We consulted the Registrar's Office for their analysis of our projected student numbers, including both domestic and international (~10%) students. The Registrar has provided a letter of support (**Appendix F**) indicating that our enrolment projections (including international enrolment) are conservative and very attainable.

Enrolment Information

- *Please complete Table 1 and provide, in paragraph form, information regarding enrolment projections*
- *Please determine the academic year when the program enrollment will reach a steady-state and add an asterisk (*) in the corresponding box beside the number*

Although this program has strong potential to be very popular, we feel it is important to maintain it as a limited enrolment, high value to entry program (25 new students per year). This will permit the greater attention per student and as a cohort that we feel is critical to its success given the interdisciplinary nature of the program. It also minimizes enrolment pressures on the existing courses across a number of Faculties that will be core or elective courses in the program.

Table 1: Projected Enrollment by Academic and Program Year

	Academic Year					
	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030*	2030-2031
Level of Study						
1st year	20	25	25	25	25	25
2nd year	0	16	20	20	20	20
3rd year	0	0	15	18	18	18
4th year	0	0	0	15	18	18
5th year	0	0	0	0	15	18
Total Enrolment	20	41	60	78	96	99

e) Societal Need

- *Evidence of the need for graduates of the program and in which fields (within academic, public, and/or private sectors)*
- *Please indicate up to three occupations in which graduates from this proposed program may be employed using the Ontario Job Futures website; you may also wish to review the Durham Workforce Authority website and provide any relevant sector portfolio or local/community impact information*
- *For professional programs, a description of the program's congruence with current regulatory requirements*
- *Mention if any employers in the area support the need for this program and include a letter(s) of support as an additional appendix*

Relevant jobs for graduates of the BAS Sustainability program are expected to be considerable. For example, one of the fastest growing job request on LinkedIn is "Sustainability Officer", and most large corporations now have a "Chief Sustainability Officer" (or similar title). These senior staff are keen to hire recent graduates. Indigenous communities, a junior scientist in an environmental consulting firm, a policy consultant in government service (all levels, many departments); these are excellent prospective employers. As government agencies, NGOs, and industry have a pressing need for sustainability professionals, these opportunities will increase, since there is growing demand in Ontario, across Canada, and globally for graduates who understand both the science and the social science of sustainability issues. Preliminary discussions with potential employers (of graduates and experiential learning opportunities) are encouraging (see attached letters). Comments, such as those of the Region of Durham, expressed a keen desire to engage with graduates having an 'integrated, multi-disciplinary and much needed perspective'.

Some graduates of the program will also be fully prepared and inspired to go on to post-graduate studies in professional (e.g., Bachelor of Education) or thesis-based (Masters and PhD) programs.

f) Duplication

Describe how the program is distinct from other programs at Ontario Tech. Is it reasonable to anticipate this program might affect enrolment in other related programs? If so, how might this be addressed?

The Faculty of Science has a BSc Biological Science with an Environmental Biology Specialization which is the closest to the proposed BAS Sustainability program at Ontario Tech. There may be some initial, small loss of students from the Environmental Biology Specialization, but the Specialization will maintain strong enrolment as it provides a deeper science background that will be preferred by some students. There may be an effect of this program on enrolment in the Minor in Sustainability Studies, but students in this program will get a full academic experience in science and technology (including health sciences) in addition to the emphasis of the Sustainability Studies program on social science and humanities. Several Engineering programs have aspects of sustainability in various courses, but this program will not divert students from an Engineering degree.

- *Identify similar or complementary programs offered elsewhere in Ontario in Table 2. Please be brief but specific in the table. Avoid value-based statements*

Table 2: List of Similar Programs in Ontario

Institution Name	**Credential Level and Program Name**
University of Waterloo	Bachelor of Environmental Studies in Environment, Resources and Sustainability
Link to Program Web Page: https://uwaterloo.ca/environment-resources-andsustainability/undergraduate	
Brief Program Description: "With the flexibility our Environment, Resources and Sustainability program offers, you can focus on topics of personal interest because the problems and opportunities we work on are diverse. Current areas of interest and strength that define our teaching and research include the sustainability of resources (e.g., foodlands, fresh water, coastal zones, energy, wildlife); ecosystem conservation and restoration; environmental politics and behavior; and sustainability policy and governance. We work at all scales, e.g., from local food to global food trade, and from community greening to planetary climate."	
What differentiates the new program from this existing program: Greater breadth in learning and experience across disciplines, including health science.	
Institution Name	**Credential Level and Program Name**
Trent University	Bachelor of Environmental Science/Studies
Link to Program Web Page: https://www.trentu.ca/bess/	
Brief Program Description: "The Bachelor of Environmental Science/Studies (B.E.S.S.) degree is an intensive degree for exceptional students that teaches full integration of science and policy, ecological and political, preventive and interventionist approaches to environmental problems."	
What differentiates the new program from this existing program: Greater energy and health sciences content in both core and elective courses.	

- *Provide additional overall comment on the justification for this duplication*

Programs available at Trent University and Waterloo University are strong, but don't "duplicate" what is proposed here. Appropriate for Ontario Tech, we integrate broad expertise in Sustainability across Faculties into the program, including not just environmental science and ecology but energy and health sciences aspects. Our program includes a unique "Sustainability Journal" which the student maintains for the four years of the program in which they reflect on experiences and opportunities we will provide beyond particular classes. Finally, our capstone group project will take place in a variety of off-campus contexts, from the sustainability office of a large corporation to the band office of a small First Nation.

2 Program Requirements

a) Admission Requirements (QAF 2.1.2.5)

- *Outline the formal admission requirements; explain how these are appropriate for the program objectives and the program learning outcomes: How will they help to ensure students are successful? How do they align with the learning outcomes of the program?*
- *Explain any additional requirements for admission to the program such as minimum grade point average, special language, portfolio, etc. (and how the program recognizes prior work or learning experience, if applicable)*
- *If this is not a direct-entry from high-school program, please explain*

The requirements for entry in the Sustainability program reflect the appropriate, diverse preparation needed for the rigour of a combined Arts and Science degree.

"Admission is competitive, and the specific average or standing required for admission varies from year to year. Students are selected by taking into consideration a wide range of criteria including school marks, distribution of subjects taken, and performance in subjects relevant to the academic program. All applicants must also submit a brief statement of why they want to enroll in the BAS Sustainability program. Possession of the minimum requirements does not guarantee acceptance; preference will be given to applicants with the best qualifications.

Current Ontario secondary school students must complete the Ontario Secondary School Diploma (OSSD) with six 4U or 4M credits, including English (ENG4U). It is recommended that Biology (SBI4U) and one of Advanced Functions (MHF4U or Mathematics of Data Management (MDM4U) is taken.
All other applicants should refer to admissions for the requirements for their specific category of admission."

b) Program Structure, Learning Outcomes, and Assessment of Student Knowledge (QAF 2.1.2.2 a/b/d, 2.1.2.4)

- ***Connect with CIQE (ciqe@ontariotechu.ca) early in the program development to participate in learning outcome development sessions or arrange for assistance and review prior to the scheduling of the external site visit***
- *In Table 3 below, please describe what the student will know or be able to do (knowledge, methodologies, and skills) by the end of the program and indicate how that knowledge or skill will be demonstrated*
- *An example has been provided in purple in the first row and can be removed.*

Degree Level Expectations are set by the Quality Council of Ontario and should not be modified. For the list of and more information on these expectations, including a detailed description, visit their website.

Table 3: Program Learning Outcomes

Program Learning Outcomes By the end of the program, students graduating will be able to… (normally 6-8 outcomes per program with 12 being the maximum)	Degree Level Expectations (list all that apply; you must align with each expectation at least once)	Relevant courses (provide course code and course title)	Assessment of Learning Outcomes (e.g. test, rubric, self-assessment, etc.)
PLO1. Analyze the environmental, social, economic and health sustainability of sociotechnological systems at global, regional, and/or local scales	*Depth and Breadth of Knowledge* • *Knowledge of Methodologies*	SUST1001U, SUST1002U, ENVS1000U, ENVS3010U,POSC3303U, HLSC1811U	tests; review papers with presentations;
PLO2. Apply multi-disciplinary principles and perspectives to Examine environmental, health, social, and cultural issues	• *Application of Knowledge*	SUST1001U, SUST1002U, ENVS1000U, ENVS3010U,POSC3303U, HLSC1811U	tests; review papers with presentations;
PLO3. Develop evidence-informed recommendations and policies to enhance sustainability	• *Application of Knowledge* • *Communication Skills*	POSC3303U, SUST4001U, SUST4002U	tests; review papers with presentations; group projects including reports and presentations
PLO4 Assess sustainability-related policies, infrastructure and systems using a broad array of tools and methods	• *Application of Knowledge* • *Communication Skills* • *Knowledge of Methodologies*	ENVS3010U, POSC3303U, SUST4001U, SUST4002U	tests; review papers with presentations; group projects including reports and presentations
PLO5. Design Integrated policy, infrastructure, and systems to achieve sustainability objectives	• *Application of Knowledge* • *Communication Skills*	ENVS3010U, POSC3303U, SUST4001U, SUST4002U	group projects including reports and presentations
PLO6. Collaborate and communicate across disciplines and perspectives with a focus on civility, empathy, understanding, and effectiveness	• *Application of Knowledge* • *Communication Skills* • *Awareness of Limits of Knowledge* • *Autonomy/Professional Capacity*	ENVS3010U, SUST4001U, SUST4002U	group projects including reports and presentations

Selecting a few examples from above and with assistance from CIQE (ciqe@ontariotechu.ca), please provide further details on:

- *Appropriateness of the program's structure and the requirements to meet both its objectives and program learning outcomes; Guidance on program objectives and program-level learning outcomes, including examples, is available here*
- *Appropriateness of the proposed methods for the assessment of student achievement of the intended program learning outcomes and Degree Level Expectations (How will students demonstrate they have learned and can do what we expect them to by the end of the program?); and*
- *Completeness and appropriateness of plans for monitoring and assessing:*
  - *The overall quality of the program*
  - *Whether the program is achieving in practice its proposed objectives;*
  - *Whether the students are achieving the program learning outcomes; and*
  - *How the resulting information will be documented and subsequently used to inform continuous program improvement*

Please see Guidance on Assessment of Teaching and Learning for advice on how to satisfy these criteria.

The foundational Sustainability courses (SUST1001U, SUST1002U) and the capstone Sustainability projects (SUST4001U, SUST4002U) provide the best examples of the link between Program Learning Outcomes and Degree Level Expectations. In first year, fundamental aspects of sustainability will be shared in lectures, discussion, and field experiences. The contribution of SUST1001U and SUST1002U to PLO1 and PLO2 will be appropriately evaluated with modelling and other assignments, short tests, and a longer form take home exams. In the final year of the program, a multi-disciplinary team of students will tackle a sustainability challenge faced by a government or NGO in the capstone project (SUST4001U, SUST4002U). The contribution of SUST4001U and SUST4002U to PLO4, PLO5, and PLO6 will be appropriately evaluated through evaluation of proposals, progress and final reports, and group presentations. In other program courses beyond 1000 level, multiple means of evaluation beyond tests and exams, including oral and video presentations and reflections, will be used to assess progress and attainment of the program PLOs.

At the University level, a formal avenue for assessing and monitoring program effectiveness will be through the cyclical program review process. In addition to the review every eight years, Ontario Tech's Academic Resource Committee requires a report one-year after the launch of a new program and, if there are areas of concern raised, a subsequent 18-month report will be required. The one-year report will ask the program to review enrollment data, admission averages, and provide an analysis of successes and challenges encountered in the first year. If it is deemed necessary, recommendations will be made to enhance program effectiveness and student success. If required, the 18-month report will address key curricular and student data (e.g. GPA, retention data, etc.) as well as any outstanding recommendations from the one-year report.

Additionally, the BAS Sustainability Team, with representatives from each of the four partnering Faculties (Engineering & Applied Science, Health Sciences,

Science, and Social Science & Humanities), will meet at least twice a year to monitor the quality of the program, student progress and challenges, and discuss proposed refinements of the program. The Team will be provided with course evaluations and student success data such as grades and progression rates. Issues with regard to the students' feedback or performance in particular courses as they relate to the PLOs will be flagged and a determination will be made regarding what pedagogical changes are needed in the course delivery to ensure that the students are meeting the PLOs and program outcomes.

- *Describe the requirements and structure of the program. Is it full-time/part-time? Is this an online or partially online/hybrid program? What are the unique curriculum or program innovations or creative components in this program?*
- *Address how the program's structure, requirements, and program-level learning outcomes are appropriate in meeting the Degree Level Expectations.*

The program will be full-time, with some core and elective courses available as either hybrid or online only. Importantly, the foundational sustainability courses (SUST1001U, SUST1002U) will be online but with innovative, virtual experiential learning components tailored to each student's individual context. The program also includes a unique, "Sustainability Journal" that will be kept by each student for the duration of the program and evaluated at the program level rather than in an individual course.

The program builds from introductory sustainability (SUST1001U, SUST1002U) and other core courses (e.g. POSC1000U, BIOL1010U, HLSC1811U). This provides the important foundation for later courses that apply this knowledge (e.g. ENVS3010U, HLSC3820U, SUST4001U). This supports the sequence of linkages between the Program Learning Outcomes and Degree Level Expectations (**Appendix A**).

  - *Please attach, as an Appendix, the Program Learning Outcome Alignment Map to Degree Level Expectations*
  - *If the program is to be accredited, include with the above information about the accreditation requirements and add the accreditation tables, if available, as an Appendix.*

- *Describe the ways in which the curriculum addresses the current state of the discipline*

The core and elective curriculum address the fundamental challenge of Sustainability as a discipline: our graduates will have expertise and experience in the many dimensions of sustainability…science, engineering, social science, and health sciences…and be able to pursue electives and even a Minor in the aspect of sustainability that most interests them (e.g. sustainable technology, Indigenous studies).

- *Is there an experiential learning component (e.g. workplace learning, co-op, internship, field placements, service learning, mandatory professional practice) to the program? If yes, please describe this component in 2500 words or less. Include confirmed partners, duration of the experiential learning component(s), and projected number of placements (where applicable)*

Although there is no formal co-op component in the program, SUST4001U and SUST4002U will be a group capstone project done in collaboration with an NGO or municipal, provincial, federal, Indigenous government partner. There will be 4-5 capstone projects each year in the program, beginning in 2028-2029.

- *Describe how the principles of Equity, Diversity, Inclusion, and Decolonization have been considered:*
  - *Does the program contain concepts, materials, or resources from scholars/professionals who are part of one or more historically marginalized groups?*
  - *Are multiple perspectives represented in the program, such as those offered by those who are Indigenous, Black, Persons of Colour, and/or 2SLGBTQIA+?*
  - *How has accessibility been considered? More specifically, have the needs of students with disabilities been integrated into the program design (e.g., the ways that students are asked to demonstrate their learning)?*
  - *Will this program provide space to allow for the discussion of other viewpoints outside the "dominant, Western narrative"?*
  - *Have the principles of Universal Design been considered?*
- *Describe how the potential need to provide accessibility accommodations has been considered in the development of this program; please provide information beyond the services offered by Student Accessibility Services*

The program is fully committed to Equity, Diversity, and Inclusion (EDI), including in all its courses and activities.

Specific components of the 1st year Foundations of Sustainability courses and upper year core courses (e.g. ENVS3110U Economics & Politics of the Environment) include discussion among and within small groups of students that demonstrate recognition of and value diverse perspectives on a variety of challenging issues (e.g. population size and immigration). Capstone projects will include diverse hosts from large corporations and municipalities to small, remote Indigenous communities.

Supports provided by Student Accessibility Services will be clearly communicated to every student in the program. Additionally, we have considered the potential need for specialized accessibility accommodations, such as for field trips, in the development of this program. Individual needs will be coordinated with Student Accessibility Services to provide any necessary supports inside or outside of the classroom. The program delivery includes flexibility through online and hybrid courses.

c) Calendar Copy with Program Map(s)

- *Provide, as an Appendix using the template provided, a clear and full calendar copy. The template ensures consistency across all programs in the Academic Calendar*
  - *Note that pathway (Bridge/Advanced Entry) programs will require a separate, usually shorter, section in the Calendar; please be sure to include one entry for each program type. Pathway Calendar example*
  - *New Minors, Co-op programs, or other alternatives have additional Calendar entries. Should you be including these items, please contact CIQE for more information and templates*
- *Provide, as an Appendix, a full list of the all courses included in the program including course numbers, titles, and descriptions. Please indicate clearly whether they are new/existing. Include full course proposals for new courses, and the most recent course syllabi for existing courses. If you are making changes to existing courses, include instead a course change form. In an appendix noted below, you will note which faculty members are expected to teach in the program and who is responsible for developing any new courses.*

Please see **Appendix B** for proposed calendar copy and program map, and **Appendix C** for a full list of core and elective courses in the program.

3 Consultation

- *Describe the expected impact of the new program on the nature and quality of other programs delivered by the home and collaborating Faculty(ies) and any expected impact on programs offered by other Faculties*
- *Outline the process of consultation with the Deans of Faculties that will be implicated or affected by the creation of the proposed program*
- *Provide letters of support for the program from Deans at Ontario Tech and/or from other institutions/partners*
- *Describe any consultation undertaken with regard to the principles of Equity, Diversity, Inclusion, and Decolonization*

Since this program will attract new students to Ontario Tech, the effect on other programs offered by collaborating Faculties will be neutral or positive. The new first year courses in Sustainability will be available to all students as an elective. This will be a limited enrolment (n=25) program so the effect on student numbers in existing core and elective courses will be modest.
Deans in all Faculties (collaborating as well as non-collaborating) were consulted on the development of this program. Letters of support are provided in **Appendix F**.

Effective incorporation of Equity, Diversity, Inclusion, and Decolonization has been a critical part of developing the BAS Sustainability proposal since EDID is foundational to the discipline. Discussion has ranged from among members of our Sustainability Program Committee, which includes representatives from

Science, Engineering & Applied Science, Social Science & Humanities, and Health Sciences, to the Indigenous Education Advisory Circle, to colleagues at other academic and non-academic institutions.

Does this Program contain any Indigenous content? ☒ Yes ☐ No ☐ Unsure

For more information on how Indigenous content is defined at Ontario Tech University and how to consult with the Indigenous Education Advisory Circle (IEAC), please refer to the Protocol for Consultation with the Indigenous Education Advisory Circle.

Has the IEAC been contacted ☒ Yes ☐ No

If yes, when?

March 2022

What was the advice you received from the IEAC, and how has it been included in your proposal?

Refine 1st year core courses to better integrate natural sciences, social sciences, and health sciences foundation for all students entering the program. This discussion led to substantive changes in the required versus elective courses in the program.

Did the IEAC ask you to return the proposal to them for review? ☐ Yes ☒ No

If yes, have they completed their review? ☐ Yes ☐ No ☒ N/A

4 Resource Requirements (QAF 2.1.2.6, 2.1.2.8 a)

a) General Resource Considerations

- *Note here if this new program may impact enrolment agreements with other institutions/external partners that exist with the Faculty/Provost's office*
- *Indicate if the new program will require changes to any existing agreements with other institutions, or will require the creation of a new agreement. Please consult with CIQE (ciqe@ontariotechu.ca) regarding any implications to existing or new agreements.*

The main resource requirements of this new program will be faculty teaching in both new (SUST) and existing core courses, and faculty members serving on the Sustainability Program Committee. At steady state in 2030-2031, 16 incremental course sections will be required. We have budgeted this as PT faculty recognizing that these courses will be taught by a combination of existing FT and

new PT hires. Any hiring will continue to prioritize the areas of greatest need amongst involved Faculties; these will not be specific to Sustainability but will aim to bring further expertise in sustainability to the institution. Additional faculty service contributions are required from each of the collaborating Faculties to support the Sustainability Program Committee. Because the program is relatively small (<100 students in 2030-2031), no additional staff or infrastructure resources are needed. A modest budget for travel, promotion, and office supplies are included in our overall budget.
This program will not impact any existing enrolment agreements.

b) Faculty Members - Current and New Faculty Requirements

- *Complete as an Appendix, using the Faculty Information template provided, a chart detailing the list of faculty committed to the program and provide any additional details, in paragraph form below*
- *Include here a brief statement to provide evidence of the participation of a sufficient number and quality of faculty who will actively participate in the delivery of the program, achieve the goals of the program and foster the appropriate academic environment, contribute substantively to the program, and commit to student mentoring*
- *Describe the role of any sessional/part-time faculty; provide an approximate percentage used in the delivery of the program and the plans to ensure the sustainability of the program and quality of the student experience*
- *Explain the provision of supervision of any experiential learning opportunities*
- ***If new faculty resources are needed, describe the plan and commitment to provide these resources to support the program and the rationale in section 4g)***

Information about Faculty Members teaching core courses in the proposed program is in **Appendix D**. Some new PT Faculty may be assigned to teach additional sections of core courses offered or backfill for FT Faculty teaching new Sustainability courses. As noted above, any hiring will continue to prioritize the areas of greatest need amongst involved Faculties; these will not be specific to Sustainability, but will aim to bring further expertise in sustainability to the institution.

c) Additional academic and non-academic human resources

- *Give details regarding the nature and level of Sessional Instructor and TA support required by the program, the level of administrative and academic advising support, etc.*
- ***If new resources are needed, describe the plan and commitment to provide these resources to support the program and the rationale in section 4g)***

As many as 16 PT Faculty Members will be needed to either deliver additional sections of existing core courses or backfill for FT Faculty Members teaching new Sustainability courses.

d) Supporting information for online and hybrid programs

- *Describe the adequacy of the technological platform to be used for online delivery*
- *Describe how the quality of education will be maintained*
- *Describe how the program objectives will be met*
- *Describe how the program learning outcomes will be met*
- *Describe the support services and training for teaching staff that will be made available*
- *Describe the sufficiency and type of supports that will be available to students*
  - *How has accessibility been considered?*
  - *What strategies have been considered to accommodate students with disabilities?*
  - *Have the principles of Universal Design been considered?*
  - *Will course content be offered in both written and audible forms (e.g., closed captioning, transcriptions)?*
  - *Is course content designed logically and is it easy to follow with limited instruction?*
  - *Are assignment expectations clear (i.e., a rubric)?*
  - *Have the needs of students with limited or unreliable access to wi-fi been considered (e.g., breaking down pre-recorded lectures into maximum 10-minute videos)?*

The existing technology at Ontario Tech, including the Canvas learning management system and other software and networking capabilities (and their support by IT Services) will adequately serve the delivery of both new and existing core courses in the program.

Since the start of the pandemic, instructors in Sustainability and core courses offered online have had substantial, successful experience in offering rich online academic experience, often with greater accessibility, in-class interaction among students, and interaction with the instructor than face-to-face classes. Ontario Tech has developed and supported the tech tools described above that make this possible.

e) Existing student supports

Ontario Tech University, as a relatively small campus community, has a centralized delivery model for student supports. All undergraduate students have access to an extensive support system that ensures a quality student experience. Each Faculty may provide additional, Faculty- or program-specific supports. In addition to the outlined services below, students may also take advantage of the Campus Bookstore, Housing and Living Resources as well as the Ontario Tech Student Union. Further information can be found at: http://studentlife.ontariotechu.ca/.

Faculty-Specific Support

Please provide details on the Academic Advising Office and any Faculty-specific student support services (e.g. peer mentoring, 'coffee chats', study groups, etc.).

In addition to existing academic advising available centrally, the members of the Sustainability Program Committee from each of the four collaborating Faculties will be assigned as mentors to individual students in the program and meet with them at least once a year.

Student Life

Student Learning Centre

Ontario Tech University fosters a high level of academic excellence by working with students, undergraduate and graduate, to achieve educational success. Faculty specific academic resources are available online and include tip sheets and videos. Academic specialists offer one-on-one support services in mathematics, writing, study skills, ESL and physics. With the additional support of peer tutors and workshops, the Student Learning Centre can also accommodate the needs of a specific course or program.

Student Accessibility Services

Ontario Tech University ensures that students with disabilities have equal opportunities for academic success. Student Accessibility Services operates under the Ontario Human Rights Code and the Accessibility for Ontarians with Disabilities Act. Services and accommodation support are provided for students with documented disabilities and include:

- Adaptive technology training
- Alternate format course material
- Learning skills support
- Testing support
- Transition support for incoming students

Student Accessibility Services also provides inclusive peer spaces, support groups, and skills workshops for students.

Career Readiness

Ontario Tech University offers comprehensive career service assistance, co-op and internship support and a variety of valuable resources to help students along their career paths, including:

- Assistance with creating effective job-search documents
- Career counselling
- Co-op and internships
- Interview preparation
- Job market information
- Job search strategies

The Career Centre hosts a variety of events during the academic year including employer information and networking sessions, job fairs and interviews conducted by leading employers.

Student Engagement, Equity and Inclusion, and ***Indigenous Education and Cultural Services***

The university supports students' successful transition and provides opportunities to develop leadership and professional skills throughout their university career. Services provided include:

- Equity and inclusivity programming and support groups
- Indigenous Education and Cultural Services provides space and supports for students to connect with Indigenous culture and resources
- Opportunities to grow and develop leadership skills through the Ambassador and Peer Mentorship program
- Orientation and events through first year
- Peer mentoring
- Services and supports for international and exchange students
- Specialized programming for first-generation, graduate, Indigenous, international, mature, online, transfer and diploma-to-degree pathways students

Student Mental Health Services

Student Mental Health Services helps students learn how to better manage the pressures of student life. Students can:

- Access short term counselling and therapy services
- Access tools and resources online to learn about mental health and how to maintain good health and wellness
- Attend drop-in sessions
- Participate in events, activities or support groups that promote positive health and well-being
- Work with a mental health professional to address concerns

Students in distress will also be provided with support and counselling as needed. There is no cost to students and services are confidential. For those who need long-term counselling support or specialized mental health services, Ontario Tech University will provide referrals to assist the student in accessing resources in the local community or in the student's home community.

Athletics and Recreation Facilities

Ontario Tech University offers a number of recreation facilities and fitness opportunities to meet all lifestyles and needs. On-campus facilities include the state-

of-the-art FLEX Fitness Centre which overlooks Oshawa Creek, five gymnasiums, a 200-metre indoor track, two aerobic/dance studios, the Campus Ice Centre, Campus Fieldhouse, a soccer pitch, a fastball diamond, squash courts and an indoor golf training centre. Students are able to participate in varsity and intramural sports as well as group fitness classes and personal training sessions.

Campus Health Centre

The Campus Health Centre provides assistance in numerous confidential health-care options including:

- A medical clinic with daily access to physician and nursing staff
- Treatment of disease, illness, and injury
- Allergy injections, immunizations, and influenza injections
- Complementary Health Services featuring acupuncture, chiropractic, custom orthotics, massage therapy, nutritional counselling, and physical therapy
- An on-site laboratory (blood work, STI testing, throat swabs, etc.)
- Gynaecological health-care and prescriptions

Student Awards and Financial Aid

Student Awards and Financial Aid (SAFA) is dedicated to helping students understand the variety of options available to finance their education. Budgeting and financial planning are essential to their success and SAFA is on hand to help create the right financial plan. Financial assistance can be in the form of bursaries, employment (both on-campus and off), parental resources, scholarships, student lines of credit and the Ontario Student Assistance Program (OSAP).

Information Technology Resources

Ontario Tech University is a leader among North American universities in implementing and using curriculum and industry specific software in a technology-enriched learning environment (TELE). Our unique environment is adapted to each discipline based on faculty requirements and input for optimal student learning. We are committed to providing the greatest value for students' investment in education and technology while studying at Ontario Tech University.

One of the greatest advantages of Ontario Tech University's approach to TELE is that all students have equal access to the same technology, resources and services. Whether you are inside or outside of the classroom, your course-specific software allows you to work on your own or with others and enjoy seamless access to all Ontario Tech online resources. TELE supports Bring-your-own-device (BYOD) which provides you with laptop standards when acquiring the right laptop for your program and software support services onsite and online. An annual fee for TELE covers a wide range of program-specific software, technical software support, exam support and virus protection.

IT Services strives to provide quality services to students at Ontario Tech. To support these objectives, the following components are included:

Wireless network
Wireless internet connection is available in public areas and open-air locations around the Ontario Tech campus where students congregate (North Oshawa and Downtown locations).

Wired network
To ensure the success of the technology-enriched learning environment, a comprehensive data network has been installed on campus. This includes network drops in lecture halls and designated areas as well as network drops for each residence suite.

Ontario Tech students benefit from networked classrooms and learning spaces. Each ergonomically-designed space has data network connection access and electrical connections to ensure battery regeneration. In addition, classrooms include electronic projection equipment and full multimedia support.

Exam support services
IT Services provide hardware, software and technical support during examinations. IT team will be equipped with loaner laptops in the event of major technical issues.

Laptop repairs
IT Services provide on campus repairs on eligible laptop models.

IT Service Desk
The IT Service Desk is equipped with certified technicians and experienced IT professionals offering technical support services on a drop-in, call-in or email basis.

General Use Workstations (GUWs)
Ontario Tech undergraduate students are able to use general workstations available at the library and have access to Bring Your Own Device Technology-Enriched Learning Environment (BYOD TELE) model course-specific software.

Software Support
Software Support specialists are available to students on-site and online to assist in downloading/installing University software and support any other software related issues.

Printing services
Printing services are available to students in the following areas: labs, classrooms, study common areas, the Learning Commons and the Library. All Ontario Tech students receive print credits every year, more Printpacks can be purchased through the Campus Bookstore if students require additional printing services.

Teaching & Learning Centre

The mission of the Teaching and Learning Centre (TLC) at Ontario Tech University is to empower faculty to reach their potential as educators and to create a culture where effective teaching is valued. We champion the scholarship of teaching and implementation of pedagogy. We create valuable teaching and learning professional development experiences. We move Ontario Tech University towards being a leader in teaching excellence, ultimately leading to greater student success.

The TLC provides faculty with a range of tools and facilities to assist them in providing a rich learning experience for students. Experts at the TLC provide support in various areas including curriculum development, multimedia design, learning technology and in the overall improvement of teaching practice.

In addition, the TLC funds teaching-related projects from the Teaching Innovation Fund (TIF) for proposals by faculty members aimed at developing new methods in teaching and learning. The TLC facilitates teaching awards at the University and supports faculty in their application for external awards and funding opportunities that focus on teaching and learning.

f) Physical resource requirements

- *Please attach a report, as an Appendix, from the Library regarding existing library holdings and support for student learning; please contact your Subject Librarian as you begin your proposal to request a 'Library statement for new program proposal'*
- *Address any space/infrastructure requirements including information technology, laboratory space, equipment, etc.* ***If new space is required, please complete Table 4 (examples in purple); otherwise, please remove this Table from the document***
- *Ideally, please provide information on the change in the number of faculty, students, administrative staff, etc. as it relates to space, as well as information on changes in equipment and activities (additional space; the renovation of existing space; or will the current space allocation accommodate the new program)*
- ***If new resources are needed, describe the plan and commitment to provide these resources to support the program and the rationale in section 4g)***

No additional physical resources are required. The program is anticipated to drive enhanced attention on the University's overall sustainability objectives, e.g., net-zero by 2040, biodiversity support. The University's progress in the sustainability field will likely be rigorously measured and compared with other institutions.

g) Resource Summary

- *Provide a brief statement of the funding requirements and the rationale.*

The main resource requirements of this new program will be faculty teaching in both new (SUST) and existing core courses. At steady state in 2030-2031, 16 incremental course sections will be required. We have budgeted this as PT faculty recognizing that these courses will be taught by a combination of existing FT and new PT hires. Any faculty hiring will continue to prioritize the areas of greatest need amongst involved Faculties; these will not be specific to Sustainability but will aim to bring further expertise in sustainability to the institution.

Because the program is relatively small (<100 students in 2030-2031), no additional staff or infrastructure resources are needed. A modest budget for travel, promotion, and office supplies are included in our overall budget.

Human Resource Requirements

Are additional faculty required to be able to offer this program? ☒ Yes ☐ No

If yes, what year will the faculty hire be required, and are there additional criteria associated with the hiring requirement (e.g. enrolment levels)?

As described previously, PT Faculty may be required to teach new sections of existing core courses or backfill for FT Faculty teaching new Sustainability courses. These will not be specific to Sustainability per se but will be distributed amongst the participating Faculties and aim to bring further expertise in sustainability to the institution within their specific disciplines.

Are additional staff required to be able to offer this program? ☐ Yes ☒ No

If yes, please outline what year the staff hire will be required and any additional criteria associated with the hiring requirement:

Space Requirements

Are there additional space requirements specific to being able to successfully launch this program? ☐ Yes ☒ No

If yes, please provide additional details:

Technology Requirements

Are there additional technology requirements specific to being able to successfully launch this program? ☐ Yes ☒ No

If yes, please provide additional details:

Additional Resource Requirements

Are there additional resource requirements not specified above that are required to successfully launch this program? If so, please outline them below:

The resource requirements outlined above have been reviewed and approved by the Academic Resource Committee (ARC): ____15 January 2024_____
(date of review)

5 Closing Statements Regarding Program Quality (QAF 2.1.2.8)

- *Please describe the appropriateness of the collective faculty expertise to contribute substantively to the proposed program; what areas of faculty strength and expertise, innovation, and scholarly record will contribute to the quality of the program and student experience*
- *Please explain how the program structure and faculty research will ensure the intellectual quality of the student experience*

The proposed BAS Sustainability program would be Ontario Tech's first truly interdisciplinary degree. It capitalizes on existing expertise at Ontario Tech to launch what has the potential to become a "small but mighty" flagship program at our university which is central to our stated mission. It will demonstrate more than any other similar undergraduate program in Canada how it is not enough to make graduates *aware of* other ways of knowing and doing. Because our program's core faculty members are drawn from Sustainability experts across the academy, it will deliver an unparalleled experience to the students in preparing them to confront the sustainability challenges of our time. Our graduates

will have tech and natural science expertise, but appropriate and necessary health and social sciences knowledge as well, taught to them by leaders in their fields. Most importantly, they will build on their Sustainability educational foundation with knowledge and experience of challenges from outside the academy in many contexts, from the very local and pristine natural to the global challenge of confronting the climate crisis.

Our faculty research and university infrastructure, along with the sustainability challenges confronted by our community partners, will provide our students with the very best experiential learning…learning that is immediately relevant in solving sustainability problems of today and the future.

APPENDICES

Please include at minimum the below. Additional Appendices may be added, as appropriate. Appendices should ultimately be listed, attached, and labelled (A, B, C, etc.) in the order in which they first are mentioned in the document.

A. Program Learning Outcome Alignment Map to DLEs
B. Calendar Copy with Program Maps
C. List of Program Courses, New Course Proposals, Required Course Changes, Course Syllabi for Existing Courses
D. Detailed Listing of Faculty Committed to the Program
E. Library Report
F. Letters of Support
G. Proposed Program Governance

Items to be separate documents sent to CIQE:

New Program Funding and Tuition form (for CIQE use only)
Full Budget Spreadsheet (for ARC use only)
CVs for all faculty committed to the program (to be provided to the external reviewers)

Appendix A – BAS Sustainability Program Learning Outcome Alignment Map to Degree Learning Expectations

	1. Analyze the environmental, social, economic and health sustainability of socio-technological systems at global, regional, and/or local scales	2. Apply multi-disciplinary principles and perspectives to examine environmental, health, social, and cultural issues	3. Develop evidence-informed recommendations and policies to enhance sustainability	4. Assess sustainability-related policies, infrastructure, and systems using a broad array of tools and methods	5. Design Integrated policy, infrastructure, and systems to achieve sustainability objectives	6. Collaborate and communicate across disciplines and perspectives with a focus on civility, empathy, understanding, and effectiveness
Depth and Breadth of Knowledge	X					
Research and Scholarship	X					
Level of Application of Knowledge		X	X	X	X	X
Communication Skills				X	X	X
Awareness of Limits of Knowledge						X
Autonomy/Professional Capacity						X

Appendix B – BAS Sustainability Program Proposal Calendar Copy and Program Map

Bachelor of Arts & Science Sustainability

General information

The Bachelor of Arts & Science (BAS) Sustainability degree offered by Ontario Tech gives students a solid foundation in pan-disciplinary sustainability, including Natural, Social, and Health Sciences as well as Engineering. Experiential learning elements, coupled with hard and soft skills development, prepare graduates of the program to be leaders in a broad array of career paths that both define and find solutions to the sustainability challenges of our time.

Core courses in the program build the necessary, broad and deep background, while electives chosen in consultation with the program's academic leaders provide each student an opportunity to grow expertise and experience in the area of sustainability that aligns with their passion and career goals.

Admission requirements

Admission is competitive, and the specific average or standing required for admission varies from year to year. Students are selected by taking into consideration a wide range of criteria including school marks, distribution of subjects taken, and performance in subjects relevant to the academic program. *All applicants must also submit a brief statement of why they want to enroll in the BAS Sustainability program*. Possession of the minimum requirements does not guarantee acceptance; preference will be given to applicants with the best qualifications.

Current Ontario secondary school students must complete the Ontario Secondary School Diploma (OSSD) with six 4U or 4M credits, including English (ENG4U). It is recommended that Biology (SBI4U) and one of Advanced Functions (MHF4U) or Mathematics of Data Management (MDM4U) is taken.

All other applicants should refer to admissions for the requirements for their specific category of admission.

Course Requirements (120 credit hours)

- **Core courses (66 credit hours)**

  - **Sustainability (12 credit hours)**
    - SUST1001U – Foundations of Sustainability I
    - SUST1002U – Foundations of Sustainability II
    - SUST4001U – Sustainability Group Capstone I
    - SUST4002U – Sustainability Group Capstone II

  - **Natural Sciences (21 credit hours)**
    - Biology (9)
      - BIOL1010U - Biology I: Molecular and Cellular Systems
      - BIOL1020U - Biology II: Diversity of Life and Principles of Ecology
      - BIOL3660U - Ecology
    - Introductory Chemistry (3) - Introductory Chemistry (CHEM1010U or one of CHEM1020U, CHEM1110U, CHEM18000U)
    - Environmental Science (6)
      - ENVS1000U – Environmental Science
      - INDG2500U/SCIE2500U – Two-eyed Seeing in the Natural Sciences
    - Mathematics (3) - Introductory Mathematics (MATH1000U or one of BUSI1900U, ENSY0101U, MATH1010U, MATH1015U, MATH1850U, MATH1880U)

  - **Social Sciences (15 credit hours)**
    - Indigenous Studies (3) **-** INDG2000U – Introduction to Indigenous Studies
    - Political Science (9)
      - POSC1000U – Introduction to Political Science
      - POSC3303U – Policies for Sustainability
      - ENVS3110U – Economics & Politics of the Environment
    - Sociology (3) **-** SOCI1000U – Introduction to Sociology

  - **Health Sciences (9 credit hours)**
    - HLSC1701U – Information Literacy & Written Communication for the Health Sciences
    - HLSC1811U – Social Determinants of Health
    - HLSC3820U – Public Health

  - **Research Methods (9 credit hours)**
    - Introductory Quantitative Methods (STAT2020U or one of BUSI1450U, HLSC3800U, INFR1400U, STAT2010U, STAT2800U, SSCI2910U)
    - SSCI2920U – Qualitative Research Methods
    - Research Methods (one of HLSC3910U, BIOL4010U)

- **Electives (54 credit hours)**

  **Electives requiring pre-requisites that are not core courses*

  - **Natural Sciences (minimum 15 credit hours)**
    - BIOL2010U – Human Physiology
    - BIOL2020U – Genetics & Molecular Biology
    - BIOL2030U – Cell Biology
    - BIOL2060U* – Fundamentals of Microbiology
    - BIOL2080U – Biochemistry I
    - BIOL3020U* – Principles of Pharmacology and Toxicology
    - BIOL3620U* – Conservation Biology
    - BIOL4020U* – Introduction to Environmental Toxicology
    - BIOL4660U – Aquatic Ecology – Concepts & Environmental Applications
    - CHEM2020U – Introduction to Organic Chemistry
    - CHEM2130U – Analytical Chemistry for Biosciences
    - ENVS2010U* – Introductory Environmental Science
    - ENVS4010U – GIS and Spatial Analysis
    - MECE3260U – Introduction to Energy Systems (Special Permission Required)
    - PHY1010U – Physics I
    - PHY1020U – Physics II
    - RADI3570U* – Environmental Effects of Radiation (Special Permission Required)

  - **Social Sciences (minimum 15 credit hours)**
    - BUSI2050U – Managerial Economics
    - COMM1100U – Introduction to Communication Studies
    - COMM3350U – Environmental Communications
    - COMM4530U – Research Within Communities: Alternative Methods for Social Sciences (Special Permission Required)
    - COMM4610U – Communication and Conflict Resolution (Special Permission Required)
    - INDG2100U Endaayaang – Storying Home in Michi Saagiig Territory
    - INDG2200U Indigenous Digital & Visual Media
    - INDG/POSC3310U – Indigenous Peoples, Sustainability, and Development: A Global Perspective
    - INDG4300U – Special Topics in Indigenous Studies
    - INDG4310U – The Politics of Indigenous Rights
    - INDG4507U – Indigenous Design and Technology
    - INFR1550U – Law & Ethics of IT
    - LGLS1000U – Foundations of Legal Studies
    - LGLS2120U* – International Law
    - LGLS2200U* – Legal Theory

Social Sciences Electives (continued)

- LGLS2940U* – Legal Research Methods
- LGLS3230U – Law and Globalization
- LGLS3310U – Indigenous Peoples, Law and the State in Canada
- LGLS4040U – Law and the Environment
- POSC2100U – Global Politics
- POSC2200U – Fundamentals of Policy Theory
- POSC2502U – Community Development Policy
- POSC3100U* – Political Economy of Global Development
- POSC3101U* – Inequality & Development
- POSC3203U* – Urban Development
- POSC3300U – Building Sustainable Communities
- POSC3301U – Eco-Justice
- POSC3302U – Environment and Globalization
- POSC3601U* – The Politics of Health
- POCS3700U* – Technology, Politics, and Social Theory
- SSCI1210U – History of Science and Technology
- SSCI1470U – Impact of Science and Technology on Society
- SSCI4010U – Policy Development (Special Permission Required)

- **Health Sciences (minimum 6 credit hours)**
  - HLSC2802U – Introduction to the Canadian Healthcare System
  - HLSC3631U* – Health Policy and Process
  - HLSC3823U – Health & Indigenous People in Canada
  - HLSC4809U* – Environmental and Occupational Health
  - HLSC4825U* – Population Health Risk and Needs Assessment

Note

At least 12 credit hours must be at the fourth-year level. No more than 42 credit hours may be taken at the first-year level.

Sustainability Journal

A Sustainability Journal is kept by each student which will include notes on field trips and other opportunities provided by the program outside of course work. The journal will be reviewed annually by the Sustainability Program Committee, and final approval of the Sustainability Journal is necessary for graduation from the program.

Sample Program Map

*Year One**	**SUST1001U Foundations of Sustainability I**[1,2]	**BIOL1010U Biology I: Molecular and Cellular Systems**	**Introductory Chemistry**[3]	**POSC1000U Introduction to Political Science**	**HLSC1701U Information Literacy & Written Communication for the Health Sciences**
	SUST1002U Foundations of Sustainability II[1,2]	**BIOL1020U Biology II: Diversity of Life and Principles of Ecology**	**ENVS1000U Environmental Science**	**SOCI1000U Introductory Sociology**	**ELECTIVE**
*Year Two**	**Introductory Mathematics**[4]	**INDG1000U Introduction to Indigenous Studies**	**ELECTIVE**	**ELECTIVE**	**ELECTIVE**
	Introductory Quantitative Methods[5]	**SSCI2920U Qualitative Research Methods**	**HLSC1811U Social Determinants of Health**	**ELECTIVE**	**ELECTIVE**
*Year Three**	**BIOL3660U Ecology**	**INDG2500U/ SCIE2500U Two-eyed Seeing in the Natural Sciences**	**ELECTIVE**	**ELECTIVE**	**ELECTIVE**
	POSC3003U Policies for Sustainability	**ENVS3110U Economics & Politics of the Environment**	**ELECTIVE**	**ELECTIVE**	**ELECTIVE**
*Year Four**	**SUST4050U Sustainability Group Capstone I**[2]	**Research Methods**[6]	**ELECTIVE**	**ELECTIVE**	**ELECTIVE**
	SUST4060U Sustainability Group Capstone II[2]	**ELECTIVE**	**ELECTIVE**	**ELECTIVE**	**ELECTIVE**

*** All students in the program maintain a reading and experiential "Sustainability Journal" reviewed annually by the Sustainability Program Committee.**

[1]Available as elective for other programs, non-credit/online for community participants
[2]New Sustainability course
[3]One of CHEM1010U, CHEM1020U, CHEM1110U, CHEM18000U
[4]One of BUSI1900U, ENSY0101U, MATH1000U, MATH1010U, MATH1015U, MATH1850U, MATH1880U
[5]One of BUSI1450U, HLSC2700U, INFR1400U, STAT2010U, STAT2020U, STAT2800U, SSCI2910U
[6]One of HLSC3910U, BIOL4010U

Appendix C: BAS Sustainability Courses

Appendix C1: Sustainability Core Course Information

Appendix C2: Sustainability Elective Course Information

Appendix C1: Sustainability Core Course Information

- BIOL1010U - Biology I: Molecular and Cellular Systems
- BIOL1020U - Biology II: Diversity of Life and Principles of Ecology
- BIOL3660U - Ecology
- BIOL4010U - Introduction to Environmental Research Methods
- CHEM1010U – Chemistry I
- ENVS1000U – Environmental Science
- ENVS3010U – Economics & Politics of the Environment
- HLSC1701U – Information Literacy & Written Communication for the Health Sciences
- HLSC1811U – Social Determinants of Health
- HLSC3820U – Public Health
- INDG2500U/SCIE2500U – Two-eyed Seeing in the Natural Sciences
- INDG2000U – Introduction to Indigenous Studies
- MATH1000U – Introductory Calculus
- POSC1000U – Introduction to Political Science
- POSC3303U – Policies for Sustainability
- SOCI1000U – Introduction to Sociology
- SSCI2920U – Qualitative Research Methods
- STAT2020U - Statistics and Probability for Biological Science
- SUST1001U – Foundations of Sustainability I
- SUST1002U – Foundations of Sustainability II
- SUST4001U – Sustainability Group Capstone I
- SUST4002U – Sustainability Group Capstone II

BIOL1010U - Biology I

Molecular and Cellular Systems Winter 2021 Syllabus

Course Description

This course examines the evolutionary basis of life at the cellular level. Topics will include the basic structure and function of cells, cell energetics, respiration, photosynthesis, the structure and function of DNA, the control of gene expression, cell division, genetics and the evolution of multicellularity.

Objectives and Outcomes

This course provides an introduction to biological science. Lectures are designed to ensure that students learn the important biological concepts necessary to build a strong foundation for future courses. These concepts are reinforced through periodic online quizzes. The laboratory sessions are designed to expand on these concepts providing hands-on experiences that permit students to become familiar with lab procedures, data acquisition, and the interpretation of results leading to conclusions from their observations. Students' mastery of this material is assessed through one midterm test and a final exam.

Lecture Times and Instructor Contact Information

CRN (Section)	Lecture Time	Delivery via	Lecturer	Contact
72240 (001)	Thursday 2:10 pm – 3:30 pm	*Kaltura Classroom	Ana Vakiloroayaei	Via Canvas email only

For office hours, please consult the Canvas home page

Note: we will switch to Google Meet if we experience difficulties with Kaltura Classroom

Lab Coordinator:

Dr. Sylvie Bardin: Contact via Canvas Email only

Important Academic Dates for 2020-2021

Always check the Important Ontario Tech University Academic Dates for Undergraduates to avoid missing university deadlines throughout the semester. Refer to the Ontario Tech University Academic Calendar for 2020/2021 for university policies and program and courses descriptions and requirements**.**

Course Design and Course Expectations

Students will be guided through the subject by structured lectures, in-class activities, tests, laboratory assignments and quizzes. The normal modes of teaching will be one, 1.5 hour **online synchronous (every Thursday from 2:10pm-3:30pm)** lecture via Kaltura or Google Meet, one **set of interactive lecture notes (asynchronous, posted every Friday)** per week and 3 hours of labs, biweekly. There are no tutorials in BIOL1010U.

It is expected that students at university become **active learners**. Students are responsible for:

- ✓ attending and actively participating in all lectures
- ✓ making their own notes, reading all assigned references and using textbook resources
- ✓ preparing for labs in advance and completing laboratory assignments and quizzes in allotted time
- ✓ completing online quizzes after reviewing resources provided
- ✓ undertaking private study (on a regular basis)
- ✓ seeking help from instructors, TAs, Science Café, peer tutors

Textbook Information

Morris, JR, Hartl DL, Knoll AH, Lue RA, Michael M, Berry A, Biewener A, Farrell B, Holbrook NM. 2019. **Biology: How Life Works** (3rd ed.)**.** WH Freeman – Macmillan Learning. New York NY. 1117 pp.

The textbook and access code for the textbook website (= Launchpad) can be purchased at the Ontario Tech University Bookstore (see the Ontario Tech University Campus Bookstore website). The textbook is packaged in two formats as follows:

1. loose-leaf package (includes e-textbook and LaunchPad access code)
2. e-book package (includes LaunchPad access code)

NOTE: If you purchase a used textbook, you will still need to purchase the e-book package (option 2 above) in order to have access to the LaunchPad resources used in this course.

To register for access to the LaunchPad website, follow the instructions posted on Canvas in the module entitled: "**BIOL1010 Textbook Information and Access**".

BIOL1010 Evaluation Details		
Component	**Mark**	**Details**
Midterm	**25%**	**For CRN 72240 - Thursday March 4th, 2021** • Format: 50 multiple-choice questions delivered via Canvas in a 1-hour time period • Midterm will be available from **11:00 am until 6:30 pm on Thursday, March.4th 2021.** • You will have one attempt only but you can choose the time you write. **Midterm must be submitted by 6:30 pm on Thursday, March.4th 2021.** • **Respondus Lockdown Browser and Monitor will be used. No exceptions.**
Participation Activities	**5%**	• 5 x 1% activities assigned randomly throughout the term and require attendance and participation in the virtual lecture – no exceptions.
Online Lecture Quizzes	**20%**	Six (6) online quizzes, delivered via Canvas, designed to assess lecture content throughout the term. • Quizzes must be completed by the deadline (see schedule below). **No extensions or excuses will be accepted** • Quizzes must be completed in one sitting and you will be given only one attempt and will be monitored by **Respondus with Lockdown Browser and Monitor. No exceptions.** • Each quiz is worth 4% of the final mark in the course. • The **best 5** of 6 **quizzes will be used to calculate your quiz mark**.
Laboratories	**25%**	Five online laboratories during term. All labs are mandatory. • The labs are synchronous and will take place on Kaltura • The Labs start on the week of Feb 1, 2021. • **Evaluation:** **Assignments** (5 Assignments each worth 5%)…… **25%** **Please refer to the "BIOL1010 Laboratory Guidelines - W 2021" posted on Canvas in the LABORATORY Module tab for more information and important policies regarding the labs.**
Final Exam	**25%**	**In Final Exam Period – April 14th to 25th 2021** (date/time/location TBA) • The **final exam is cumulative** with emphasis on material covered after the midterm test • The format is 80 multiple-choice questions (in 90 minutes) and will be delivered online via Canvas using **Respondus Lockdown Browser and Monitor. No exceptions.** • More details will be available at a later date

Lecture Topics and Associated Textbook Chapters

S = synchronous delivery via online lecture
AS = asynchronous delivery via interactive notes

Date	Lecture	Topic	Chapter
Jan.14th (S)	1	Introduction and syllabus	
Jan.15th **Posted** (AS)	2 (AS)	Molecules of Life	2
Jan.21st (S)	3 (S)	Nucleic Acids and Transcription	3
Jan.22nd **Posted** (AS)	4 (AS)	Protein Structure and Function	4
Jan.28th (S)	5 (S)	Translation	4
Jan.29th **Posted** (AS)	6 (AS)	Membrane Structure, Transport and Cellular Organization	5
Feb.4th (S)	7 (S)	Enzymes	6
Feb.5th **Posted** (AS)	8 (AS)	Cellular Respiration 1: Glycolysis and Anaerobic Metabolism	7
Feb.11th (S)	9 (S)	Cellular Respiration 2: Pyruvate oxidation, CAC, ETC/Oxidative Phosphorylation	7
Feb.12th **Posted** (AS)	10 (AS)	Photosynthesis	8
Oct 15 - 19	**Winter Study Break (no lectures)**		
Feb.25th (S)	11 (S)	Cell Communication	9
Feb.26th **Posted** (AS)	12 (AS)	Cell Form and Function	10
Mar.4th	Midterm Test (Lectures 2 – 10) – details above on p.3		
Mar.11th (S)	13 (S)	Cell Division 1 – Mitosis	11
Mar.12th **Posted** (AS)	14 (AS)	Cell Division 2 – Meiosis	11
Mar.18th (S)	15 (S)	DNA Replication	12
Mar.19th **Posted** (AS)	16 (AS)	Mutation and Genetic Variation	14
Mar.25th (S)	17 (S)	Mendelian Inheritance 1	15
Mar.26th **Posted** (AS)	18 (AS)	Mendelian Inheritance 2	15
April 1st (S)	19 (S)	Beyond Mendel	16
April 2nd **Posted** (AS)	20 (AS)	Genetic / Environmental Influences	17
April 8th		Study time - no synchronous lecture	

Online Quiz Schedule and Due Dates:

Quiz #	Lectures Covered	Date Available (by 5:00 pm)	Due Date (by 7:00 pm)
1	2-4	Jan.22nd	Jan.28th
2	5-7	Feb.5th	Feb.11th
3	8-9	Feb.12th	Feb. 25th
4	11-13	March 12th	March 18th
5	14-16	March 19th	March 25th
6	17-19	April 2nd	April 8th

Tips for Completing your Online Quizzes

- ✓ Study ahead of time, quizzes are time limited and not open book
- ✓ Work independently – you should not be working with classmates on the quizzes
- ✓ Quizzes must be completed in one sitting and are 30 minutes in duration – make sure you choose a time when you won't be disturbed
- ✓ Write the quiz in an area where you have good wifi reception or if possible connect via ethernet cable if wifi is unstable. Make sure your laptop is charged. If you encounter technical issues email your instructor immediately (via Canvas email) with a description of the problem
- ✓ Do not leave completing the quiz until the last minute – technical issues that occur within two hours of the due date will not be considered

Getting Help with Course Content

There are no tutorials in BIOL1010; instead there is Peer Tutoring and the Ontario Tech Science Café where students can get help. These services are already included with your tuition fees so are available at no extra cost! It is a great way not only to get help with course material but to meet fellow students and interact with senior students and graduate students as well. Please make sure to make use of these excellent resources. And of course, seek help from your instructors during office hours!

Peer Tutoring

BIOL1010U peer tutors work one-on-one to provide academic support based on students' individual needs.

Appointments are 45 minutes long and will take place online.

Book an appointment through the Student Life Portal where you can also see a list of courses for which the Peer Tutors are available.

Science Café

Science Café – **online on Mondays and Thursdays 4:00 to 6:00 pm beginning January 18th.** To join, log in to Canvas, go to Science Café courses, click "Media Gallery" followed by "Join Meeting"

The Ontario Tech Science Café offers additional academic support in Biology, Chemistry, Math and Physics outside of class time, in a relaxed more informal setting.

Technology Requirements

To support online learning, the university recommends certain technology requirements for laptops, software and internet connectivity which are available at: https://itsc.ontariotechu.ca/remote-learning.php.

Students experiencing technical difficulties such that they are unable to meet the technology requirements may contact the IT Service Help Desk at: servicedesk@dc-uoit.ca.

Students experiencing financial difficulties such that they are unable to meet the technology requirements may contact Student Awards and Financial Aid Office at: connect@ontariotehu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand and agree to observe the Recommended Technology Requirements for accessing university online learning resources, including those minimum requirements that are specific to your faculty and program.

Online Test and Exam Proctoring (Virtual Proctoring)

Ontario Tech University will conduct virtual monitoring of examinations in accordance with Ontario privacy legislation and all approved policy instruments.

Freedom of Expression and Professional Student Conduct Online

Pursuant to Ontario Tech's Freedom of Expression Policy, all students are encouraged to express ideas and perspectives freely and respectfully in university space and in the online university environment, **subject to certain limitations**. Students are reminded that the limits on Freedom of Expression include speech or behaviour that: is illegal or interferes with the university's legal obligations; defames an individual or group; constitutes a threat, harassment or discrimination; is a breach of fiduciary, contractual, privacy or confidentiality obligations or commitments; and unduly disrupts and interferes with the functioning of the university. In the context of working online, different forms of communication are used. Where permitted, students using "chat" functions or other online forms of communication are encouraged to ensure that their communication complies with the Freedom of Expression Policy.

Additional tips for engaging professionally in online classes/activities:

- Please make sure to be in a room/area in your home where there is minimal activity and where you will not be disturbed.
- Please make sure you are appropriately dressed.
- When communicating via "chat" or other online forms of communication please refrain from using abbreviations, emojis, gamer speak etc., and minimize activity that may be disruptive.
- Please mute your microphone when you sign in. Large gatherings often create a lot of electronic feedback. Unmute your microphone to speak and then mute it again when done, or use the chat function integrated into online meeting platform being used.
- If your internet connection/bandwidth is not the best, you can also turn off the camera, it sometimes helps.

Remember you are engaging in an Ontario Tech University course and are bound by the Ontario Tech U Student Code of Conduct. Inappropriate behaviour will be noted and is subject to misconduct penalties in accordance with the university's Academic Conduct policies.

BIOL1010 Summary Laboratory Information

*For detailed laboratory information, please consult the **Lab Guidelines** on Canvas*
(in the folder entitled: "**BIOL1010 Laboratory Guidelines – W2021**").

Laboratory Objectives

- to learn about working safely in biology laboratory settings;
- to learn how to use some equipment commonly found in biology laboratories;
- to help develop analytical skills required to evaluate scientific data and interpret results.

Lab Personnel

Lab Coordinator - **Dr. Sylvie Bardin** (see contact information on page 1 of this syllabus)

Lab TAs – **Luis Salgado, Urvi Pajankar**

Please contact your TA via Canvas email only

Highlights:

- Biol 1010 laboratories start on the week of Feb 1, 2021.
- All the labs will be performed online for a total of 5 labs over the semester.
- The 3 h lab sessions will be synchronous on Kaltura with a TA available to answer questions.
- The lab manuals and activities will be posted under the LABORATORY tab in Canvas Modules one week before the labs and students will have to submit their assignments to their TA via Turnitin by the end of their lab period.
- All labs are mandatory. You must participate in the quizzes and /or activities occurring during the labs in order for your lab assignment to be graded.

Tentative Lab Topics and date of the labs

Lab #	Tentative topics	Dates (2021)
1	The meaning of life (and Lab safety)	Feb 2 / 3
2	Macromolecules	Feb 23 / 24
3	Enzyme lab	March 9 / 10
4	Photosynthesis and respiration	March 23 /24
5	Solving genetic problems	April 6 / 7

Please refer to the Laboratory Guidelines Biol 1010 – W2021 posted in Canvas for complete and detailed information about the labs policies.

Faculty of Science Academic Policy

Missed Course Work

For the Winter 2021 academic term, medical notes will not be required for missed term work due to illness. However, you must complete and submit the Academic Consideration Form if you miss term work for any reason. Forms must be submitted to your instructor for coursework weighted less than 25%, to your lab coordinator for missed labs, to Science Academic Advising for missed midterms and to the Registrar's Office for missed final exams and please submit by the deadlines indicated on the form.

Final Examinations, Final Exam Viewing and Final Grades

Final examinations are held during the final examination period at the end of the semester and **when on campus access is allowed,** may take place in a different room and on a different day from the regularly scheduled class. Check the published Examination Schedule for a complete list of days and times.

Students are required to show their Student ID card (campus ID) **when in-person examinations are allowed.** Students are advised to obtain their Student ID Card well in advance of the examination period as they will not be able to write their examinations without it. More information on ID cards can be found at https://registrar.ontariotechu.ca/campus-id/index.php.

Students who are unable to write a final examination when scheduled due to religious obligations may make arrangements to write a deferred examination. These students are required to submit a Request for Accommodation for Religious Obligations to the Faculty concerned as soon as possible and no later than three weeks prior to the first day of the final examination period.

Further information on final examinations can be found at: https://usgc.ontariotechu.ca/policy/policy-library/policies/academic/procedures-for-final-examination-administration.php.

Final Examination Viewing:

Students wishing to view their final exam must submit a written request no later than 1 week (7 days) after the release of final grades for that semester, stating why they would like to view the exam. Reasons may include, to calculate the final numeric grade (in cases where it is difficult to infer) or to determine which items of the course material gave you the most difficulty. To request an exam view, please complete the Science Final Exam View Request form found on our Canvas course page and submit it to the course instructor via email. There is no fee associated with viewing a final exam.

Please note, this is an opportunity for students to view their answers and see where any mistakes were made and not to negotiate grades. Per Ontario Tech University policy (section 5.24.5.1) unless a clerical error has occurred, instructors may not make changes to the final grade awarded in a course as a result of an exam view. If, after viewing the final exam script, you wish to dispute the final grade awarded, you will need to submit for a Final Grade Appeal through the Registrar's Offices. For more information on Final Grade Appeals, please refer to section 5.11.2 of the Ontario Tech University Academic Calendar or contact the Science Advising Office.

Students will have 15 minutes to discuss their final exam via webcam with their instructor. Only the use of a calculator is permitted during the exam view appointment. No writing instruments, cell phones or other electronic devices will be permitted. Missed exam view appointments will not be rescheduled.

***Final grades**:*

Final grades are posted to MyCampus by the Registrar's office (RO) approximately one-and-a-half weeks after the end of the final exam period. Official grades are released by the RO only and your final grades cannot be released by anyone else. Please do not contact your instructor for this information. Grades will be posted in accordance with the Grading Scale as indicated in the Ontario Tech U Academic Calendar.

Your final exam grades will not be posted on Canvas, but you will be able to infer your grade based on your final exam grade and your term work grades. ***Please note that there are no options to do extra assignments, tests, exams or other activities to make up for unsatisfactory performance in a course.***

Academic Integrity: Plagiarism and Cheating

Students and faculty at Ontario Tech University share an important responsibility to maintain the integrity of the teaching and learning relationship. This relationship is characterized by honesty, fairness and mutual respect for the aim and principles of the pursuit of education. Academic misconduct impedes the activities of the university community and is punishable by appropriate disciplinary action.

Students are expected to be familiar with and abide by Ontario Tech University's regulations on Academic Conduct which sets out the kinds of actions that constitute academic misconduct, including plagiarism, copying or allowing one's own work to copied, use of unauthorized aids in examinations and tests, submitting work prepared in collaboration with another student when such collaboration has not been authorized, among other academic offences. The regulations also describe the procedures for dealing with allegations, and the sanctions for any finding of academic misconduct, which can range from a resubmission of work to a failing grade to permanent expulsion from the university. A lack of familiarity with these regulations on academic conduct does not constitute a defense against its application. This information can be found at this link: http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Academic_conduct

Extra support services are available to all Ontario Tech University students in academic development, study skills, counseling, and peer mentorship. More information on student support services can be found at https://studentlife.ontariotechu.ca/services/academic-support/index.php

Turnitin

Ontario Tech University and faculty members reserve the right to use electronic means to detect and help prevent plagiarism. Students agree that by taking this course all assignments are subject to submission for textual similarity review by Turnitin.com. Assignments submitted to Turnitin.com will be included as source documents in Turnitin.com's restricted access database solely for the purpose of detecting plagiarism in such documents for five academic years. The instructor may require students to submit their assignments electronically to Turnitin.com or the instructor may submit questionable

text on behalf of a student. The terms that apply to Ontario Tech University's use of the Turnitin.com service are described on the Turnitin.com website.

Students who do not wish to have their work submitted to Turnitin.com must provide with their assignment at the time of submission to the instructor a signed Turnitin.com Assignment Cover Sheet. Further information about Turnitin can be found on the Academic Integrity link above.

Students with Disabilities

Accommodating students with disabilities at Ontario Tech is a responsibility shared among various partners: the students themselves, SAS staff and faculty members. To ensure that disability-related concerns are properly addressed during this course, students with documented disabilities and who may require assistance to participate in this class are encouraged to speak with me as soon as possible. Students who suspect they have a disability that may affect their participation in this course are advised to go to Student Accessibility Services (SAS) as soon as possible. Maintaining communication and working collaboratively with SAS and faculty members will ensure you have the greatest chance of academic success.

When on campus access is allowed, students taking courses on north Oshawa campus can visit Student Accessibility Services in the Student Life Building, U5, East HUB (located in the Founders North parking lot). Students taking courses on the downtown Oshawa campus can visit Student Accessibility Services in the 61 Charles St. Building, 2nd Floor, Room DTA 225 in the Student Life Suite.

Disability-related and accommodation support is available for students with mental health, physical, mobility, sensory, medical, cognitive, or learning challenges. Office hours are 8:30am-4:30pm, Monday to Friday, closed Wednesday's 8:30am – 10:00am. For more information on services provided, you can visit the SAS website at https://studentlife.ontariotechu.ca/services/accessibility/index.php. Students may contact Student Accessibility Services by calling 905-721-3266, or email studentaccessibility@ontariotechu.ca.

When on campus access is allowed, students who require the use of the Test Centre to write tests, midterms, or quizzes MUST register online using the SAS test/exam sign-up module, found here https://disabilityservices.ontariotechu.ca/uoitclockwork/custom/misc/home.aspx. Students must sign up for tests, midterms, or quizzes AT LEAST seven (7) days before the date of the test.

Students must register for final exams by the registration deadline, which is typically two (2) weeks prior to the start of the final examination period. SAS will notify students of the registration deadline date.

Freedom of Information and Protection of Privacy Act (FIPPA)

The following is an important notice regarding the process for submitting course assignments, quizzes, and other evaluative material in your courses in the Faculty of Science.

Ontario Tech University is governed by the Freedom of Information and Protection of Privacy Act ("FIPPA"). In addition to providing a mechanism for requesting records held by the university, this legislation also requires that the University not disclose the personal information of its students without their consent.

FIPPA's definition of "personal information" includes, among other things, documents that contain both your name and your Banner (student) ID. For example, this could include graded test papers or assignments. To ensure that your rights to privacy are protected, the Faculty of Science encourages you to use only your Banner ID on assignments or test papers being submitted for grading, unless otherwise instructed. This policy is intended to prevent the inadvertent disclosure of your information where graded papers are returned to groups of students at the same time. If you still wish to write both your name and your Banner ID on your tests and assignments, please be advised that Ontario Tech University will interpret this as an implied consent to the disclosure of your personal information in the normal course of returning graded materials to students.

If you have any questions or concerns relating to the new policy or the issue of implied consent addressed above, please contact accessandprivacy@ontariotechu.ca

Notice of Collection and Use of Personal Information

Throughout this course, personal information may be collected through the use of certain technologies under the authority of the University of Ontario Institute of Technology Act, SO 2002, c. 8, Sch. O. and will be collected, protected, used, disclosed and retained in compliance with Ontario's Freedom of Information and Protection of Privacy Act R.S.O. 1990, c. F.31.

This course will use the following technologies that may collect, use, disclose and retain personal information (including images) for the purposes described below:

- Respondus Monitor to maintain academic integrity for examinations.
- Google Meet or Kaltura Virtual Classroom to facilitate remote instruction and interactive learning.
- Peer-shared applications, services or technologies that may be reviewed, assessed, or used as part of coursework.
- Other applications, services, or technologies that support or enhance online learning that include, but are not limited to, the following: Socrative

For more information relating to these technologies, we encourage you to visit: https://tlc.ontariotechu.ca/learning-technology/index.php Questions regarding personal information may be directed to: Ontario Tech University Access and Privacy Office, 2000 Simcoe Street North, Oshawa, ON L1G 0C5, email: accessandprivacy@ontariotechu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand, and agree to the terms and conditions under which the technology provider(s) may collect, use, disclose and retain your personal information. You agree to the university using the technologies and using your personal information for the purposes described in this course outline.

Religious Observances

It is Faculty of Science policy to provide special consideration for recognized holy days (Interfaith Calendar) which may be observed by our students. Although not all holy days

require students to be absent from school, accommodations may still be necessary in some cases. As a student, it is **your** responsibility to check the dates for all course work and exams on a regular basis and notify the Science Academic Advisor per the options below. Documentation which confirms your faith is required in all cases.

Please note:

1. If the holy day will conflict with scheduled labs and tutorials you must inform the Senior Lab coordinator or lab TA of any potential conflicts **at least 7 business days before the scheduled meeting time of the lab.**

2. If the holy day will conflict with the due date for an assignment you must inform the instructor at least **7 days before the due date.**

3. If the holy day will conflict with tests or exams you must inform your instructors and the Science Academic Advisor of any potential conflicts **at least 7 business days prior to the date of the test/exam. Note that the deadline for final exams is at least three weeks prior to the examination period as per the Final Exams policy.**

Failure to contact the appropriate person by the deadline may result in special consideration not being granted. Note that the dates indicated on the website above are the dates which will be recognized by the Faculty of Science. Should your holy day fall on alternate dates (e.g. those holy days which are based on lunar cycles) you will be required to provide additional proof of the date of your holy day by the deadline as specified above.

Student Support

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact studentlife@ontariotechu.ca for support. Furthermore, please notify your professor if you are comfortable in doing so. This will enable them to provide any resources and help that they can.

Sexual Violence Policy

Ontario Tech is committed to the prevention of sexual violence in all is forms. For any student who has experienced Sexual Violence, Ontario Tech can help. We will make accommodations to cater to the diverse backgrounds, cultures, and identities of students when dealing with individual cases.

If you think you have been subjected to or witnessed sexual violence:

1. Reach out to a Support Worker, a specially trained individual authorized to receive confidential disclosures about incidents of sexual violence. Support Workers can offer help and resolution options which can include safety plans, accommodations, mental health support, and more. To make an appointment with a Support Worker, call 905.721.3392 or email studentlife@ontariotechu.ca
2. Learn more about your options at: https://studentlife.ontariotechu.ca/sexualviolence/

Course Feedback Surveys

Student evaluation of teaching is a highly valued and helpful mechanism for monitoring the quality of Ontario Tech University's programs and instructional effectiveness. To that end, course evaluations are administered by an external company in an online, anonymous process during the last few weeks of classes. Students are encouraged to participate actively in this process and will be notified of the dates. Notifications about course evaluations will be sent via e-mail, and posted on Canvas, Weekly News, and signage around the campus.

University Response to COVID-19

The government response to the COVID-19 pandemic is continually evolving. As new information becomes available from federal and provincial public health authorities, the Province of Ontario and the Regional Municipality of Durham, Ontario Tech University will remain nimble and prepared to respond to government orders, directives, guidelines and changes in legislation to ensure the health and safety of all members of its campus community. In accordance with public health recommendations, the university may need to adjust the delivery of course instruction and the availability and delivery mode of campus services and co-curricular opportunities. Ontario Tech University appreciates the understanding and flexibility of our students, faculty, and staff as we continue to navigate the pandemic and work together to demonstrate our strong commitment to academic, research and service excellence during these challenging and unprecedented times.

BIOL1020U
Biology II: Diversity of Life and Principles of Ecology
Spring 2022 Syllabus

Course Description

In this course we learn how evolution works, and then look at the diversity of organisms (prokaryotes, protists, fungi, plants and animals) that it has produced. We then learn the main concepts of ecology including a basic understanding of populations, communities and ecosystems.

Objectives and Outcomes

This course provides the student with an introduction to evolution, biological diversity, and ecology. Online lecture quizzes throughout the course reinforce the concepts presented in lectures. The laboratory component is designed to expand on the concepts developed in the lectures via exploration and observation of specimens, dissections, data collection and report writing..

Who Teaches the Lecture Component

Dr Robert Bailey – Best way to get in touch is through the Canvas email system. If I can't answer your query via Canvas email and we need to chat, we'll get together at a mutually convenient time ASAP.

When We Meet

We will get together on Google Meet **meet.google.com/vgu-hpqu-jzx** every **Tuesday and Thursday from 940-1130am starting on Tuesday 10 May and finishing up on Thursday 16 June**. I will record all of our meetings and post them on Canvas in case you're not able to attend.

Who Teaches the Lab Component

Dr George Stamatiou – If you need to get in touch please use the Canvas email system.

Textbook Information

We will be using the same textbook as was used for BIOL1010U:

Morris JR, Hartl DL, Knoll AH, Lue RA, Michael M, Berry A, Biewener A, Farrell B, Holbrook NM. 2019. **Biology: How Life Works** (3rd ed.)**.** WH Freeman – Macmillan Learning. New York NY. 1117 pp.

Important Note: you cannot access BIOL1020U Launchpad content with the URL used for BIOL1010. Please use the following URL to access Launchpad for BIOL1021U:

https://www.macmillanhighered.com/launchpad/morris3e/19420620#/launchpad

If you did not previously purchase a textbook and access code for the textbook, it can be purchased at the Ontario Tech University Bookstore (see the Ontario Tech University Campus Bookstore website).

The textbook is packaged in two formats as follows:

1. loose-leaf package (includes e-textbook and LaunchPad access code)
2. e-book package (includes LaunchPad access code)

NOTE: If you purchase a used textbook, you will still need to purchase the e-book package (option 2 above) in order to have access to the LaunchPad resources used in this course.

BIOL1021 Evaluation Details		
Component	**Mark**	**Details**
Online Lecture Quizzes	**35%**	**Five (5) online quizzes**, delivered via Canvas, designed to assess lecture content throughout the term • Quizzes will be available for one week • Quizzes must be completed in one sitting, one question at a time with no revisiting questions • Each quiz is **twenty (20) questions** • You get **45m** to do the quiz • You can attempt each quiz **two (2)** times. Your best result is recorded • Each quiz is worth **7%** of your final mark in the course
Laboratories	**25%**	**Five (5) in person labs weekly during the term** ● Attendance is **mandatory** ● You are permitted to miss **one** (1) lab ***with appropriate documentation***. If you miss more than one lab even with appropriate documentation, you will receive a mark of **zero** for each lab missed. Missed labs will not be rescheduled. ● **Evaluation** o **Quizzes (4 quizzes each worth 1.25%) 5%** o **Pre-Lab Assignments (5, each worth 1%) 5%** o **Lab Assignments (5 reports each worth 2%) 10%** o **Lab Practicum (virtual bell ringer test) 5%** *Please refer to the "BIOL 1020 Laboratory Guidelines" file posted on Canvas (under the Lab Content Module) for more information regarding the labs.*
Final Exam	**40%**	**In Final Exam Period** (date/time TBA)

Lecture Topics and Associated Textbook Chapters

Module	Date	Topic	Chapter
1	Tuesday 10 May	Evolution	20
2	Thursday 12 May	Species & Speciation	21
3	Tuesday 17 May QUIZ 1 RELEASED	Evolutionary Patterns	22
4	Thursday 19 May	Bacteria & Archaea	24
5	Tuesday 24 May QUIZ 2 RELEASED	Eukaryotic Cells: Origin & Diversity; Being Multicellular	25, 26
6	Thursday 26 May	Plant Diversity	31
7	Tuesday 31 May QUIZ 3 RELEASED	Fungal Diversity	32
8	Thursday 2 June	Animal Diversity	42
9	Tuesday 7 June QUIZ 4 RELEASED	Population Ecology	44
10	Thursday 9 June	Community Ecology	45
11	Tuesday 14 June QUIZ 5 RELEASED	Ecosystem Ecology	46
12	Thursday 16 June	Climate & Biomes	47
	22 – 25 June	**FINAL EXAM (date/time TBA)**	

Online Quiz Schedule and Due Dates:

Quiz #	Lectures Covered	Date Available (1pm)	Due Date (930am)
1	1-3	17 May	24 May
2	4-5	24 May	31 May
3	6-7	31 May	7 June
4	8-9	7 June	14 June
5	10-11	14 June	21 June

Technology Requirements

To support online learning, the university recommends certain technology requirements for laptops, software and internet connectivity which are available at: https://itsc.ontariotechu.ca/remote-learning.php.

Students experiencing technical difficulties such that they are unable to meet the technology requirements may contact the IT Service Help Desk at: servicedesk@dc-uoit.ca.

Students experiencing financial difficulties such that they are unable to meet the technology requirements may contact Student Awards and Financial Aid Office at: connect@ontariotehu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand and agree to observe the Recommended Technology Requirements for accessing university online learning resources, including those minimum requirements that are specific to your faculty and program.

Online Test and Exam Proctoring (Virtual Proctoring)

Ontario Tech University will conduct virtual monitoring of examinations in accordance with Ontario privacy legislation and all approved policy instruments.

Freedom of Expression and Professional Student Conduct Online

Pursuant to Ontario Tech's Freedom of Expression Policy, all students are encouraged to express ideas and perspectives freely and respectfully in university space and in the online university environment, **subject to certain limitations**. Students are reminded that the limits on Freedom of Expression include speech or behaviour that: is illegal or interferes with the university's legal obligations; defames an individual or group; constitutes a threat, harassment or discrimination; is a breach of fiduciary, contractual, privacy or confidentiality obligations or commitments; and unduly disrupts and interferes with the functioning of the university. In the context of working online, different forms of communication are used. Where permitted, students using "chat" functions or other online forms of communication are encouraged to ensure that their communication complies with the Freedom of Expression Policy.

Additional tips for engaging professionally in online classes/activities:

- Please make sure to be in a room/area in your home where there is minimal activity and where you will not be disturbed.
- Please make sure you are appropriately dressed.
- When communicating via "chat" or other online forms of communication, please refrain from using abbreviations, emojis, gamer speak etc., and minimize activity that may be disruptive.
- Please mute your microphone when you sign in. Large gatherings often create a lot of electronic feedback. Unmute your microphone to speak and then mute it again when done, or use the chat function integrated into online meeting platform being used.
- If your internet connection/bandwidth is not the best, you can also turn off the camera, it sometimes helps.

Remember you are engaging in an Ontario Tech University course and are bound by the Ontario Tech U Student Code of Conduct. Inappropriate behaviour will be noted and is subject to misconduct penalties in accordance with the university's Academic Conduct policies.

Faculty of Science Academic Policy

Missed Course Work

For the Winter 2021 academic term, medical notes will not be required for missed term work due to illness. However, you must complete and submit the Academic Consideration Form if you miss term work for any reason. Forms must be submitted to your instructor for coursework weighted less than 25%, to your lab coordinator for missed labs, to Science Academic Advising for missed midterms and to the Registrar's Office for missed final exams and please submit by the deadlines indicated on the form.

Final Examinations, Final Exam Viewing and Final Grades

Final examinations are held during the final examination period at the end of the semester and **when on campus access is allowed,** may take place in a different room and on a different day from the regularly scheduled class. Check the published Examination Schedule for a complete list of days and times.

Students are required to show their Student ID card (campus ID) **when in-person examinations are allowed.** Students are advised to obtain their Student ID Card well in advance of the examination period as they will not be able to write their examinations without it. More information on ID cards can be found at https://registrar.ontariotechu.ca/campus-id/index.php.

Students who are unable to write a final examination when scheduled due to religious obligations may make arrangements to write a deferred examination. These students are required to submit a Request for Accommodation for Religious Obligations to the Faculty concerned as soon as possible and no later than three weeks prior to the first day of the final examination period.

Further information on final examinations can be found at: https://usgc.ontariotechu.ca/policy/policy-library/policies/academic/procedures-for-final-examination-administration.php.

Final Examination Viewing:

Students wishing to view their final exam must submit a written request no later than 1 week (7 days) after the release of final grades for that semester, stating why they would like to view the exam. Reasons may include, to calculate the final numeric grade (in cases where it is difficult to infer) or to determine which items of the course material gave you the most difficulty. To request an exam view, please complete the Science Final Exam View Request form found on our Canvas course page and submit it to the course instructor via email. There is no fee associated with viewing a final exam.

Please note, this is an opportunity for students to view their answers and see where any mistakes were made and not to negotiate grades. Per Ontario Tech University policy (section 5.24.5.1) unless a clerical error has occurred, instructors may not make changes to the final grade awarded in a course as a result of an exam view. If, after viewing the final exam script, you wish to dispute the final grade awarded, you will need to submit for a Final Grade Appeal through the Registrar's Offices. For more

information on Final Grade Appeals, please refer to section 5.11.2 of the Ontario Tech University Academic Calendar or contact the Science Advising Office.

Students will have 15 minutes to discuss their final exam via webcam with their instructor. Only the use of a calculator is permitted during the exam view appointment. No writing instruments, cell phones or other electronic devices will be permitted. Missed exam view appointments will not be rescheduled.

***Final grades**:*

Final grades are posted to MyCampus by the Registrar's office (RO) approximately one-and-a-half weeks after the end of the final exam period. Official grades are released by the RO only and your final grades cannot be released by anyone else. Please do not contact your instructor for this information. Grades will be posted in accordance with the Grading Scale as indicated in the Ontario Tech U Academic Calendar.

Your final exam grades will not be posted on Canvas, but you will be able to infer your grade based on your final exam grade and your term work grades. ***Please note that there are no options to do extra assignments, tests, exams or other activities to make up for unsatisfactory performance in a course.***

Academic Integrity: Plagiarism and Cheating

Students and faculty at Ontario Tech University share an important responsibility to maintain the integrity of the teaching and learning relationship. This relationship is characterized by honesty, fairness and mutual respect for the aim and principles of the pursuit of education. Academic misconduct impedes the activities of the university community and is punishable by appropriate disciplinary action.

Students are expected to be familiar with and abide by Ontario Tech University's regulations on Academic Conduct which sets out the kinds of actions that constitute academic misconduct, including plagiarism, copying or allowing one's own work to copied, use of unauthorized aids in examinations and tests, submitting work prepared in collaboration with another student when such collaboration has not been authorized, among other academic offences. The regulations also describe the procedures for dealing with allegations, and the sanctions for any finding of academic misconduct, which can range from a resubmission of work to a failing grade to permanent expulsion from the university. A lack of familiarity with these regulations on academic conduct does not constitute a defense against its application. This information can be found at this link: http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Academic_conduct

Extra support services are available to all Ontario Tech University students in academic development, study skills, counseling, and peer mentorship. More information on student support services can be found at https://studentlife.ontariotechu.ca/services/academic-support/index.php

Turnitin

Ontario Tech University and faculty members reserve the right to use electronic means to detect and help prevent plagiarism. Students agree that by taking this course all assignments are subject to submission for textual similarity review by Turnitin.com. Assignments submitted to Turnitin.com will be included as source documents in Turnitin.com's restricted access database solely for the purpose of detecting plagiarism in such documents for five academic years. The instructor may require students to submit their assignments electronically to Turnitin.com or the instructor may submit questionable text on

behalf of a student. The terms that apply to Ontario Tech University's use of the Turnitin.com service are described on the Turnitin.com website.

Students who do not wish to have their work submitted to Turnitin.com must provide with their assignment at the time of submission to the instructor a signed Turnitin.com Assignment Cover Sheet. Further information about Turnitin can be found on the Academic Integrity link above.

Students with Disabilities

Accommodating students with disabilities at Ontario Tech is a responsibility shared among various partners: the students themselves, SAS staff and faculty members. To ensure that disability-related concerns are properly addressed during this course, students with documented disabilities and who may require assistance to participate in this class are encouraged to speak with me as soon as possible. Students who suspect they have a disability that may affect their participation in this course are advised to go to Student Accessibility Services (SAS) as soon as possible. Maintaining communication and working collaboratively with SAS and faculty members will ensure you have the greatest chance of academic success.

When on campus access is allowed, students taking courses on north Oshawa campus can visit Student Accessibility Services in the Student Life Building, U5, East HUB (located in the Founders North parking lot). Students taking courses on the downtown Oshawa campus can visit Student Accessibility Services in the 61 Charles St. Building, 2nd Floor, Room DTA 225 in the Student Life Suite.

Disability-related and accommodation support is available for students with mental health, physical, mobility, sensory, medical, cognitive, or learning challenges. Office hours are 8:30am-4:30pm, Monday to Friday, closed Wednesday's 8:30am – 10:00am. For more information on services provided, you can visit the SAS website at https://studentlife.ontariotechu.ca/services/accessibility/index.php. Students may contact Student Accessibility Services by calling 905-721-3266, or email studentaccessibility@ontariotechu.ca.

When on campus access is allowed, students who require the use of the Test Centre to write tests, midterms, or quizzes MUST register online using the SAS test/exam sign-up module, found here https://disabilityservices.ontariotechu.ca/uoitclockwork/custom/misc/home.aspx. Students must sign up for tests, midterms, or quizzes AT LEAST seven (7) days before the date of the test.

Students must register for final exams by the registration deadline, which is typically two (2) weeks prior to the start of the final examination period. SAS will notify students of the registration deadline date.

Freedom of Information and Protection of Privacy Act (FIPPA)

The following is an important notice regarding the process for submitting course assignments, quizzes, and other evaluative material in your courses in the Faculty of Science.

Ontario Tech University is governed by the Freedom of Information and Protection of Privacy Act ("FIPPA"). In addition to providing a mechanism for requesting records held by the university, this legislation also requires that the University not disclose the personal information of its students without their consent.

FIPPA's definition of "personal information" includes, among other things, documents that contain both your name and your Banner (student) ID. For example, this could include graded test papers or assignments. To ensure that your rights to privacy are protected, the Faculty of Science encourages you to use only your Banner ID on assignments or test papers being submitted for grading, unless otherwise instructed. This policy is intended to prevent the inadvertent disclosure of your information where graded papers are returned to groups of students at the same time. If you still wish to write both your name and your Banner ID on your tests and assignments, please be advised that Ontario Tech University will interpret this as an implied consent to the disclosure of your personal information in the normal course of returning graded materials to students.

If you have any questions or concerns relating to the new policy or the issue of implied consent addressed above, please contact accessandprivacy@ontariotechu.ca

Notice of Collection and Use of Personal Information

Throughout this course, personal information may be collected through the use of certain technologies under the authority of the University of Ontario Institute of Technology Act, SO 2002, c. 8, Sch. O. and will be collected, protected, used, disclosed and retained in compliance with Ontario's Freedom of Information and Protection of Privacy Act R.S.O. 1990, c. F.31.

This course will use the following technologies that may collect, use, disclose and retain personal information (including images) for the purposes described below:

- Respondus Lockdown Browser/Monitor or Proctortrack to maintain academic integrity for examinations.
- Google Meet or Kaltura Virtual Classroom to facilitate remote instruction and interactive learning.
- Peer-shared applications, services or technologies that may be reviewed, assessed, or used as part of coursework.
- Other applications, services, or technologies that support or enhance online learning that include, but are not limited to, the following: Socrative

For more information relating to these technologies, we encourage you to visit: https://tlc.ontariotechu.ca/learning-technology/index.php Questions regarding personal information may be directed to: Ontario Tech University Access and Privacy Office, 2000 Simcoe Street North, Oshawa, ON L1G 0C5, email: accessandprivacy@ontariotechu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand, and agree to the terms and conditions under which the technology provider(s) may collect, use, disclose and retain your personal information. You agree to the university using the technologies and using your personal information for the purposes described in this course outline.

Religious Observances

It is Faculty of Science policy to provide special consideration for recognized holy days (Interfaith Calendar) which may be observed by our students. Although not all holy days

require students to be absent from school, accommodations may still be necessary in some cases. As a student, it is **your** responsibility to check the dates for all course work and exams on a regular basis and notify the Science Academic Advisor per the options below. Documentation which confirms your faith is required in all cases.

Please note:

1. If the holy day will conflict with scheduled labs and tutorials you must inform the Senior Lab coordinator or lab TA of any potential conflicts **at least 7 business days before the scheduled meeting time of the lab.**

2. If the holy day will conflict with the due date for an assignment you must inform the instructor at least **7 days before the due date.**

3. If the holy day will conflict with tests or exams you must inform your instructors and the Science Academic Advisor of any potential conflicts **at least 7 business days prior to the date of the test/exam. Note that the deadline for final exams is at least three weeks prior to the examination period as per the Final Exams policy.**

Failure to contact the appropriate person by the deadline may result in special consideration not being granted. Note that the dates indicated on the website above are the dates which will be recognized by the Faculty of Science. Should your holy day fall on alternate dates (e.g. those holy days which are based on lunar cycles) you will be required to provide additional proof of the date of your holy day by the deadline as specified above.

Student Support

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact studentlife@ontariotechu.ca for support. Furthermore, please notify your professor if you are comfortable in doing so. This will enable them to provide any resources and help that they can.

Sexual Violence Policy

Ontario Tech is committed to the prevention of sexual violence in all is forms. For any student who has experienced Sexual Violence, Ontario Tech can help. We will make accommodations to cater to the diverse backgrounds, cultures, and identities of students when dealing with individual cases.

If you think you have been subjected to or witnessed sexual violence:

1. Reach out to a Support Worker, a specially trained individual authorized to receive confidential disclosures about incidents of sexual violence. Support Workers can offer help and resolution options which can include safety plans, accommodations, mental health support, and more. To make an appointment with a Support Worker, call 905.721.3392 or email studentlife@ontariotechu.ca
2. Learn more about your options at: https://studentlife.ontariotechu.ca/sexualviolence/

Course Feedback Surveys

Student evaluation of teaching is a highly valued and helpful mechanism for monitoring the quality of Ontario Tech University's programs and instructional effectiveness. To that end, course evaluations are administered by an external company in an online, anonymous process during the last few weeks of

classes. Students are encouraged to participate actively in this process and will be notified of the dates. Notifications about course evaluations will be sent via e-mail, and posted on Canvas, Weekly News, and signage around the campus.

University Response to COVID-19

The government response to the COVID-19 pandemic is continually evolving. As new information becomes available from federal and provincial public health authorities, the Province of Ontario and the Regional Municipality of Durham, Ontario Tech University will remain nimble and prepared to respond to government orders, directives, guidelines and changes in legislation to ensure the health and safety of all members of its campus community. In accordance with public health recommendations, the university may need to adjust the delivery of course instruction and the availability and delivery mode of campus services and co-curricular opportunities. Ontario Tech University appreciates the understanding and flexibility of our students, faculty, and staff as we continue to navigate the pandemic and work together to demonstrate our strong commitment to academic, research and service excellence during these challenging and unprecedented times.

BIOL 3660U Ecology

COURSE INFORMATION

Course Instructor: Sarah MacKay, *PhD, OCT*
Faculty of Science, Ontario Tech

Contact: sarah.mackay@ontariotechu.net

Course Format: Asynchronous and Synchronous

Lecture Times & Location **Wednesdays 2:10 to 3:30pm, via Online/Canvas/Kaltura**

Office Hours: There are no official office hours for this course because it is not possible to schedule times that are available for all students. I am happy to meet online with students by appointment if questions related to the course cannot be answered via email.

COURSE DESCRIPTION:
This course is a general introduction to ecology, covering current theories and practices. Fundamentally, ecology is the study of the distribution of organisms and their interactions with the environment. These interactions occur at the level of individuals, populations, communities and ecosystems. As such, the design of the course topic areas will follow this hierarchical structure.

Pre-requisite(s): BIOL1020 (Biology II) or BIOL1021 (Intro. To Organismal Biol and Ecol). Must be enrolled in Education, Science and Third or Fourth year. It is the student's responsibility to ensure that they meet all pre- and co-requisite requirements for each course in which they are registered. *Students who do not meet these requirements may be deleted from the course.*

Learning Outcomes:

Outcome 1: You will acquire a more in-depth understanding of what the discipline of ecology is, and how it elucidates the interactions between organisms and their environment.
Outcome 2: You will gain a broad-based knowledge of the principles and concepts in ecology at four levels of integration [individuals, populations, communities and ecosystems]
Outcome 3: You will gain an ability to describe how interactions between organisms and their environment relate to their distribution and abundance

Outcome 4: You will learn about ecological processes at various scales (from local to global), and the importance of ecosystem function and service to human populations.
Outcome 5: You will acquire a working vocabulary of ecological terms and concepts
Outcome 6: You will learn how to interpret ecological data, including figures and tables.
Outcome 7: You will be able to apply ecological knowledge and critical thinking skills to environmental problems

COURSE MATERIALS
Optional Course Textbook: The framework and content of this course is based on the following textbook from Pearson Education:

Hardcopy
Elements of Ecology, First Canadian Edition (2014) Smith, Smith & Waters 744 pp. ISBN-10: 0321512014 • ISBN-13: 9780321512017

E-book:
Elements of Ecology, First Canadian Edition (2014) via EcologyPlace with Pearson eText ISBN-10: 0321832418 • ISBN-13: 9780321832412
http://www.pearsoncanada.ca/ecologyplace/

These electronic resources can be included with the purchase of the textbook from the campus bookstore or directly from the publisher. Even if a used textbook is purchased, the electronic resources can be purchased separately from the publisher. Most chapters from the textbook will be covered in the course. Students can increase their understanding of the lecture material by performing online searches and/or purchasing the textbook. See the **Lecture Outline** below for more details.

Things to keep in mind:
- Although the **textbook is not required for this course**, students may require additional information to understand the topics and applications in this course. It is the student's responsibility to reach out with any questions and/or conduct searches on topics to reinforce and/or increase their understanding of the course material

• **Lecture Materials:** (e.g. lecture slides, and associated videos, documents and links) will be made available through Canvas.
• **Assignments:** Instructions, expectations and deadlines will be posted on Blackboard.

Lecture Outline:
No dates have been provided because there may be instances when certain lectures require longer periods to adequately cover the material.

Week	**Topic covered**	**Textbook Chapter (If students decided to purchase it)**
1	Nature of ecology	Ch. 1
	The Physical Environment: Climate	Ch. 2
2	The Physical Environment: Aquatic	Ch. 3
	The Physical Environment: Terrestrial	Ch. 4
3	Ecological Genetics	Ch. 5
	The Organism & Environment: Plant adaptations	Ch. 6
4	The Organism & Environment: Animal adaptations	Ch. 7
	Populations: Life history patterns	Ch. 8
5	Populations: Population Properties and Growth	Ch. 9 & 10
	Interspecific Population Regulation and Metapopulations	Ch. 11 & 12
6	Species Interactions: Interspecific competition	Ch. 13
	Species Interactions: Predation	Ch. 14
7	Species Interactions: Parasitism and mutualism	Ch. 15
	Communities: Community structure	Ch. 16
8	Communities: Community dynamics	Ch. 17
	Communities: Landscape ecology	Ch. 18
9	Ecosystems: Systems ecology	Ch. 19
	Ecosystems: Ecosystem energetics	Ch. 20
10	Ecosystems: Decomposition and Nutrient Cycling	Ch. 21
	Population Growth and Sustainability	Ch. 26
11	Conservation Ecology	Ch. 27

Tests - Undecided

In previous years for this course, there have been two term tests and one final cumulative exam. For this year, 2020, it is the plan to reduce the number of formal assessments (tests and exam) and therefore increasing the number of assignments and/or presentations.

Communications will be made throughout the course on how this will unfold and the appropriate amount of time for assignment descriptions will be provided to students.

In the event that tests/exam are used in in this course, they will be online and only material **covered in the lectures** will be included for the formal assessments (i.e., tests and final exam).

GRADE DISTRIBUTION:
The university policy on grading and related matters is described in the Academic Calendar: http://uoit.ca/main/current-students/academics/academic-calendars/index.php, including the conversion of percentage grades to letter grades. In determining the overall grade in this course, the following weights will be used:

Task	Description	Due Date	Percentage of Final Grade*
Assignment 1	Article Critique	~ Oct 21	20
Assignment 2	Group Presentation	Sign up: Week 8 Due: Week 11	15
Term Test 1	T/F, MC, Short Answer	Week 5 ~ Oct 7	20
Term Test 2	T/F, MC, Short Answer	Week 9 ~ Nov 4	20
Term Test 3	T/F, MC, Short Answer	Week 12 ~ Dec 2	20
Participation	Various online activities	On-going throughout semester	5

* In the event that mid-term test(s) are removed or altered due to unforeseen or agreed upon circumstances, the percentage of final grade for the other assessments and any new assessments will be adjusted to reflect a total of 100% of a student's final grade. Communication with students will be provided via Canvas and an updated syllabus will be provided

Academic Policies:
Late assignments or reports will receive a **10% deduction** immediately after the **end of class** on the day that it is due, and for every cumulative day after the due date**. Any assignments received after one-week, will receive a zero grade.** To ensure fairness for all students, these rules are non-negotiable.

There are no "make-up" or "re-write" Exams, Tests or Assignments. The normal policy in the Faculty of Science for any legitimately missed term work is to re-weight the remaining work of the course to account for the missing grade, in accordance with the regulations given on the Faculty of Science website for Term Tests, Assignments, Labs and Tutorials. For more details on the Faculty of Science's academic policies, including accommodation for religious observances, please refer to: http://science.uoit.ca/undergraduate/current-students/academic-policies.php

Academic misconduct (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Make sure that you are familiar with the rules and regulations regarding academic integrity by accessing the link entitled "Academic Integrity" on your computer desktop.

In accordance with the Freedom of Information and Protection of Privacy Act (FOIP), students should identify themselves on written assignments (exam papers, term work, lab reports, etc.) by placing their name on the front page and their ID number on each subsequent page.

Learning Considerations:
Students with diverse learning needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach the Instructor and/or Student Accessibility Services (SAS), which is dedicated to providing accessible and equal education for all. Please follow the SAS guidelines to ensure that you have the appropriate documentation and procedures in place for your instructor to deliver your accommodations within a reasonable time frame. Check out the SAS webpage (https://studentlife.uoit.ca/student-accessibility-services/index.php) for additional information.

Faculty of Science
CHEM 1010: Chemistry I
Course outline for Fall 2020

1. Course Details & Important Dates*

Term	Course Type	CRN	Last Name	Day	Time
Fall	Synchronous	40169	A-L	Monday	9:40am – 11:00am
Fall	Synchronous	40169	M-Z	Wednesday	9:40am – 11:00am
Fall	Synchronous	42936	A-L	Tuesday	11:10am – 12:30pm
Fall	Synchronous	42936	M-Z	Friday	11:10am – 12:30pm

Note for the first week of class everyone in **CRN 40169 will meet on Wednesday September 9 and everyone in **CRN 42936 will meet on Tuesday September 8th****

Term	Course Type	Day	Time
Fall	Synchronous Tutorial	Consult your schedule in my campus	

Note online synchronous communications will occur in Kaltura, the online video software provided through the University's learning management system, Canvas. Students can access this through the course Dashboard – Media Gallery or via a provided link.

Term	Course Type	Day	Time
Fall	Asynchronous Laboratory	Complete the lab requirements as outlined in the CHEM1010 Laboratory Manual	

Important Dates

Classes Start	September 8th 2020
Holiday	October 12th 2020 (Thanksgiving Monday, no scheduled academic activities)
Fall Study Week	October 13th – 18th 2020
Last day to withdraw from fall semester courses	November 16th 2020
Classes End	December 7th 2020
Exam Period	December 9th – 20th 2020 (students are advised not to make commitments during this period)

* For other important dates go to: https://uoit.ca/current-students/academics/important-dates-and-deadlines.php

2. Instructor Contact Information

Course Instructor	Office	Phone	Email
Cristen Hucaluk	UA 3075	ex 2187	Cristen.hucaluk@ontariotechu.ca
Office Hours: conducted virtually by appointment or email			
Laboratory Instructor	**Office**	**Phone**	**Email**
Richard Bartholomew	UA 3071		Richard.bartholomew@ontariotechu.ca
Office Hours: scheduled by email appointment			

3. Course Description

This course will introduce the basic concepts of chemistry including simple reactions and stoichiometry; acids, bases, salts; titration; gases; atomic and molecular structure and bonding; introduction to Organic and Biological Chemistry.

4. Learning Outcomes

Upon successful completion of the course, students will possess basic understanding of the following concepts of chemistry:

- Discuss and describe characteristics of the periodic table and the elements found within it
- Perform and express accurate and precise calculations for the various chemical concepts discussed
- Describe and compare the characteristics of atoms molecules and ions.
- Evaluate mass relationships in chemical reactions
- Classify reactions that occur in aqueous solutions and identify the components of those solutions
- Describe the electronic structure of the atom
- Discuss the periodicity observed in the periodic table
- Describe an ionic bond making reference to ionization energies, electron affinities and lattice energies
- Describe a covalent bond in terms of the theories of bonding discussed including lewis bond theory, VSEPR theory, and Molecular Orbital theory
- Discuss the properties and behavior of ideal and non-ideal gases
- Identify and name organic and biological molecules according to their functional group and properties

A detailed list of learning outcomes listed by chapter is presented at the end of this syllabus.

5. Course Design

Lectures	Tutorials	Laboratories	Assignments	Practice Problems
1.5 hours weekly Based on last name (see above important dates)	1 x 1.5 hours biweekly – Synchronous online	1 x 3 hours biweekly - Asynchronous	Online through Canvas	Suggested from the textbook

6. Outline of Topics in the Course

The class is scheduled in weekly modules. Each week a new module will become available in Canvas. All the required materials and assignments for that week can be found in the weekly checklist. The following is an outline of chapters and topics by week.

Chapter	Topic	Week (dates)
1, 2.1-2.3, 2.9, 2.11, 2.12, 4.7	Independent Study: Review Topics Chemical Tools: Experimentation and Measurement The Periodic table and naming The mole and unit conversion	Week 1 (September 8 – 13)
2	Atoms Molecules and Ions	Week 2 (September 14 – 20)
3	Mass Relationships in Chemical Reactions	Week 3 (September 2 – 27)
4	Reactions in Aqueous Solution	Week 4 (September 28 – October 4)
10	Gases	Week 5 (October 5 – 11)
Fall Study Break		
Midterm		Week 6 (October 19 – 25)
5	Periodicity and the Electronic Structure of Atoms	Week 7 (October 26 – November 1)
6	Ionic Compounds: Periodic Trends and Bonding	Week 8 (November 2 – 8)
7	Covalent Bonds and Electron Dot Structures	Week 9 (November 9 – 15)
8	Covalent Bonds: Bonding Theories and Molecular Structures	Week 10 (November 16 – 22)
23	Organic and Biological Chemsitry	Week 11 (November 23 – 29)
Review and Exam Preparations		Week 12 (November 30 – December 6)

7. Required Texts/Readings

Required:

McMurry and Fay, Chemistry, 8th edition (Pearson Prentice Hall, 2015) bundled with "Mastering General Chemistry Student Access Kit (8th Edition).
Laboratory Manual for Chemistry 1010 (Available through Canvas)

Optional:
Mastering Chemistry stand-alone access code (no textbook included) – available online at masteringchemistry.com

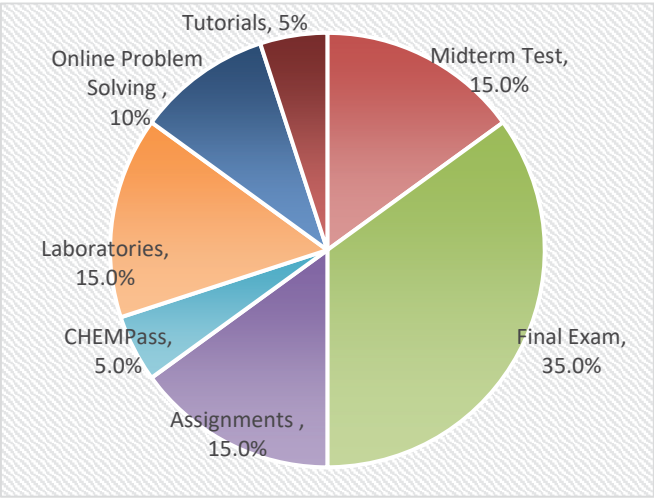
Chemistry Libre Text available online through Canvas

8. Evaluation Method

Students will receive a single, final grade assessing their performance in the laboratory, tutorial, and lecture components combined.

<u>To receive a passing grade in the course a passing grade must be achieved in *each* of the laboratory (i.e. at least 7.5/15) and the lecture (at least 42.5/85) portions of the course.</u>

Final course grades may be adjusted to conform to program or Faculty grade distribution profiles. Further information on grading can be found in Section 5 of the UOIT Academic Calendar.



9. Assignments (15%) and Tests (50%)
There will weekly Assignments in the course. Assignments will be available on the Monday of the week, and will be due by 5:00pm Friday evening. Assignments will be submitted through the University's learning management system, Canvas. While discussion with classmates is encouraged, Assignments must be completed independently, and should represent an individual student's work. The **textbook** and **class notes** are allowed resources when completing Assignments. The lowest assignment mark throughout the semester will be dropped. Late assignments will be penalized 2% per hour. Cumulatively assignments will contribute 15% towards student marks.

The Midterm Test in the course will be conducted online through the learning management system Canvas. There is one midterm test scheduled for the course during week 6 (October 19-25). The Midterm will be completed synchronous online during one of the scheduled lecture times that week. The content to be covered on the midterm test is listed in the outline of course topics for the course. **Class notes** and the **textbook** are permitted aids for the midterm test. No other resources are permitted.

10. Tutorial Participation (5%)
Tutorials will take place biweekly in the course, synchronous online through Kaltura online meet software. Teaching assistants will model problem solving strategies and give students an opportunity to work together online in small groups to solve problems. The cumulative value of the tutorials is 5% and will be awarded based on the TA's evaluation of your participation in the group. Those who show up on time, earnestly participate and are generally good citizens of the course will receive marks reflecting that. Tardiness, disruptive behaviour, lack of effort and delinquency will all be cause for loss of marks for a given tutorial. Your mark for each tutorial will contribute equally towards your final tutorial grade. If you are not present for a tutorial you will receive a mark of 0. Tutorials begin the week of September 14th 2020

11. Online Problem Solving Evaluation (10%)
During the second part of the semester students will sign up for online 1 on 1 appointments with a Teaching Assistant or the Instructor. Appointments will be scheduled Monday – Saturday. At the time of the meeting students will login to a predetermined online classroom. Students will be required to turn on their webcams and microphones (note the sessions will not be recorded by either the student or the instructor). During the 10 minute meeting students will be required to orally solve 2 problems with the instructor by outlining in a clear step-wise manner the calculation steps they would perform. Students will not be required to produce a numerical answer, only discuss how they would arrive at the answer. Marks will be awarded for including the correct steps, clearly outlining the solution, and effective communication skills.

Failure to schedule an online problem solving evaluation will result in a mark of zero. If you miss a scheduled online problem solving evaluation appointment due to illness or bereavement, you must submit appropriate documentation (e.g. Academic Consideration form found on Mycampus - documents) to the course instructor within three working days of missing the midterm. Please include any supporting documentation, if available, with your submission. Online problem solving appointments will not be rescheduled; the marks missed will be added to the marks apportioned for the final exam

12. Laboratories (15%)
Laboratory experiments have been designed to emphasize and illustrate the concepts learned in the lectures to allow observation of fundamental laboratory techniques of chemistry.

For Fall 2020 CHEM 1010 laboratories will be "on-line" as opposed to face-to-face. For each of the 5 experiments videos of the experiment will be posted on Canvas. The videos will feature a TA (or technician) performing the experiments and acquiring data. You will be expected to use these videos and data to prepare laboratory reports for each of the experiments. You will be able to watch the videos at any time; a new laboratory video will be posted every two weeks beginning September 14.
The laboratory manual will provide descriptions of the techniques and detailed procedures for each experiment. Laboratory reports will require you to analyze data, perform calculations and answer questions.

Submission of laboratory reports is required. No student who fails to submit at least **two (2)** reports will receive credit for the laboratory portion of the course. This may result in failure of the course. Laboratory reports must be submitted by email to your TA. Your TA will provide you with an address to use. Laboratory reports must be submitted using Microsoft Word; a Word template will be provided.

During your scheduled laboratory period, your teaching assistant (TA) will be available on-line for 1.5 hours to answer any questions you have about the experiment: the theory, procedure or laboratory report. Check with your TA for the precise time(s) when they will be available.
Further information about experiments, laboratory reports and laboratory regulations can be found in the laboratory manual (posted on Canvas).

13. Policy on "Carry Forward" of Laboratory Marks

If you should fail the course but pass the laboratory portion, you may be eligible to "carry forward" your laboratory marks. That is, you may be able to repeat the course without having to repeat the laboratories. In order to qualify for this option a number of conditions must be met including:

- You must have completed all the laboratory work with a passing grade.
- You may only "carry forward" the mark to the next offering of Chemistry 1010U.
- You must apply to Faculty of Science Advising Office, for the "carry forward" no later than the last day to add courses in the term – generally set as 7 days after the start of classes
- Your application to "carry forward" must be approved by the Dean of the Faculty of Science (or designate).

Other conditions also apply; these will be explained if you apply for the "carry forward".

14. Policies on Missed Term Tests, Exams, or Late Submission of Laboratories

If you miss a midterm or exam due to illness or bereavement, you must submit appropriate documentation (e.g. Academic Consideration form found on Mycampus - documents) to the Science Academic Advising office within three working days of missing the midterm. Please include any supporting documentation, if available, with your submission.

If you are aware in advance that you cannot write a midterm, you must discuss this with the Science Academic Advising office and the course instructor at least two working days before you are scheduled to write it. Exceptions to this deadline include varsity athletics, religious observances and test-course conflicts that have different deadlines. Please visit the Faculty of Science academic policy webpage for more information.

Failure to submit the appropriate documentation and contact the correct instructor by the deadline will result in a zero grade for course work.

Term tests will not be re-scheduled; the marks missed will be added to the marks apportioned for the final exam. If the final exam is missed and acceptable documentation is provided, the student will be eligible to write a "deferred exam" early in the following semester.

If you miss a submission deadline for a laboratory report you should complete the Academic Consideration form found on Mycampus - documents and submit it to the Laboratory instructor Richard Bartholomew within three working days of missing the submission deadline.

15. CHEMPass 5%

CHEMPass is your compass to success in Chemistry. The goal of CHEMPass is to familiarize you with the resources available to support your Chemistry learning. In order to receive credit for CHEMPass you will need to accomplish 3 goals (note you can do these at any time throughout the semester as long as they are completed by the last day of classes –

- Meet virtually with your Academic Advisor (must be completed before November 16 2020)
- Participate in 2 Peer Assisted Study Sessions (PASS) sessions for CHEM 1010
- Participate in 1 Chemistry workshop or CHEM 1010 Virtual Study Hall

Your completion of each of these activities will be noted by the organizer. At the end of the semester completion of your CHEMPass will be worth 5% of your grade
* Should you receive an individual grade greater that 85% on the Midterm you can contact the course instructor and receive credit for one of the CHEMPass goals.
** Course conflicts that prevent completion of a required CHEMPass goal will be addressed on a case by case basis with your instructor.

16. Technology Requirements
To support online learning, the university recommends certain technology requirements for laptops, software and internet connectivity which are available at: https://itsc.ontariotechu.ca/remote-learning.php.
Students experiencing technical difficulties such that they are unable to meet the technology requirements may contact the IT Service Help Desk at: servicedesk@dc-uoit.ca.
Students experiencing financial difficulties such that they are unable to meet the technology requirements may contact Student Awards and Financial Aid Office at: connect@ontariotehu.ca.
By remaining enrolled in this course, you acknowledge that you have read, understand and agree to observe the Recommended Technology Requirements for accessing university online learning resources, including those minimum requirements that are specific to your faculty and program.

17. Student Support
Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact studentlife@uoit.ca for support. Furthermore, please notify your professor if you are comfortable in doing so. This will enable them to provide any resources and help that they can.

18. Sexual Violence Support and Education
Ontario Tech is committed to the prevention of sexual violence in all is forms. For any student who has experienced Sexual Violence, Ontario Tech can help. We will make accommodations to cater to the diverse backgrounds, cultures, and identities of students when dealing with individual cases.

If you think you have been subjected to or witnessed sexual violence:
Reach out to a Support Worker, a specially trained individual authorized to receive confidential disclosures about incidents of sexual violence. Support Workers can offer help and resolution options which can include safety plans, accommodations, mental health support, and more. To make an appointment with a Support Worker, call 905.721.3392 or email studentlife@uoit.ca
Learn more about your options at: https://studentlife.uoit.ca/sexualviolence/

19. Students with Disabilities
Accommodating students with disabilities at Ontario Tech is a responsibility shared among various partners: the students themselves, SAS staff and faculty members. To ensure that disability-related concerns are properly addressed during this course, students with documented disabilities and who may require assistance to participate in this class are encouraged to speak with me as soon as possible. Students who suspect they have a disability that may affect their participation in this course are advised to go to Student Accessibility Services (SAS) as soon as possible. Maintaining communication and working collaboratively with SAS and faculty members will ensure you have the greatest chance of academic success.
When on campus access is allowed, students taking courses on north Oshawa campus can visit Student Accessibility Services in the Student Life Building, U5, East HUB (located in the Founders North parking lot). Students taking courses on the downtown Oshawa campus can visit Student Accessibility Services in the 61 Charles St. Building, 2nd Floor, Room DTA 225 in the Student Life Suite.
Disability-related and accommodation support is available for students with mental health, physical, mobility, sensory, medical, cognitive, or learning challenges. Office hours are 8:30am-4:30pm, Monday to Friday, closed Wednesday's 8:30am – 10:00am. For more information on services provided, you can visit the SAS website at https://studentlife.ontariotechu.ca/services/accessibility/index.php. Students may contact Student Accessibility Services by calling 905-721-3266, or email studentaccessibility@ontariotechu.ca.
When on campus access is allowed, students who require the use of the Test Centre to write tests, midterms, or quizzes MUST register online using the SAS test/exam sign-up module, found here https://disabilityservices.ontariotechu.ca/uoitclockwork/custom/misc/home.aspx. Students must sign up for tests, midterms, or quizzes AT LEAST seven (7) days before the date of the test.

Students must register for final exams by the registration deadline, which is typically two (2) weeks prior to the start of the final examination period. SAS will notify students of the registration deadline date.

20. Professional Conduct
Unless otherwise stated, class notes and the textbook are the approved resources for completion of class work. While discussion between classmates is encouraged all course work submitted must be completed independently, and should represent an individual student's work. While in online learning environments students must conduct themselves according the Universities professional code of conduct.
Additional information on professional suitability can be found at
http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Academic_conduct

21. Academic Integrity
Students and faculty at Ontario Tech University share an important responsibility to maintain the integrity of the teaching and learning relationship. This relationship is characterized by honesty, fairness and mutual respect for the aim and principles of the pursuit of education. Academic misconduct impedes the activities of the university community and is punishable by appropriate disciplinary action.

Students are expected to be familiar with and abide by Ontario Tech University's regulations on Academic Conduct which sets out the kinds of actions that constitute academic misconduct, including plagiarism, copying or allowing one's own work to copied, use of unauthorized aids in examinations and tests, submitting work prepared in collaboration with another student when such collaboration has not been authorized, among other academic offences. The regulations also describe the procedures for dealing with allegations, and the sanctions for any finding of academic misconduct, which can range from a resubmission of work to a failing grade to permanent expulsion from the university. A lack of familiarity with these regulations on academic conduct does not constitute a defense against its application. This information can be found at
http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Academic_conduct

Extra support services are available to all Ontario Tech University students in academic development, study skills, counseling, and peer mentorship. More information on student support services can be found at
https://studentlife.uoit.ca/services/academic-support/index.php

22. Turnitin
Ontario Tech University and faculty members reserve the right to use electronic means to detect and help prevent plagiarism. Students agree that by taking this course all assignments are subject to submission for textual similarity review by Turnitin.com. Assignments submitted to Turnitin.com will be included as source documents in Turnitin.com's restricted access database solely for the purpose of detecting plagiarism in such documents. The instructor may require students to submit their assignments electronically to Turnitin.com or the instructor may submit questionable text on behalf of a student. The terms that apply to Ontario Tech University's use of the Turnitin.com service are described on the Turnitin.com website.

Students who do not wish to have their work submitted to Turnitin.com must provide with their assignment at the time of submission to the instructor a signed Turnitin.com Assignment Cover sheet:
https://shared.uoit.ca/shared/department/academic-integrity/Forms/assignment-cover-sheet.pdf

23. Final Examinations
Final examinations are held during the final examination period at the end of the semester and **when on campus access is allowed,** may take place in a different room and on a different day from the regularly scheduled class. Check the published Examination Schedule for a complete list of days and times.
Students are required to show their Student ID card (campus ID) **when in-person examinations are allowed.** Students are advised to obtain their Student ID Card well in advance of the examination period as they will not be able to write their examinations without it. More information on ID cards can be found at
https://registrar.ontariotechu.ca/campus-id/index.php.
Students who are unable to write a final examination when scheduled due to religious publications may make arrangements to write a deferred examination. These students are required to submit a Request for Accommodation for Religious Obligations to the Faculty concerned as soon as possible and no later than three weeks prior to the first day of the final examination period.

Further information on final examinations can be found at https://usgc.ontariotechu.ca/policy/policy-library/policies/academic/procedures-for-final-examination-administration.php.

24. Online Test and Exam Proctoring (Virtual Proctoring)
Ontario Tech University will conduct virtual monitoring of examinations in accordance with Ontario privacy legislation and all approved policy instruments.

25. Exam views
Students have the opportunity to view their final exam online. This is an opportunity for students to view their answers and see where any mistakes were made. As per the university's policy, unless a clerical error has occurred, instructors may not make changes to the final grade awarded in a course as a result of an exam view. If, after viewing the final exam script, you wish to dispute the final grade awarded, you will need to submit for a Final Grade Appeal through the Registrar's office. Please see the Academic calendar for more information on final grade reappraisals or contact the Science Advising office. Applications for exam views must be submitted via email to your instructor within 7 calendar days of the release of marks. Your email must include your name, student number and the reason for your request which may include:

- To calculate the final numeric grade (in cases where it is difficult to infer).
- To determine which items of the course material gave you the most difficulty

The instructor will then contact the students with a given time to meet online to discuss their exam. Exam views will be 5 minutes in length and students should have access to only a calculator during the exam view. More information about the Faculty of Science Exam view policy can be found here

26. Freedom of Information and Protection of Privacy Act
Throughout this course, personal information may be collected through the use of certain technologies under the authority of the University of Ontario Institute of Technology Act, SO 2002, c. 8, Sch. O. and will be collected, protected, used, disclosed and retained in compliance with Ontario's Freedom of Information and Protection of Privacy Act R.S.O. 1990, c. F.31.
This course will use the following technologies that may collect, use, disclose and retain personal information (including images) for the purposes described below:

- Respondus Monitor and Proctortrack to maintain academic integrity for examinations.
- Google Meet and Kaltura Virtual Classroom to facilitate remote instruction and interactive learning.
- Peer-shared applications, services or technologies that may be reviewed, assessed, or used as part of coursework.
- Other applications, services, or technologies that support or enhance online learning that include, but are not limited to, the following: [Instructor to list all relevant components].

For more information relating to these technologies, we encourage you to visit: https://tlc.ontariotechu.ca/learning-technology/index.php Questions regarding personal information may be directed to: Ontario Tech University Access and Privacy Office, 2000 Simcoe Street North, Oshawa, ON L1G 0C5, email: accessandprivacy@ontariotechu.ca.
By remaining enrolled in this course, you acknowledge that you have read, understand, and agree to the terms and conditions under which the technology provider(s) may collect, use, disclose and retain your personal information. You agree to the university using the technologies and using your personal information for the purposes described in this course outline.

27. Freedom of Expression
Pursuant to Ontario Tech's Freedom of Expression Policy all students are encouraged to express ideas and perspectives freely and respectfully in university space and in the online university environment, subject to certain limitations. Students are reminded that the limits on Freedom of Expression include speech or behaviour that: is illegal or interferes with the university's legal obligations; defames an individual or group; constitutes a threat, harassment or discrimination; is a breach of fiduciary, contractual, privacy or confidentiality obligations or commitments; and unduly disrupts and interferes with the functioning of the university. In the context of working online, different forms of communication are used. Where permitted, students using "chat" functions or other online forms of communication are encouraged to ensure that their communication complies with the Freedom of Expression Policy.

28. Student Course Feedback Surveys

Student evaluation of teaching is a highly valued and helpful mechanism for monitoring the quality of Ontario Tech University's programs and instructional effectiveness. To that end, course evaluations are administered by an external company in an online, anonymous process during the last few weeks of classes. Students are encouraged to participate actively in this process and will be notified of the dates. Notifications about course evaluations will be sent via e-mail, and posted on Canvas, Weekly News, and signage around the campus.

The Accessibility for Ontarians with Disabilities Act (AODA) standards have been considered in the development of this model course template and it adheres to the principles outlined in the University's Accessibility Policy.

29. University Response to COVID-19 – to be added to the end of the course outline:

The government response to the COVID-19 pandemic is continually evolving. As new information becomes available from federal and provincial public health authorities, the Province of Ontario and the Regional Municipality of Durham, Ontario Tech University will remain nimble and prepared to respond to government orders, directives, guidelines and changes in legislation to ensure the health and safety of all members of its campus community. In accordance with public health recommendations, the university may need to adjust the delivery of course instruction and the availability and delivery mode of campus services and co-curricular opportunities. Ontario Tech University appreciates the understanding and flexibility of our students, faculty, and staff as we continue to navigate the pandemic and work together to demonstrate our strong commitment to academic, research and service excellence during these challenging and unprecedented times.

Learning Outcomes by Chapter:

Upon successful completion of the course students will possess basic understanding of the following concepts of chemistry:

Learning Outcomes contained in the Independent Study Unit:
Chapter 1 – Chemical Tools: Experimentation and Measurement

- Differentiate between a qualitative and quantitative measurement
- Write numbers in scientific notation and use prefixes for multiples of SI units
- Convert between different prefixes used in mass measurements
- Convert between different prefixes used in length measurements
- Convert between common units of temperature measurement
- Convert between SI and metric units of volume
- Convert between different prefixes used in volume measurement
- Calculate mass volume or density using the formula for density
- Predict whether a substance will float or sink in another substance based on density
- Convert between common energy units
- Specify the number of significant figures in a measurement
- Evaluate the level of accuracy and prevision in a data set
- Report a measurement to the approximate number of significant digits
- Report the answer of a mathematical calculation to the correct number of significant figures
- Change a measurement into different units using appropriate conversion factors

Chapter 2 – Atoms, Molecules, and Ions

- Identify the location of metals non-metals and semimetals on the periodic table
- Indicate the atomic number group number and period number for an element whose position in the periodic table is given
- Identify groups as main group transition metal group or inner transition metal group
- Specify the location and give examples of elements in the alkali metal alkaline earth metal halogen and noble gas group
- Use the properties of an element to classify it as metal non-mental or semimetal and give its location in the periodic table
- Convert between name and formula for binary ionic compounds
- Convert between formula and name for ionic compound with polyatomic ions
- Convert between name and formula for binary molecular compounds

Chapter 2 – Atoms, Molecules, and Ions

- Determine the mass of the products in a reaction using the law of mass conservation
- Demonstrate the law of multiple proportions using mass composition of two compounds of the same elements
- Determine the formula of a compound given the mass composition data for two compounds and the formula of one compound
- Describe Thompsons cathode ray experiment and what it contributed to the current model of atomic structure
- Describe Millikan's oil drop experiment and what it contributed to the current model of atomic structure
- Describe Rutherford's gold foil experiment and what it contributed to the current model of atomic structure
- Calculate the number of atoms in a sample given the size of the atom
- Determine the mass number atomic umber and number of protons neutrons and electrons from an isotope symbol
- Calculate atomic weight given the fractional abundance and mass of each isotope
- Convert between mass and numbers of moles or atoms using molar mass and Avogadro's

number
- Classify molecular representation of matter as a mixture pure substance element or compound
- Convert between structural formulas ball and stick models and chemical formulas
- Classify bonds as ionic or covalent
- Determine the number of electrons and protons from chemical symbol and charge
- Match the molecular representation of an ionic compound with its chemical formula

Chapter 3 – Mass Relationships in Chemical Reactions:
- Balance a chemical reaction given the formulas of reactants and products
- Calculate formula weight molecular weight and molar mass given a chemical formula or structure
- Interconvert between mass moles and molecules or atoms of a substance
- Relate the amount (moles or mass) of reactants and predicts in a balanced equation using stoichiometry
- Calculate percent yield given amounts of reactants and products
- Determine the relative amounts of atoms or molecules in the reactants and products of a balance reaction given a molecular representation
- Determine which reactant is limiting and calculate the theoretical yield of the product and the amount of excess reactant
- Calculate the percent yield when one reactant is limiting
- Calculate the percent composition given a chemical formula or structure
- Determine the empirical and molecular formula given the mass percent composition and molecular weight of a compound
- Determine the empirical and molecular formula given combustion analysis data and molecular weight

Chapter 4 – Reactions in Aqueous Solutions:
- Calculate the molarity of a solution given the mass of solute and total volume
- Calculate the amount of solute in a given volume of solution with a known molarity
- Calculate the concentration of a solution that has been diluted
- Classify a substance as a strong weak or nonelectrolyte
- Calculate the concentration of ions in a strong electrolyte solution
- Classify a reaction as a precipitation acid-base neutralization or oxidation reduction reaction
- Write a net ionic equation and identify spectator ions given the molecular equation
- Use the solubility guidelines to predict the solubility of an ionic compound in water
- Predict whether a precipitation reaction will occur and write the ionic and net ionic equations
- Classify acids as strong or weak based on the molecular picture of dissociation
- Write the ionic equation and net ionic equation for an acid base neutralization reaction
- Convert between moles and volume using molarity in stoichiometry calculations
- Determine the concentration of a solution using titration data
- Assign oxidation numbers to atoms in a compound
- Identify redox reactions oxidizing agents and reducing agents
- Use the location of elements in the periodic table and activity series to predict if a redox reaction will occur
- Develop an activity series and predict if a redox reaction will occur based on experimental data provided

Chapter 5 – Periodicity and the Electronic Structure of Atoms:
- Label the wavelength frequency and amplitude in an electromagnetic wave and understand their meaning

- Interconvert between wavelength and frequency of electromagnetic radiation
- Calculate the energy of electromagnetic radiation units of J/photon or kJ/mol when given the frequency or wavelength
- Describe the photoelectric effect and explain how it supports the theory of particle like properties of light
- Calculate the frequency or wavelength of radiation needed to product the photoelectric effect given the work function of a metal
- Describe the difference between a continuous spectrum and a line spectrum
- Compare the wavelength and frequency of different electron transition in the Bohr model of the atom
- Relate wavelengths calculate using the Balmer-Rydberg equation to energy levels in the Bohr model of the atom
- Calculate the wavelength of a moving object using the de Broglie equation
- Identify and write valid sets of quantum numbers that describe electrons in different types of orbitals
- Identify an orbital based on its shape and describe it using a set of quantum numbers
- Locate the nodal planes in different types of orbitals and different shells
- Assign a set of four quantum numbers for electrons in an atom
- Explain how electron shielding gives the order of subshells from lowest to highest in energy
- Predict the order of filling of subshells based upon energy
- Assign electron configurations to atoms in their ground state
- Draw orbital filling diagrams for the ground state of an atom and determine the number of unpaired electrons
- Identify atoms from orbital filling diagrams or electron configurations
- Explain the periodic trend in atomic radii
- Predict the relative size of atoms based upon their position in the periodic table

Chapter 6 – Ionic Compounds: Periodic Trends and Bonding Theory:

- Write ground state electron configurations for the main group and transition metal ions
- Determine the number of unpaired electrons in a transition metal ion
- Predict the relative size of anions cations and atoms
- Predict the relative size of isoelectronic ions
- Order elements from lowest to highest ionization energy
- Explain the periodic trend in ionization energy
- Compare successive ionization energies for different elements
- Identify elements based on values of successive ionization energies
- Compare the value of electron affinity for different elements
- Explain the periodic trend in electron affinity
- Use the octet rule to predict changes on main group ions electron configurations of main group ions and formulas for ionic compounds
- Draw a Born-Haber cycle and calculate the energy change that occurs when an ionic compound is formed from it elements
- Use the Born-Haber cycle to solve for the energy change associated with one of the steps
- Predict the relative magnitude of lattice energy given the formula or molecular representation of an ionic compound

Chapter 7 – Covalent Bonding and Electron Dot Structures:

- Describe the difference between an ionic and covalent bond
- Describe the changes in energy that occur as two nuclei approach to form a covalent bond
- Predict trends in bond length and bond dissociation energy based on bond order and atomic

size
- Rank elements by increasing value of electronegativity
- Classify bonds as nonpolar covalent, polar covalent, or
- Interpret electrostatic potential maps to determine regions of high and low electron density
- Explain the different physical properties of ionic and covalent compounds
- Draw an electron dot structures by using valence electrons to give all atoms an octet
- Use the five step procedure for drawing electron dot structures for all molecules including those with expanded octets and those containing multiple bonds
- Draw electron dot structures for radicals
- Draw electron dot structures for molecules with more than one central atom
- Calculate the formal change on atoms in electron dot structures

Chapter 8 – Covalent Compounds: Bonding Theories and Molecular Structure
- Use the VESPR model to predict geometry from the total number of charge clouds and lone pairs of electrons around an atom
- Use VSEPR model to predict bond angles and overall shape of a molecule or ion with one central atom
- Use VSEPR model to predict bond angles and overall shape of a molecule with more than one central atom
- Describe the difference between a sigma bond and a pi bond 8.58
- Write and electron-dot structure for a molecule and determine hybridization and bond angles 8.32, 8.33, 8.62-8.65
- Identify which orbitals overlap for form sigma and pi bonds
- Predict whether a given molecule has a dipole moment and draw its direction
- Interpret electrostatic potential maps of molecules
- Identify the types of intermolecular forces experienced by a molecule
- Relate the strength of intermolecular forces to physical properties such as melting point and boiling point
- Sketch the hydrogen bonding that occurs between two molecules
- Interpret the molecular orbital diagram for a first row diatomic molecule or ion
- Interpret the molecular orbital diagram for a second row diatomic molecule or ion. Calculate the bond order and predict magnetic properties
- Draw orbital overlap diagrams for molecules and describe the use of both valence bond theory and molecular orbital theory

Chapter 10 – Gases: Their Properties and Behaviours:
- Convert between different units of pressure
- Determine the pressure from the height of a liquid mercury column in a barometer or monometer
- Use the individual gas laws to calculate pressure volume molar amount or temperature for a gas sample when conditions change
- Use the ideal gas law to calculate pressure volume molar amount or temperature for a gas sample
- Calculate volumes of gases in chemical reactions
- Calculate the volumes of gases in chemical reactions
- Calculate the density or molar mass of a gas using the formula for gas density
- Calculate the partial pressure, mole fraction, or amount of each gas in a mixture
- Use the assumptions of kinetic molecular theory to predict gas behaviours
- Calculate the average molecular speed of gas particles at a given temperature
- Interpret a molecular picture of effusion and diffusion
- Use Graham's law to estimate relative rates of diffusion for 2 gases

- Understand the conditions when gases deviate the most from ideal behaviours
- Use the van der Waals equation to calculate the properties of real gases

Chapter 23 – Organic and Biological Chemistry

- Represent the chemical structure of alkanes as condensed structures or line drawings
- Identify and draw constitutional isomers of alkanes
- Identify and name functional groups in organic molecules
- Represent molecules with functional groups using condensed structures and line drawings
- Classify and discriminate between monosaccharides, triacylglycerols, lipids, amino acids, and nucleic acids

ENVS1000U
Environmental Science
Summer 2022 Syllabus

Course Description

This course will introduce the conceptual, interdisciplinary framework of environmental science by examining its physical, biological, economic and social components. Canadian examples will be used wherever possible but the underlying theme will include a more global approach.

Who Teaches

Dr Robert Bailey – Best way to get in touch is through the Canvas email system. If I can't answer your query via Canvas email and we need to chat, we'll get together at a mutually convenient time ASAP.

When We Meet We will get together on Google Meet **meet.google.com/vgu-hpqu-jzx** every **Tuesday and Thursday from 940-1230pm starting on Tuesday 28 June and finishing up on Thursday 4 August**. I will record all of our meetings and post them on Canvas in case you're not able to attend.

Textbook Information

Molles, M., and B. Borrell. 2016. **Environment: Science, Issues, Solutions** WH Freeman – Macmillan Learning. New York, NY.

Evaluation

Component	Mark	Details
Online Lecture Quizzes	**50%**	**Five (5) online quizzes**, delivered via Canvas, designed to assess lecture content throughout the term • Quizzes will be available for nine days. • Quizzes must be completed in one sitting, one question at a time with no revisiting questions. • You can attempt each quiz **two (2)** times. Your best result is recorded. • Each quiz is worth **10%** of your final mark in the course.
Final Exam	**50%**	**In Canvas and available from 8am Saturday 13 August to 8pm Sunday 14 August**

Lecture Topics and Associated Textbook Chapters

Module	Date	Topic	Chapter(s)
1	Tuesday 28 June	Introduction	1
2	Thursday 30 June	Economics & Politics of the Environment	2
3	Tuesday 5 July QUIZ 1 (M1-M3) RELEASED	Protecting Diversity	3, 4
4	Thursday 7 July	Human Populations	5
5	Tuesday 12 July QUIZ 2 (M4-M5) RELEASED	Sustaining Water Supplies	6
6	Thursday 14 July	Sustaining Terrestrial Resources	7
7	Tuesday 19 July QUIZ 3 (M6-M7) RELEASED	Sustaining Aquatic Resources	8
8	Thursday 21 July	Energy	9,10
9	Tuesday 26 July QUIZ 4 (M8-M9) RELEASED	Environmental Health	11
10	Thursday 28 July	Waste Management	12
11	Tuesday 2 August QUIZ 5 (M10-M11) RELEASED	Air, Water, and Soil Pollution	13
12	Thursday 4 August	Global Climate Change	14
M1-M12	**13-14 August**	**FINAL EXAM** **8am 13Aug22 to 8pm 14Aug22**	

Online Quiz Schedule and Due Dates:

Quiz #	Modules	Date Available (1:00 pm)	Due Date (930am)
1	1-3	5 July	12 July
2	4-5	12 July	21 July
3	6-7	19 July	28 July
4	8-9	26 July	4 August
5	10-11	2 August	11 August

Technology Requirements

To support online learning, the university recommends certain technology requirements for laptops, software and internet connectivity which are available at: https://itsc.ontariotechu.ca/remote-learning.php.

Students experiencing technical difficulties such that they are unable to meet the technology requirements may contact the IT Service Help Desk at: servicedesk@dc-uoit.ca.

Students experiencing financial difficulties such that they are unable to meet the technology requirements may contact Student Awards and Financial Aid Office at: connect@ontariotehu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand and agree to observe the Recommended Technology Requirements for accessing university online learning resources, including those minimum requirements that are specific to your faculty and program.

Online Test and Exam Proctoring (Virtual Proctoring)

Ontario Tech University will conduct virtual monitoring of examinations in accordance with Ontario privacy legislation and all approved policy instruments.

Freedom of Expression and Professional Student Conduct Online

Pursuant to Ontario Tech's Freedom of Expression Policy, all students are encouraged to express ideas and perspectives freely and respectfully in university space and in the online university environment, **subject to certain limitations**. Students are reminded that the limits on Freedom of Expression include speech or behaviour that: is illegal or interferes with the university's legal obligations; defames an individual or group; constitutes a threat, harassment or discrimination; is a breach of fiduciary, contractual, privacy or confidentiality obligations or commitments; and unduly disrupts and interferes with the functioning of the university. In the context of working online, different forms of communication are used. Where permitted, students using "chat" functions or other online forms of communication are encouraged to ensure that their communication complies with the Freedom of Expression Policy.

Additional tips for engaging professionally in online classes/activities:

- Please make sure to be in a room/area in your home where there is minimal activity and where you will not be disturbed.
- Please make sure you are appropriately dressed.
- When communicating via "chat" or other online forms of communication, please refrain from using abbreviations, emojis, gamer speak etc., and minimize activity that may be disruptive.
- Please mute your microphone when you sign in. Large gatherings often create a lot of electronic feedback. Unmute your microphone to speak and then mute it again when done, or use the chat function integrated into online meeting platform being used.
- If your internet connection/bandwidth is not the best, you can also turn off the camera, it sometimes helps.

Remember you are engaging in an Ontario Tech University course and are bound by the Ontario Tech U Student Code of Conduct. Inappropriate behaviour will be noted and is subject to misconduct penalties in accordance with the university's Academic Conduct policies.

Faculty of Science Academic Policy

Missed Course Work

For the Winter 2021 academic term, medical notes will not be required for missed term work due to illness. However, you must complete and submit the Academic Consideration Form if you miss term work for any reason. Forms must be submitted to your instructor for coursework weighted less than 25%, to your lab coordinator for missed labs, to Science Academic Advising for missed midterms and to the Registrar's Office for missed final exams and please submit by the deadlines indicated on the form.

Final Examinations, Final Exam Viewing and Final Grades

Final examinations are held during the final examination period at the end of the semester and **when on campus access is allowed,** may take place in a different room and on a different day from the regularly scheduled class. Check the published Examination Schedule for a complete list of days and times.

Students are required to show their Student ID card (campus ID) **when in-person examinations are allowed.** Students are advised to obtain their Student ID Card well in advance of the examination period as they will not be able to write their examinations without it. More information on ID cards can be found at https://registrar.ontariotechu.ca/campus-id/index.php.

Students who are unable to write a final examination when scheduled due to religious obligations may make arrangements to write a deferred examination. These students are required to submit a Request for Accommodation for Religious Obligations to the Faculty concerned as soon as possible and no later than three weeks prior to the first day of the final examination period.

Further information on final examinations can be found at: https://usgc.ontariotechu.ca/policy/policy-library/policies/academic/procedures-for-final-examination-administration.php.

Final Examination Viewing:

Students wishing to view their final exam must submit a written request no later than 1 week (7 days) after the release of final grades for that semester, stating why they would like to view the exam. Reasons may include, to calculate the final numeric grade (in cases where it is difficult to infer) or to determine which items of the course material gave you the most difficulty. To request an exam view, please complete the Science Final Exam View Request form found on our Canvas course page and submit it to the course instructor via email. There is no fee associated with viewing a final exam.

Please note, this is an opportunity for students to view their answers and see where any mistakes were made and not to negotiate grades. Per Ontario Tech University policy (section 5.24.5.1) unless a clerical error has occurred, instructors may not make changes to the final grade awarded in a course as a result of an exam view. If, after viewing the final exam script, you wish to dispute the final grade awarded, you will need to submit for a Final Grade Appeal through the Registrar's Offices. For more

information on Final Grade Appeals, please refer to section 5.11.2 of the Ontario Tech University Academic Calendar or contact the Science Advising Office.

Students will have 15 minutes to discuss their final exam via webcam with their instructor. Only the use of a calculator is permitted during the exam view appointment. No writing instruments, cell phones or other electronic devices will be permitted. Missed exam view appointments will not be rescheduled.

***Final grades**:*

Final grades are posted to MyCampus by the Registrar's office (RO) approximately one-and-a-half weeks after the end of the final exam period. Official grades are released by the RO only and your final grades cannot be released by anyone else. Please do not contact your instructor for this information. Grades will be posted in accordance with the Grading Scale as indicated in the Ontario Tech U Academic Calendar.

Your final exam grades will not be posted on Canvas, but you will be able to infer your grade based on your final exam grade and your term work grades. ***Please note that there are no options to do extra assignments, tests, exams or other activities to make up for unsatisfactory performance in a course.***

Academic Integrity: Plagiarism and Cheating

Students and faculty at Ontario Tech University share an important responsibility to maintain the integrity of the teaching and learning relationship. This relationship is characterized by honesty, fairness and mutual respect for the aim and principles of the pursuit of education. Academic misconduct impedes the activities of the university community and is punishable by appropriate disciplinary action.

Students are expected to be familiar with and abide by Ontario Tech University's regulations on Academic Conduct which sets out the kinds of actions that constitute academic misconduct, including plagiarism, copying or allowing one's own work to copied, use of unauthorized aids in examinations and tests, submitting work prepared in collaboration with another student when such collaboration has not been authorized, among other academic offences. The regulations also describe the procedures for dealing with allegations, and the sanctions for any finding of academic misconduct, which can range from a resubmission of work to a failing grade to permanent expulsion from the university. A lack of familiarity with these regulations on academic conduct does not constitute a defense against its application. This information can be found at this link: http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Academic_conduct

Extra support services are available to all Ontario Tech University students in academic development, study skills, counseling, and peer mentorship. More information on student support services can be found at https://studentlife.ontariotechu.ca/services/academic-support/index.php

Turnitin

Ontario Tech University and faculty members reserve the right to use electronic means to detect and help prevent plagiarism. Students agree that by taking this course all assignments are subject to submission for textual similarity review by Turnitin.com. Assignments submitted to Turnitin.com will be included as source documents in Turnitin.com's restricted access database solely for the purpose of detecting plagiarism in such documents for five academic years. The instructor may require students to submit their assignments electronically to Turnitin.com or the instructor may submit questionable text on

behalf of a student. The terms that apply to Ontario Tech University's use of the Turnitin.com service are described on the Turnitin.com website.

Students who do not wish to have their work submitted to Turnitin.com must provide with their assignment at the time of submission to the instructor a signed Turnitin.com Assignment Cover Sheet. Further information about Turnitin can be found on the Academic Integrity link above.

Students with Disabilities

Accommodating students with disabilities at Ontario Tech is a responsibility shared among various partners: the students themselves, SAS staff and faculty members. To ensure that disability-related concerns are properly addressed during this course, students with documented disabilities and who may require assistance to participate in this class are encouraged to speak with me as soon as possible. Students who suspect they have a disability that may affect their participation in this course are advised to go to Student Accessibility Services (SAS) as soon as possible. Maintaining communication and working collaboratively with SAS and faculty members will ensure you have the greatest chance of academic success.

When on campus access is allowed, students taking courses on north Oshawa campus can visit Student Accessibility Services in the Student Life Building, U5, East HUB (located in the Founders North parking lot). Students taking courses on the downtown Oshawa campus can visit Student Accessibility Services in the 61 Charles St. Building, 2nd Floor, Room DTA 225 in the Student Life Suite.

Disability-related and accommodation support is available for students with mental health, physical, mobility, sensory, medical, cognitive, or learning challenges. Office hours are 8:30am-4:30pm, Monday to Friday, closed Wednesday's 8:30am – 10:00am. For more information on services provided, you can visit the SAS website at https://studentlife.ontariotechu.ca/services/accessibility/index.php. Students may contact Student Accessibility Services by calling 905-721-3266, or email studentaccessibility@ontariotechu.ca.

When on campus access is allowed, students who require the use of the Test Centre to write tests, midterms, or quizzes MUST register online using the SAS test/exam sign-up module, found here https://disabilityservices.ontariotechu.ca/uoitclockwork/custom/misc/home.aspx. Students must sign up for tests, midterms, or quizzes AT LEAST seven (7) days before the date of the test.

Students must register for final exams by the registration deadline, which is typically two (2) weeks prior to the start of the final examination period. SAS will notify students of the registration deadline date.

Freedom of Information and Protection of Privacy Act (FIPPA)

The following is an important notice regarding the process for submitting course assignments, quizzes, and other evaluative material in your courses in the Faculty of Science.

Ontario Tech University is governed by the Freedom of Information and Protection of Privacy Act ("FIPPA"). In addition to providing a mechanism for requesting records held by the university, this legislation also requires that the University not disclose the personal information of its students without their consent.

FIPPA's definition of "personal information" includes, among other things, documents that contain both your name and your Banner (student) ID. For example, this could include graded test papers or assignments. To ensure that your rights to privacy are protected, the Faculty of Science encourages you to use only your Banner ID on assignments or test papers being submitted for grading, unless otherwise instructed. This policy is intended to prevent the inadvertent disclosure of your information where graded papers are returned to groups of students at the same time. If you still wish to write both your name and your Banner ID on your tests and assignments, please be advised that Ontario Tech University will interpret this as an implied consent to the disclosure of your personal information in the normal course of returning graded materials to students.

If you have any questions or concerns relating to the new policy or the issue of implied consent addressed above, please contact accessandprivacy@ontariotechu.ca

Notice of Collection and Use of Personal Information

Throughout this course, personal information may be collected through the use of certain technologies under the authority of the University of Ontario Institute of Technology Act, SO 2002, c. 8, Sch. O. and will be collected, protected, used, disclosed and retained in compliance with Ontario's Freedom of Information and Protection of Privacy Act R.S.O. 1990, c. F.31.

This course will use the following technologies that may collect, use, disclose and retain personal information (including images) for the purposes described below:

- Respondus Lockdown Browser/Monitor or Proctortrack to maintain academic integrity for examinations.
- Google Meet or Kaltura Virtual Classroom to facilitate remote instruction and interactive learning.
- Peer-shared applications, services or technologies that may be reviewed, assessed, or used as part of coursework.
- Other applications, services, or technologies that support or enhance online learning that include, but are not limited to, the following: Socrative

For more information relating to these technologies, we encourage you to visit: https://tlc.ontariotechu.ca/learning-technology/index.php Questions regarding personal information may be directed to: Ontario Tech University Access and Privacy Office, 2000 Simcoe Street North, Oshawa, ON L1G 0C5, email: accessandprivacy@ontariotechu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand, and agree to the terms and conditions under which the technology provider(s) may collect, use, disclose and retain your personal information. You agree to the university using the technologies and using your personal information for the purposes described in this course outline.

Religious Observances

It is Faculty of Science policy to provide special consideration for recognized holy days (Interfaith Calendar) which may be observed by our students. Although not all holy days

require students to be absent from school, accommodations may still be necessary in some cases. As a student, it is **your** responsibility to check the dates for all course work and exams on a regular basis and notify the Science Academic Advisor per the options below. Documentation which confirms your faith is required in all cases.

Please note:

1. If the holy day will conflict with scheduled labs and tutorials you must inform the Senior Lab coordinator or lab TA of any potential conflicts **at least 7 business days before the scheduled meeting time of the lab.**

2. If the holy day will conflict with the due date for an assignment you must inform the instructor at least **7 days before the due date.**

3. If the holy day will conflict with tests or exams you must inform your instructors and the Science Academic Advisor of any potential conflicts **at least 7 business days prior to the date of the test/exam. Note that the deadline for final exams is at least three weeks prior to the examination period as per the Final Exams policy.**

Failure to contact the appropriate person by the deadline may result in special consideration not being granted. Note that the dates indicated on the website above are the dates which will be recognized by the Faculty of Science. Should your holy day fall on alternate dates (e.g. those holy days which are based on lunar cycles) you will be required to provide additional proof of the date of your holy day by the deadline as specified above.

Student Support

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact studentlife@ontariotechu.ca for support. Furthermore, please notify your professor if you are comfortable in doing so. This will enable them to provide any resources and help that they can.

Sexual Violence Policy

Ontario Tech is committed to the prevention of sexual violence in all is forms. For any student who has experienced Sexual Violence, Ontario Tech can help. We will make accommodations to cater to the diverse backgrounds, cultures, and identities of students when dealing with individual cases.

If you think you have been subjected to or witnessed sexual violence:

1. Reach out to a Support Worker, a specially trained individual authorized to receive confidential disclosures about incidents of sexual violence. Support Workers can offer help and resolution options which can include safety plans, accommodations, mental health support, and more. To make an appointment with a Support Worker, call 905.721.3392 or email studentlife@ontariotechu.ca
2. Learn more about your options at: https://studentlife.ontariotechu.ca/sexualviolence/

Course Feedback Surveys

Student evaluation of teaching is a highly valued and helpful mechanism for monitoring the quality of Ontario Tech University's programs and instructional effectiveness. To that end, course evaluations are administered by an external company in an online, anonymous process during the last few weeks of

classes. Students are encouraged to participate actively in this process and will be notified of the dates. Notifications about course evaluations will be sent via e-mail, and posted on Canvas, Weekly News, and signage around the campus.

University Response to COVID-19

The government response to the COVID-19 pandemic is continually evolving. As new information becomes available from federal and provincial public health authorities, the Province of Ontario and the Regional Municipality of Durham, Ontario Tech University will remain nimble and prepared to respond to government orders, directives, guidelines and changes in legislation to ensure the health and safety of all members of its campus community. In accordance with public health recommendations, the university may need to adjust the delivery of course instruction and the availability and delivery mode of campus services and co-curricular opportunities. Ontario Tech University appreciates the understanding and flexibility of our students, faculty, and staff as we continue to navigate the pandemic and work together to demonstrate our strong commitment to academic, research and service excellence during these challenging and unprecedented times.

ENVS3110U Economics & Politics of the Environment
January – April 2022

Who (teaches)

- Dr. Robert Bailey (via **Canvas email** or **robert.bailey@ontariotechu.ca**)

When & Where

- Live on Tuesdays 110-3pm in UA2120 and streamed on Google Meet https://meet.google.com/bqx-gkcj-fxg (recordings available at our Canvas course site)

Mandate

This course is dedicated to helping students understand **the interaction of the economy with significant environmental issues via politics**.

Learning Outcomes

Students who successfully complete the course will know how to:

- Understand science and policy issues related to contemporary environmental issues
- Understand key economic effects of contemporary environmental issues
- Understand the influence of science and the economy on the development of policy

Schedule

Week	Concepts
1 (18Jan22)	**WTF is this course about?**
2 (25Jan22)	1. **Environmental Assessment**
3 (1Feb22)	2. **Endangered Species**
4 (8Feb22)	**3. Traditional Ecological Knowledge**
5 (15Feb22)	**4. Environmental Health**
6 (22Feb22)	**Reading Week** - no class
7 (1Mar22)	5. **Water**
8 (8Mar22)	6. **Energy**
9 (15Mar22)	**NO CLASS ~ Work on Project and Papers**

10 22Mar22)	7. **Human Populations**
11 (29Mar22)	**8. Climate Change**
12 (5Apr22)	**NO CLASS ~ Work on Project and Papers**
13 (12Apr22)	**Group Presentations**

Evaluation

eNews Before & After Columns – 4 (four) columns @ 15% weighting each (60% total weighting)

Pick two of the eight topics we will discuss in the course and write **two eNews Articles** (minimum 750 – maximum1,000 words) for each topic. The two articles on each topic will represent your thoughts ***before*** and ***after*** we discuss each issue. In each "**Before**" column, you give me **your view** of a topic we haven't yet discussed (e.g. #2 Endangered Species)**.** You then write another, "**After**", column on the same subject ***after*** we've discussed it in class. The **Before** column is **just based on your knowledge now**…no research allowed! The **After** column is based on the resources provided for our class and any other research you do. This is your own work, so *it's fine to have somebody else read it, but not ok to have somebody else write it or to use somebody else's writing*.

Dates - "Before" columns are due ***at least one hour before the topic is discussed in class***. "After" columns are due ***at least one day after the topic is discussed in class***. **All "After" columns must be submitted by 14Apr22**.

OPTION 1 - *Group Project (40% weighting)*

Each group will choose a topic relevant to both society and "hard" science (approved by the professor) and prepare a **15-20m video presentation** with their analysis of an environmental science topic in a way understandable to government and the community in general. The group also prepares a ***maximum 25 page report*** (including figures, tables, maps, references) as a companion to their presentation.

Dates - Presentations are **12Apr22**. All videos should be submitted by **1159pm 11Apr22**. All reports are due **14Apr22**.

OPTION 2 - *Solo Project (40% weighting)*

Each person will choose a topic related to their former group's project description and do an analysis of an environmental science topic in a way understandable to government and the community in general. They will prepare a ***maximum 25 page report*** (including figures, tables, maps, references).

Dates - All reports are due **14Apr22**.

Appendix - Ontario Tech University Notes

Technology Requirements

To support online learning, the university recommends certain technology requirements for laptops, software and internet connectivity which are available at: https://itsc.ontariotechu.ca/remote-learning.php.

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Students experiencing financial difficulties such that they are unable to meet the technology requirements may contact Student Awards and Financial Aid Office at: connect@ontariotehu.ca

By remaining enrolled in this course, you acknowledge that you have read, understand and agree to observe the Recommended Technology Requirements for accessing university online learning resources, including those minimum requirements that are specific to your faculty and program.

Sensitive/Offensive Subject Matter

The classroom (both physical and virtual) is intended to provide a safe, open space for the critical and civil exchange of ideas and opinions. Some articles, media and other course materials may contain sensitive content that is offensive and/or disturbing. For example, some articles or videos may contain [Instructors should provide examples that are applicable to the course subject matter – e.g. graphical depictions of violence, profanity, human anatomy, sexual acts, matters pertaining to race, gender, or sexuality]. The Course Instructor will try to identify such material and communicate warnings to students in advance of the distribution and use of such materials, affording students the choice to either emotionally prepare for, or not to view or interact with, the content. [Instructors should publish a warning statement in advance so as to give students adequate opportunity to make a choice to avoid any such matter. The following is a sample disclaimer: “The content you are about to view contains sensitive subject matter that may be considered offensive and/or disturbing to some viewers. By viewing and/or interacting with the content you acknowledge and agree that it is your decision to view and interact with the content and to take the risk that you will experience a negative emotional response or reaction to the nature of the content.”]

Student Support

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact studentlife@ontariotechu.ca for support. Furthermore, please notify your professor if you are comfortable in doing so. This will enable them to provide any resources and help that they can.

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- Reach out to a Support Worker, a specially trained individual authorized to receive confidential disclosures about incidents of sexual violence. Support Workers can offer help and resolution options which can include safety plans, accommodations, mental health support, and more. To make an appointment with a Support Worker, call 905.721.3392 or email studentlife@ontariotechu.ca
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Students with Disabilities

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Students must register for final exams by the registration deadline, which is typically two (2) weeks prior to the start of the final examination period. SAS will notify students of the registration deadline date.

Professional Conduct (if applicable)

[Include faculty statement on professional conduct, if applicable.] Additional information on professional suitability can be found at http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Academic_conduct

Academic Integrity

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Freedom of Information and Protection of Privacy Act

The following is an important notice regarding the process for submitting course assignments, quizzes, and other evaluative material in your courses in the Faculty of [Insert Faculty name]

Ontario Tech University is governed by the Freedom of Information and Protection of Privacy Act ("FIPPA"). In addition to providing a mechanism for requesting records held by the university, this legislation also requires that the University not disclose the personal information of its students without their consent.

FIPPA's definition of "personal information" includes, among other things, documents that contain both your name and your Banner (student) ID. For example, this could include graded test papers or assignments. To ensure that your rights to privacy are protected, the Faculty of [Insert Faculty name] encourages you to use only your Banner ID on assignments or test papers being submitted for grading. This policy is intended to prevent the inadvertent disclosure of your information where graded papers are returned to groups of students at the same time. If you still wish to write both your name and your Banner ID on your tests and assignments, please be advised that Ontario Tech University will interpret this as an implied consent to the disclosure of your personal information in the normal course of returning graded materials to students.

If you have any questions or concerns relating to the new policy or the issue of implied consent addressed above, please contact accessandprivacy@ontariotechu.ca

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Throughout this course, personal information may be collected through the use of certain technologies under the authority of the *University of Ontario Institute of*

Technology Act, SO 2002, c. 8, Sch. O. and will be collected, protected, used, disclosed and retained in compliance with Ontario's *Freedom of Information and Protection of Privacy Act R.S.O. 1990, c. F.31.*

This course will use the following technologies that may collect, use, disclose and retain personal information (including images) for the purposes described below: [Instructors should edit this section according to the systems and technologies to be used in this specific course (e.g. If using Proctortrack, remove any reference to Respondus)]

- Respondus Monitor and Proctortrack to maintain academic integrity for examinations;
- Google Meet and Kaltura Virtual Classroom to facilitate remote instruction and interactive learning;
- Peer-shared applications, services or technologies that may be reviewed, assessed, or used as part of coursework.
- Other applications, services, or technologies that support or enhance online learning that include, but are not limited to, the following: [Instructor to list all relevant components].

For more information relating to these technologies, we encourage you to visit: https://tlc.ontariotechu.ca/learning-technology/index.php Questions regarding personal information may be directed to: Ontario Tech University Access and Privacy Office, 2000 Simcoe Street North, Oshawa, ON L1G 0C5, email: accessandprivacy@ontariotechu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand, and agree to the terms and conditions under which the technology provider(s) may collect, use, disclose and retain your personal information. You agree to the university using the technologies and using your personal information for the purposes described in this course outline.

Freedom of Expression

Pursuant to Ontario Tech's Freedom of Expression Policy all students are encouraged to express ideas and perspectives freely and respectfully in university space and in the online university environment, subject to certain limitations. Students are reminded that the limits on Freedom of Expression include speech or behaviour that: is illegal or interferes with the university's legal obligations; defames an individual or group; constitutes a threat, harassment or discrimination; is a breach of fiduciary, contractual, privacy or confidentiality obligations or commitments; and

unduly disrupts and interferes with the functioning of the university. In the context of working online, different forms of communication are used. Where permitted, students using “chat” functions or other online forms of communication are encouraged to ensure that their communication complies with the Freedom of Expression Policy.

Student Course Feedback Surveys

Student evaluation of teaching is a highly valued and helpful mechanism for monitoring the quality of Ontario Tech University’s programs and instructional effectiveness. To that end, course evaluations are administered by an external company in an online, anonymous process during the last few weeks of classes. Students are encouraged to participate actively in this process and will be notified of the dates. Notifications about course evaluations will be sent via e-mail, and posted on Canvas, Weekly News, and signage around the campus.

University Response to COVID-19

The government response to the COVID-19 pandemic is continually evolving. As new information becomes available from federal and provincial public health authorities, the Province of Ontario and the Regional Municipality of Durham, Ontario Tech University will remain nimble and prepared to respond to government orders, directives, guidelines and changes in legislation to ensure the health and safety of all members of its campus community. In accordance with public health recommendations, the university may need to adjust the delivery of course instruction and the availability and delivery mode of campus services and co-curricular opportunities. Ontario Tech University appreciates the understanding and flexibility of our students, faculty and staff as we continue to navigate the pandemic and work together to demonstrate our strong commitment to academic, research and service excellence during these challenging and unprecedented times.

Faculty of Health Sciences

HLSC 1701: Information Literacy and Written Communications for HS

Course Outline for Fall 2021

1. Course Details & Important Dates*

Term	Course Type	Day	Time
F	Asynchronous	N/A	N/A

Location	CRN #	Classes Start	Classes End	Final Exam Period
Online	44099	September 7	December 6	No Final Exam

* Visit https://ontariotechu.ca/current-students/academics/important-dates-and-deadlines.php for other dates

2. Instructor Contact Information

Instructor Name	Office	Phone	Email
Milly Ryan-Harshman, PhD			via Canvas message
Office Hours: TBD			

Laboratory/Teaching Assistant Name	Office	Phone	Email
Office Hours:			

3. Course Description

This course is an introduction and opportunity for first year Health Sciences students to develop their writing, information technology, and literacy skills. The emphasis in the course is on cultivating the students' writing skills to the level of scholarly writing within a prescribed format (e.g. Publication Manual of the American Psychological Association).

Students participate in activities that foster critical thinking as they research and evaluate online materials as well as participate in self and peer evaluation activities. Students are introduced to various authoritative sources of health information, and how to evaluate health information sources for their authoritativeness. In this course, the students will participate in the writing process from conduct of a literature review, evaluation of information sources, to the final output of an academic paper in the prescribed format. Academic integrity and technical writing skills are also emphasized.

4. Learning Outcomes

Upon successful completion of the course, the student will demonstrate the ability to perform the following. Information in parentheses following the learning outcomes indicate specific professional competencies as identified by individual health disciplines.

1. Use current writing composition technology and strategies (i.e. Microsoft Word, Excel, PowerPoint) to communicate in written format clearly, concisely, comprehensively, and accurately, using correct grammar and spelling. (cf. COKO 4.1.8; CMSLS 7.01; PHAC 6.1, 6.4)

2. Demonstrate a body of knowledge in health and related social sciences research (e.g. communication and learning) (cf. CNO 27)

3. Identify relevant and appropriate sources of information, including community assets and resources. (cf. PHAC 2.2)

4. Collect, store, retrieve, and use accurate and appropriate information on health issues. (cf. PHAC 2.3)

5. Demonstrate a foundational use of evidence and research to inform practice, health policies and programs. (cf. COKO 5.2.4; PHAC 1.4)

6. Analyze information to determine appropriate implications, uses, gaps, and limitations. (cf. PHAC 2.4)

7. Share new knowledge and experience with others through written communications. (cf. COKO 5.2.7)

8. Obtain feedback and demonstrates a willingness to consider opinions of others through a peer review process. (cf. CMSLS 6.03, 7.03; COKO 5.1.4)

9. Consider, calibrate, and incorporate own experiences and learning in practice through self-assessment and reflections. (cf. CMSLS 6.03; COKO 5.1.5, 5.1.6)

10. Provide constructive feedback to others through a peer review process (cf. CMSLS 6.03; COKO 5.1.7)

11. Articulate and practice the principles of academic integrity. (cf. CMSLS Code of Ethics; CNO 75; COKO 2.15.3, 3.1.4)

References:

Canadian Society for Medical Laboratory Science. (2015). *Competency profile: General medical laboratory technologist*. Retrieved from http://csmls.org/Certification/Certification-Exam/Competency-Profiles.aspx

College of Kinesiologists of Ontario. (2014). *Essential competencies of practice for kinesiologists in Ontario*. Retrieved from www.coko.ca/index.php/download_file/view/68/346

College of Nurses of Ontario. (2014). *Competencies for entry-level registered nurse practice*. Retrieved from http://www.cno.org/Global/docs/reg/41037_EntryToPracitic_final.pdf

Public Health Agency of Canada. (2008). *Core competencies for public health in Canada: Release 1.0*. (Catalogue No. HP5-51/2008). Retrieved from http://www.phac-aspc.gc.ca/php- psp/ccph-cesp/about_cc-apropos_ce-eng.php

5. Course Design

All students in Faculty of Health Sciences are required to take this course. Mastering the skills required to become an academic writer can be achieved only through practice. Academic writing is focused on both process and perspective. The process can be taught online using synchronous/asynchronous recordings of lectures and other material. However, perspective can only be learned from completing assignments in reading and writing, coupled with self-reflection on accomplishment and feedback.

This course is organized mainly as an online asynchronous course and reflects a commitment to the principles of adult education, including the concept of "learner centeredness" (i.e., maximizing instructional flexibility and accessibility while placing increased responsibility for learning on the learner).

Other weekly material is provided in the form of recorded lectures. Students are expected to read health sciences literature extensively to provide the foundation for student learning and practice in writing.

6. Outline of Topics in the Course

Week	Dates	Topics	Notes
1	Sep 7-13	Course Overview and Startup Tasks	Read Chapters 2 and 4 in the APA Manual
2	Sep 14-20	Planning the Paper	Read Chapters 5 and 6 in the APA Manual Complete Academic Integrity Quiz by 11:59 p.m. Monday, Sep 20 Begin Library Module; Due Date: 11:59 p.m. Monday, Oct 4
3	Sep 21-27	APA Publication Manual	Read Chapters 8-10 in the APA Manual Submit Paper Proposal/Annotated Bibliography by 11:59 p.m. Sep 27
4	Sep 28-Oct 4	Paragraph Structure; Transitions; PEAS Model	Completed Library Module Due Monday, Oct 4
5	Oct 5-8, Oct 18	Critical Reading and Writing; Data Sources	*Fall Break: Oct 11-17* First Draft of Academic Paper Due Monday, Oct 18 at 11:59 p.m. Submit to

			Turn-it-in, Canvas and Pearson Tutor Services – All three places are separate and required
6	Oct 19-25	Argument and Evidence	Peer Review (Turn-it-in) Assignment Due Oct 25 at 11:59 p.m.
7	Oct 26-Nov 1	Introductions and Conclusions	MWL PathBuilder Pre-Test Proof of Completion Must Be Submitted by Monday, Nov 1 at 11:59 p.m. * Submit proper screenshot to Canvas
8	Nov 2-8	Health Literacy	Second Draft of Academic Paper Due Monday, Nov 8 at 11:59 p.m. Submit paper to Pearson Tutor Services and Turn-it-in
9	Nov 9-15	Knowledge Dissemination	Independent Learning: Presentation Tools
10	Nov 16-22	*No New Material*	Pearson Tutor Reflection Paper Due Monday, Nov 22 at 11:59 p.m. Submit to Canvas
11	Nov 23-29	*No New Material*	Final Paper Due Monday, Nov 29 @ 11:59 p.m. Submit to Turn-it-in and Canvas**
12	Nov 30-Dec 6	*No New Material*	MWL Completion of Activities, Mastery Check; Due Date: Monday, Dec 6 @ 11:59 p.m.

*Failure to submit the PathBuilder Proof of Completion will cause a loss of marks.

**Remember that you must receive a passing grade (50%) on the final paper to pass the course.

7. Required Texts/Readings

Publication Manual of the American Psychological Association, (2020), 7th Edition. ISBN: 9781433832161

Additional readings may be assigned or recommended during the course.

8. Evaluation Method

Assessment	Percent of Course Grade	Due Date
Academic Integrity Module Quiz	10	September 20
Paper Proposal/Annotated Bibliography	12.5	September 27
Health Sciences Information Literacy (Library) Module	10	October 4
First Draft of Academic Paper	12.5	October 18
Peer Review Assignment	10	October 25
Second Draft of Academic Paper	5	November 8
Reflection Paper	5	November 22
Final Version of Academic Paper	25	November 29
My Writing Lab Modules and Mastery Check	10	December 6

]

Final course grades may be adjusted to conform to program or Faculty grade distribution profiles. Further information on grading can be found at:
http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Grading

9. Assignments and Tests

All assignments in this course lead toward the completion of a final academic paper. The Academic Integrity quiz provides the students with a basis of understanding about what constitutes academic dishonesty and students must pass the quiz with a 75% or higher to pass the course. PathBuilder, the My Writing Lab (MWL) pre-test must be taken by all students to help them identify their strengths and weaknesses in writing mechanics and style. Students then select activities (homework, quizzes, skills checks) for improvement in selected areas of self-study. Mastery Check, the MWL post-test, will give some indication regarding self-improvement through study. Again, a passing mark of 75% or higher is required. All other assignments are focused on writing a university level academic paper. The processes of peer review and reflection are essential to improved writing. As every assignment contributes toward a final paper, students should not fall behind or miss any assignments; however, 10% will be deducted for one day late, 20% will be deducted for two days late, and 30% will be deducted for three days late. After three days, the student's mark is a zero. For valid reasons only, students may have their marks re-weighted, but failure to submit work cannot be made up later.

10. Technology Requirements and Learning Management System Information

Ontario Tech uses *Canvas*™ as its learning management system (LMS). Access to the LMS is limited to students formally registered in courses. That access is for the duration of the semester **and for an additional 120 days once the semester is over**. Students are strongly encouraged to download any/all relevant course material during that access period. Any requests for access past this period must be made in writing to the instructor/faculty member responsible for the course.

To support online learning, the university recommends certain technology requirements for laptops, software and internet connectivity which are available at: https://itsc.ontariotechu.ca/remote-learning.php.

Students experiencing technical difficulties such that they are unable to meet the technology requirements may contact the IT Service Help Desk at: servicedesk@dc-uoit.ca
Students experiencing financial difficulties such that they are unable to meet the technology requirements may contact Student Awards and Financial Aid Office at: connect@ontariotehu.ca

By remaining enrolled in this course, you acknowledge that you have read, understand and agree to observe the Recommended Technology Requirements for accessing university online learning resources, including those minimum requirements that are specific to your faculty and program.

11. Sensitive/Offensive Subject Matter

The classroom (both physical and virtual) is intended to provide a safe, open space for the critical and civil exchange of ideas and opinions. Some articles, media and other course materials may contain sensitive content that is offensive and/or disturbing. For example, some articles or videos may contain graphical depictions of violence, profanity, human anatomy, sexual acts, or matters pertaining to race, gender, or sexuality. The course Instructor will try to identify such material and communicate warnings to students in advance of the distribution and use of such materials, affording students the choice to either emotionally prepare for, or not to view or interact with, the content.

12. Student Support

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact studentlife@ontariotechu.ca for support. Furthermore, please notify your professor if you are comfortable in doing so. This will enable them to provide any resources and help that they can.

13. Sexual Violence Support and Education

Ontario Tech is committed to the prevention of sexual violence in all is forms. For any student who has experienced Sexual Violence, Ontario Tech can help. We will make accommodations to cater to the diverse backgrounds, cultures, and identities of students when dealing with individual cases.

If you think you have been subjected to or witnessed sexual violence:

- Reach out to a Support Worker, a specially trained individual authorized to receive confidential disclosures about incidents of sexual violence. Support Workers can offer help and resolution options which can include safety plans, accommodations, mental health support, and more. To make an appointment with a Support Worker, call 905.721.3392 or email studentlife@ontariotechu.ca
- Learn more about your options at: https://studentlife.ontariotechu.ca/sexualviolence/

14. Students with Disabilities

Accommodating students with disabilities at Ontario Tech is a responsibility shared among various partners: the students themselves, SAS staff and faculty members. To ensure that disability-related concerns are properly addressed during this course, students with documented disabilities and who may require assistance to participate in this class are encouraged to speak with me as soon as possible. **Students who suspect they have a disability that may affect their participation in this course are advised to go to Student Accessibility Services (SAS) as soon as possible.** Maintaining communication and working collaboratively with SAS and faculty members will ensure you have the greatest chance of academic success.

When on campus access is allowed, students taking courses on north Oshawa campus can visit Student Accessibility Services in the Student Life Building, U5, East HUB (located in the Founders North parking lot). Students taking courses on the **downtown Oshawa campus** can visit Student Accessibility Services in the 61 Charles St. Building, 2nd Floor, Room DTA 225 in the Student Life Suite.

Disability-related and accommodation support is available for students with mental health, physical, mobility, sensory, medical, cognitive, or learning challenges. Office hours are 8:30am-4:30pm, Monday to Friday, closed Wednesday's 8:30am – 10:00am. For more information on services provided, you can visit the SAS website at https://studentlife.ontariotechu.ca/services/accessibility/index.php. Students may contact Student Accessibility Services by calling 905-721-3266, or email studentaccessibility@ontariotechu.ca.

When on campus access is allowed, students who require the use of the Test Centre to write tests, midterms, or quizzes MUST register online using the SAS test/exam sign-up module, found here https://disabilityservices.ontariotechu.ca/uoitclockwork/custom/misc/home.aspx. Students must sign up for tests, midterms, or quizzes AT LEAST seven (7) days before the date of the test.

Students must register for final exams by the registration deadline, which is typically two (2) weeks prior to the start of the final examination period. SAS will notify students of the registration deadline date.

15. Professional Suitability (if applicable)

Students in programs leading to professional certification must demonstrate behaviour appropriate to practice in those professions. Where a dean determines that behaviour inconsistent with the norms and expectations of the profession has been exhibited by a student, that student may be immediately withdrawn from the program by the dean or subject to one or more of the sanctions (described in Section 5.15.3). A student demonstrating professional unsuitability may be immediately suspended from any practicum, field work or similar activity at the discretion of the dean pending a final decision. The *Professional Suitability* policy can be found at https://usgc.ontariotechu.ca/policy/policy-library/policies/academic/academic-conduct-and-professional-suitability-policy.php and the related procedures are hosted at https://usgc.ontariotechu.ca/policy/policy-library/policies/academic-misconduct-and-professional-unsuitability.php

16. Academic Integrity

Students and faculty at Ontario Tech University share an important responsibility to maintain the integrity of the teaching and learning relationship. This relationship is characterized by honesty, fairness and mutual respect for the aim and principles of the pursuit of education. Academic misconduct impedes the activities of the university community and is punishable by appropriate disciplinary action.

Students are expected to be familiar with and abide by Ontario Tech University's regulations on Academic Conduct which sets out the kinds of actions that constitute academic misconduct, including plagiarism, copying or allowing one's own work to copied, use of unauthorized aids in examinations and tests, submitting work prepared in collaboration with another student when such collaboration has not been authorized, among other academic offences. The regulations also describe the procedures for dealing with allegations, and the sanctions for any finding of academic misconduct, which can range from a resubmission of work to a failing grade to permanent expulsion from the university. A lack of familiarity with these regulations on academic conduct does not constitute a defense against its application. This information can be found at https://usgc.ontariotechu.ca/policy/policy-library/policies/academic/academic-integrity-policy.php

Extra support services are available to all Ontario Tech University students in academic development, study skills, counseling, and peer mentorship. More information on student support services can be found at https://studentlife.ontariotechu.ca/services/academic-support/index.php

17. Turnitin (if applicable)

Ontario Tech University and faculty members reserve the right to use electronic means to detect and help prevent plagiarism. Students agree that by taking this course all assignments are subject to submission for textual similarity review by Turnitin.com. Assignments submitted to Turnitin.com will be included as source documents in Turnitin.com's restricted access database solely for the purpose of detecting plagiarism in such documents. The instructor may require students to submit their assignments electronically to Turnitin.com or the instructor may submit questionable text on behalf of a student. The terms that apply to Ontario Tech University's use of the Turnitin.com service are described on the Turnitin.com website.

Students who do not wish to have their work submitted to Turnitin.com must provide with their assignment at the time of submission to the instructor a signed Turnitin.com Assignment Cover sheet: https://tlc.ontariotechu.ca/learning-technology/assignment-cover-sheet_updatedmay2021-1.pdf

18. Online Test and Exam Proctoring (Virtual Proctoring)

Ontario Tech University will conduct virtual monitoring of examinations in accordance with Ontario privacy legislation and all approved policy instruments.

19. Final Examinations (if applicable)

Final examinations are held during the final examination period at the end of the semester and **when on campus access is allowed,** may take place in a different room and on a different day from the regularly scheduled class. Check the published Examination Schedule for a complete list of days and times.

Students are required to show their Student ID card (campus ID) when **in-person examinations are allowed.** Students are advised to obtain their Student ID Card well in advance of the examination period as they will not be able to write their examinations without it. More information on ID cards can be found at https://registrar.ontariotechu.ca/campus-id/index.php.

Students who are unable to write a final examination when scheduled due to religious publications may make arrangements to write a deferred examination. These students are required to submit a Request for Accommodation for Religious Obligations to the Faculty concerned as soon as possible and no later than three weeks prior to the first day of the final examination period.

Further information on final examinations can be found at https://usgc.ontariotechu.ca/policy/policy-library/policies/academic/procedures-for-final-examination-administration.php

20. Freedom of Information and Protection of Privacy Act

The following is an important notice regarding the process for submitting course assignments, quizzes, and other evaluative material in your courses in the Faculty of Health Sciences.

Ontario Tech University is governed by the Freedom of Information and Protection of Privacy Act ("FIPPA"). In addition to providing a mechanism for requesting records held by the university, this legislation also requires that the University not disclose the personal information of its students without their consent.

FIPPA's definition of "personal information" includes, among other things, documents that contain both your name and your Banner (student) ID. For example, this could include graded test papers or assignments. To ensure that your rights to privacy are protected, the Faculty of Health Sciences encourages you to use only your Banner ID on assignments or test papers being submitted for grading. This policy is intended to prevent the inadvertent disclosure of your information where graded papers are returned to groups of students at the same time. If you still wish to write both your name and your Banner ID on your tests and assignments, please be advised that Ontario Tech University will interpret this as an implied consent to the disclosure of your personal information in the normal course of returning graded materials to students.

If you have any questions or concerns relating to the new policy or the issue of implied consent addressed above, please contact accessandprivacy@ontariotechu.ca

Notice of Collection and Use of Personal Information
Throughout this course, personal information may be collected through the use of certain technologies under the authority of the *University of Ontario Institute of Technology Act, SO 2002, c. 8, Sch. O.* and will be collected, protected, used, disclosed and retained in compliance with Ontario's *Freedom of Information and Protection of Privacy Act R.S.O. 1990, c. F.31.*

This course will use the following technologies that may collect, use, disclose and retain personal information (including images) for the purposes described below:

- Respondus Monitor and Proctortrack to maintain academic integrity for examinations;
- Google Meet and Kaltura Virtual Classroom to facilitate remote instruction and interactive learning;
- Peer-shared applications, services or technologies that may be reviewed, assessed, or used as part of coursework.
- Other applications, services, or technologies that support or enhance online learning.

For more information relating to these technologies, we encourage you to visit: https://tlc.ontariotechu.ca/learning-technology/index.php Questions regarding personal information may be directed to: Ontario Tech University Access and Privacy Office, 2000 Simcoe Street North, Oshawa, ON L1G 0C5, email: accessandprivacy@ontariotechu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand, and agree to the terms and conditions under which the technology provider(s) may collect, use, disclose and retain your personal information. You agree to the university using the technologies and using your personal information for the purposes described in this course outline.

21. Human Rights and Respect

Ontario Tech University is committed to providing a campus environment in which all University Members are treated with dignity and to fostering a climate of understanding and mutual respect. The University will not tolerate, ignore or condone Discrimination or Harassment by or against anyone. Examples of Harassing behavior include, but are not limited to: bullying, taunting or mocking someone's race or creed, ridiculing an individual's disability, or targeting individuals with unwanted sexual or negative stereotypical comments about one's sex, gender, sexual orientation, gender identity and/or gender expression. Pursuant to Ontario Tech's Respectful Campus Policy, students are reminded of their role in ensuring a campus environment that is equitable and inclusive. Requirements to refrain from harassment and discrimination apply broadly to the classroom, including in lectures, labs and practicums, as well as through the use of sanctioned and unsanctioned technological tools that facilitate remote learning, e.g. class and other chat functions, video conferencing, electronic mail and texts, and social media content amongst or about University students, faculty and staff.

22. Freedom of Expression

Pursuant to Ontario Tech's Freedom of Expression Policy, all students are encouraged to express ideas and perspectives freely and respectfully in university space and in the online university environment, subject to certain limitations. Students are reminded that the limits on Freedom of Expression include speech or behaviour that: is illegal or interferes with the university's legal obligations; defames an individual or group; constitutes a threat, harassment or discrimination; is a breach of fiduciary, contractual, privacy or confidentiality obligations or commitments; and unduly disrupts and interferes with the functioning of the university. In the context of working online, different forms of communication are used. Where permitted, students using "chat" functions or other online forms of communication are encouraged to ensure that their communication complies with the Freedom of Expression Policy.

23. Copyright Notice

All teaching materials provided by the instructor throughout the course, including, but not limited to, in whole or in part, recorded lectures, slides, videos, diagrams, case studies, assignments, quizzes, and examinations are subject to the Copyright Act, R.S.C., 1985, c. C-42. Teaching materials are owned by the faculty member, instructor or other third party who creates such works. The copyright owner(s) reserves all intellectual property rights in and to the teaching materials, including the sole right to copy, reproduce, distribute, and modify the teaching materials. Consistent with the university's Intellectual Property Policy, teaching materials are intended only for the educational use of Ontario Tech University students registered in the course that is the subject of this course outline. Any distribution or publishing of this material (e.g. uploading material to a third-party website) is strictly prohibited under the law unless the student has obtained the copyright owner's prior written consent. Any violation of copyright law or the Intellectual Property Policy, if proven, may be subject to sanction as academic misconduct, and/or under the Student Conduct Policy.

24. Student Course Feedback Surveys

Student evaluation of teaching is a highly valued and helpful mechanism for monitoring the quality of Ontario Tech University's programs and instructional effectiveness. To that end, course evaluations are administered by an external company in an online, anonymous process during the last few weeks of classes. Students are encouraged to participate actively in this process and will be notified of the dates. Notifications about course evaluations will be sent via e-mail, and posted on Canvas, Weekly News, and signage around the campus.

25. University Response to COVID-19

The government response to the COVID-19 pandemic is continually evolving. As new information becomes available from federal and provincial public health authorities, the Province of Ontario and the Regional Municipality of Durham, Ontario Tech University will remain nimble and prepared to respond to government orders, directives, guidelines and changes in legislation to ensure the health and safety of all members of its campus community. In accordance with public health recommendations, the university may need to adjust the delivery of course instruction and the availability and delivery mode of campus services and co-curricular opportunities. Ontario Tech University appreciates the understanding and flexibility of our students, faculty and staff as we continue to navigate the pandemic and work together to demonstrate our strong commitment to academic, research and service excellence during these challenging and unprecedented times.

The Accessibility for Ontarians with Disabilities Act (AODA) standards have been considered in the development of this model course template and it adheres to the principles outlined in the University's Accessibility Policy.

FACULTY OF HEALTH SCIENCES
HLSC1811U: Social Determinants of Health
Course outline for Winter 2022

1. Course Details & Important Dates*

Term	Course Type	Day	Time
Winter	On-line	Monday	

Location	CRN #	Classes Start	Classes End	Final Exam Period
Canvas	74122	January 17, 2022	April 16, 2022	April 11-24, 2022

* Visit https://ontariotechu.ca/current-students/academics/important-dates-and-deadlines.php for other dates

Important Note – Final Exams
The final exam for this course will be run virtually during the regular final exam period. However, students have an option to book a formal space on campus should they wish. If a student wishes to write on campus you **must submit a request through the link:** Winter 2022 Final Examination: On-campus space request

Instructor Contact Information

Instructor Name	Office	Phone	Email
Dr. T. Bryant	SHA455		Canvas
Office Hours: Email Dr. Bryant on Canvas only Monday to Thursday 8:30am-4:30pm, Friday 8:30am-4:00pm. Emails sent Fridays after 4pm will be answered the following Monday.			

Laboratory/Teaching Assistant Name	Office	Phone	Email
Lucas Martignotti			
Office Hours: **No Office Hours. See above for Dr. Bryant's availability above.**			

3. Course Description

Examining the social determinants of health is essential because health inequalities cannot be explained by lifestyle choices alone. In this course, historical, social, political, and economic forces that influence health and health inequalities will be discussed. Demographic factors such as education, employment, income levels, ethnicity, and gender will be examined in light of their contribution to issues such as racism and sexism that can lead to health inequalities among groups. A key component of this course will be to explore the literature that focuses on specific determinants such as housing, food security, poverty, access to care, and health issues. **Prerequisite: HLSC 1300U or HLSC 1700U or HLSC 1701U or HLSC 1702U.**

Learning Outcomes

On the successful completion of the course, students will be able to:

- Examine and compare the definitions of health and wellness.
- Explain the relevance of the social determinants of health in different contexts such as HIV/AIDS, family violence, Aboriginal health and the higher incidence of cardiovascular disease among low income groups.
- Critically examine health inequities in vulnerable groups.
- Understand how social, political, historical and economic forces influence health.
- Describe the factors that influence health and health inequalities and the current approaches utilized to address them.
- Explain the importance of intersectoral and interprofessional collaboration to increase the health status of particular groups.

5. Course Design

The course consists of approximately 180 min. of on-line activity that will include listening to and watching lectures (MP4 files) posted on the course website, and watching episodes of *Unnatural Causes*, a series on the social determinants of health. URLs for the films will be posted for students to watch on their own. Students must read weekly assigned readings, prepare and submit on-line four critical comments on assigned readings on specified dates during the term, listen to and watching the on-line lecture each week. Evaluation will also consist of two short assignments each of three pages maximum, mid-term test, and final examination.

Learning is a shared responsibility for everyone involved in the course: students and instructor. To ensure a culture of learning, it is expected and essential that students complete weekly readings and course assignments in order to do well in the course. It is also the responsibility of students to ask questions when they do not understand course material. This will enhance your learning and help you to do well in the course. Please email Prof. Bryant on Canvas when you have questions or concerns. Prof. Bryant is willing to meet virtually with individual students or groups of students to discuss course material.

6. Outline of Topics in the Course

Date	Topic	Assigned Reading	On-line Activity
January 17, 2022	Introduction to course: Topics, evaluation, expectations, learning objectives, and course rules. What are SDOH?	Read the course outline.	Watch the following: 1) Orientation to the Course Website 2) Introduction to the Course
1. January 17, 2022	What is Health? Who is healthy and who gets sick?	HI: Ch. 1; CATIE. *The Social Determinants of Health and Structural Interventions*.	
2. January 24, 2022	Living Conditions	HI: Ch. 2; College of Family Physicians. (2015). *Best Advice: Social Determinants of Health.*	Post critical reflection #1 on Chap. 2 by January 24, 10am.
3. January 31, 2022	Income and Education	HI: Ch. 3 - pp. 42-53; Raphael, D. & Bryant, T. (2014 Nov. 23). Income inequality is killing thousands of Canadians each year. *Toronto Star.*	
4. February 7, 2022	Employment Security and Working Conditions	HI: Ch. 3 - pp. 53-63; Burgard, S.A. & Lin, K.Y. (2013). Bad Jobs, Bad Health? How Work and Working Conditions Contribute to Health Disparities. *American Behavioural Scientist 57*(8), 1-19.	**Assignment 1 is due on Canvas by February 7, 2022, 11:59pm.**
5. February 14, 2022	Early Child Development, Food Security	HI: Ch. 4; Meili, R. & Gibson, C. (2017 March 24). To improve a child's health, follow Alberta's lead and give parents a raise. *The Globe and Mail.* Ubelacker, S. (2013 Aug. 29). Poverty lowers brain power, study suggests. *CTV News.* Power, E. (2012 Sept. 6). It's time to close Canada's food banks. *The Globe and Mail.*	Post critical comment #2 on assigned readings by February 14, 10am.
Feb. 22 to 27, 2022	**READING WEEK**	**NO CLASS**	
February 28, 2022		**Mid-Term Quiz on-line – 25-30 multiple choice questions.** **You must complete the Confidentiality Agreement in order to access the quiz.**	Mid-term quiz will be available Feb. 28, 8am-11:59pm. Students must complete the test in one sitting. No backtracking.
6. March 7, 2022	Housing as a Social Determinant of Health	Wellesley Institute (WI). (2010) *Precarious housing in Canada. Executive Summary* Toronto: WI. MacKay, K. & Wellner, J. (2013 July/August). OMA calls for urgent government action, housing-supportive policies to improve health outcomes of vulnerable populations. *Ontario Medical Review*.	Assigned readings are posted on course website. Critical comment #3 is due by March 7, 10am.
7. March 14, 2022	Built Environment and Health Inequalities	Giles-Corti, B. (2017 Oct. 12). What makes a city more liveable? *Policy Forum.*	
8. March 21, 2022	Social Exclusion	HI: Ch. 5; Society's excluded people 10 times more likely to die early (2017 Nov. 14). *Medical Express.*	Post Critical Comment #4 by March 21, 10am.

9. March 28, 2022	Social Exclusion of Indigenous Populations	Reading, C. & Wien, F. (2013). Health inequalities and social determinants of Aboriginal Peoples' Health. *NCCAH*. Galloway, G. (2017 March 14). Head of inquiry into residential schools says Ottawa lags on commitments. *Globe and Mail.*	**Assignment 2 due on Canvas by March 28, 11:59pm.**
10. April 4, 2022	Public Policy and Social Determinants of Health	HI: Ch. 6 Raphael, D. (2017 Oct. 19). Viewpoint: Tommy Douglas may be back. StarPhoenix.	
11. April 11, 2022	Next Steps -- FINAL CLASS	HI: Ch. 7	
Final Exam	To be determined. The exam will be held during the regular exam period – April 16-27, 2022.	The exam will consist of 75-multiple choice questions on the term's work. Students must complete the exam in one sitting. No backtracking.	Final Exam TBA

A link will
live or wat
later date

7. Required Texts/Readings

Raphael, D. (2016). *Health and illness.*(Second edition). Fernwood Publishing. To be referred to herein as HI.

American Psychological Association (2019). *Publication Manual of the American Psychological Association*, 7th Ed. Washington, DC: American Psychological Association. To be referred herein to as APA.

Additional readings may be assigned or recommended during the course. Additional online activities by be assigned as part of the course requirement

Notes: MP4 files of lectures will be posted each week on the course website.

8. Evaluation Method

Evaluation for this course consists of two short assignments, mid-term test, 4 critical comments, and final examination.	
4 Critical Comments due by specified dates and times – CC1 – Jan. 24, 8am; CC2 – Feb. 14, 8am; CC3 – March 7, 8am; CC4 – March 21, 8am.	10%
Assignment 1 – Due by Monday, February 7, 2022, 11:59pm	15%
Mid-Term Test – Monday, February 28, 2022 – Available 8am-11:59pm 35 multiple choice questions on Lectures 1-5, assigned readings, and films presented from January 17 to February 14, 2022.	20%
Assignment 2: Reflective Paper – Due by Monday, March 28, 2022, 11:59pm	20%
Final Exam – To be held during the exam period April 16-27 2022	35%
TOTAL	**100%**

The marking rubric for Assignments 1 and 2 is posted in Google Drive. You must be logged onto your .net account to access the rubric. *Final course grades may be adjusted to conform to program or Faculty grade distribution profiles. Further information on grading can be found at:*
http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Grading

9. Assignments and Tests

Critical Comments on Assigned Readings (10%): Students will post four journals on assigned readings due on Canvas: CC1 by January 24, 5pm; CC2 by February 14, 8am; CC3 by March 7, 8am and CC4 by March 21, 8am. You will receive a mark out of 2. Canvas will weight each as worth 2.5 points. Check the schedule each week to see when a critical comment is due. The aim is to help you to think critically about what you read. **Do not summarize readings. Explain why one idea in an assigned reading is important or interesting in no more than three sentences maximum. Be brief!!** Type in the box that appears. No WORD FILE UPLOADS – they will not be marked. Students must submit by the time and date specified to receive points. This is a participation mark. Late posts will not be accepted regardless of reasons, including illness. No extensions. Watch the MP4 on the introduction to the course and expectations on the course website.

Assignments 1 and 2 must have 12 font Times Roman with 1.5 line spacing and 1" (2.54 cm) page margins. NO DIRECT QUOTES – Explain ideas of others in your words and provide an in-text reference and full citation in APA citation format in the bibliography. Comply with specified page limits for assignments. We will not read text beyond three pages.

1) Assignment 1 – Due Monday, February 7, 2022, by 11:59pm. Page Limit – 3 pages of text maximum (15% of final grade) – Not including title page and bibliography. Download and read, "Food drives are not the answer to poverty and hunger", by Elaine Power, Paul Taylor and Valerie Tarasuk. What is the authors' main argument? What social determinant of health do they discuss? What public policies can improve the situation they present? **No need for additional sources**. Draw on lecture material and the course text to support argument. You will receive a mark out of 25 for formatting, i.e. line-spacing, paragraphing, APA citation format (See Marking Rubric). Watch the MP4 that explains the assignment and expectations posted in Assignments on Canvas**. When you submit your assignment on Canvas, it will be automatically uploaded to turnitin.com.**

2) Mid-Term Quiz – Monday February 28, 2022 (20% of final course grade) **–** 30-40 multiple choice questions on Lectures 1 to 5, including assigned readings and films covered from January 17 to February 14 inclusive. To be completed on-line in one sitting. Consistent with other on-line assessments in the Faculty of Health Sciences, there will be no backtracking, and students must complete the quiz in one sitting.

3) Assignment 2: Reflective Paper due Monday, March 28, 2022 by 11:59pm - 3 pages of text maximum (20% of final grade). Discuss income as a social determinant of health. What does the research literature show about how it influences health? How does it affect other social determinants of health? What public policies will strengthen this social determinant? Draw on lecture material and the text only. No need for additional sources. You will receive a mark out of 25 for formatting, i.e. line-spacing, paragraphing, correct APA citation format. Watch the MP4 that explains the assignment and expectations posted in Assignments on Canvas**. When you upload your assignment to the course website, it will be automatically submitted to turnitin.com.**

5) Final Exam: (35% of final course grade) - 75-100 multiple choice questions on all of the work presented during the term, including assigned readings, lecture material, and films presented during the term.

Class Rules for Assignments

- ********Assignment Schedule***: See above for assignment deadlines and weights. Check individual assignments for guidelines on the assignment. Assignments may be submitted in advance of their due date, though this will not guarantee that they will be returned sooner. *****

- ***Assignment Deadlines***: Assignments are due by a particular time on specified due dates.

- ***Manage your time***: Time management is important as you well know. And it is especially important for this course. If you experience difficulties, you are encouraged to contact the UOIT Student Learning Centre: https://studentexperience.uoit.ca/academicSuccessCentre/bookAnAppointment.htm

- You are responsible for readings, assignment instructions, the syllabus, and other material provided. Please read the course syllabus carefully.

- When assignments are submitted, it will generate an originality report. You will not see your originality scores. Prof. Bryant will let you know if there are any concerns about your assignments.

- ***Marks are not based on how hard you work.*** Marks are based on the quality of your work, not on how hard you worked or how much time you spent to produce it. This may be unfortunate, but the reality is that sometimes people work extremely hard, but do not produce quality results. Hard work always pays off one way or another, but it might not be reflected in the mark you receive on an assignment. If you are a hard worker, good for you. Keep working hard, and you will be rewarded. But, do not expect that you "deserve" a good grade because you worked hard on a particular assignment. Learning is accumulative. You will receive constructive feedback on assignments to help you improve and achieve your goals.

- ***Marks are not based on the grade you want or expect in the course.*** Marks are based on the quality of your work, not on what you want or think you should receive as a grade for the course. Although you may really want an A in this course, it is not an argument for obtaining a better mark for a course assignment. Nor is receiving A in other courses justification for an A in this course.

- ***Reassessment of marks.*** We strive to be fair in marking all assignments and are not motivated to treat one student more favourably or harshly than another. If you think that an assignment mark should be higher -- not because you "worked hard" on it or "wanted a better grade" -- you might wish to have it re-assessed. **Please provide a type-written explanation as to why you think your paper deserves a better grade in a single paragraph.** Please keep in mind, however, that a reassessment may result in: a) NO CHANGE in the mark, b) a HIGHER mark, or c) a LOWER mark. More likely, you will not receive a new grade, but constructive feedback on how to improve your grade on the next assignment.

Late assignments: The following policy guidelines apply to assignments submitted late:

- If, for any reason, a student misses an assignment or exam for a legitimate reason and provides appropriate documentation **within a minimum three (3) days of the deadline to Student Services in UA 2000**, the student will not be penalized. Appropriate documentation is https://ontariotechu.ca/forms/online/view.php?id=769554: Or if there has been a death in the family, please provide a photocopy of a death certificate. Once appropriate documentation has been submitted, it is the responsibility of the student to make alternative arrangements with the instructor to set a deadline for completing and submitting work that is owed.

- If a student misses a set assignment deadline without a legitimate reason, or without speaking to the instructor within **at least one week prior to the deadline**, does not provide the proper documentation s/he will be penalized 5% per calendar day (including Saturday and Sunday).

- Assignments that are one week late (including weekends), and the student has not communicated with the instructor one week prior to the deadline before the deadline, **will not be accepted.**

- If a student cannot complete a piece of academic work for any reason, it is the student's responsibility to inform the course instructor at least one week BEFORE the deadline for the assessment. The course instructor will make a decision on a case by case basis.

Formatting for All Assignments

- 1.5 line spacing with paragraph indentation, no spacing between paragraphs, 1 inch/2.54 cm. margins. Please use APA 7th edition citation style. Provide a bibliography of sources you used to complete the assignment at the end of your assignment. Please refer to 'The Analytic Essay' -- posted on Blackboard -- for guidance on how to structure assignments. **Please comply with the page limits for assignments.**

- Use sub-headings to help organize assignments, e.g. Introduction, Alternative Perspectives, Discussion, Conclusion, etc. The introduction must state what will be argued in the paper. Please do not use the first-person narrative (i.e. "I will argue that … "). It is appropriate to state, "This paper will examine …" or "This paper will argue …" The next section should explain what the instructions require be explained, or present alternative perspectives. They require full sentences, proper paragraphing, and punctuation, etc. Essays must also have discussion and conclusion sections.

- No semi-colons. Write clear, simple sentences. This will help avoid run-on sentences and make your writing clearer.

- **No direct quotes**. When citing information from the course text or from other sources, please explain the ideas of others **in your own words** and provide an in-text citation, E.G. (Raphael, 2016) and provide a full reference in the bibliography in correct APA citation style. A bibliography should appear at the end of your assignment.

- Please ensure that your name and student number appear on the first page of all your assignments. A title page is not necessary.

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10. Technology Requirements and Learning Management System Information

Ontario Tech uses *Canvas™* as its learning management system (LMS). Access to the LMS is limited to students formally registered in courses. That access is for the duration of the semester **and for an additional 120 days once the semester is over**. Students are strongly encouraged to download any/all relevant course material during that access period. Any requests for access post this period must be made in writing to the instructor/faculty member responsible for the course.

To support online learning, the university recommends certain technology requirements for laptops, software and internet connectivity which are available at: https://itsc.ontariotechu.ca/remote-learning.php.

Students experiencing technical difficulties such that they are unable to meet the technology requirements may contact the IT Service Help Desk at: servicedesk@dc-uoit.ca
Students experiencing financial difficulties such that they are unable to meet the technology requirements may contact Student Awards and Financial Aid Office at: connect@ontariotehu.ca

By remaining enrolled in this course, you acknowledge that you have read, understand and agree to observe the Recommended Technology Requirements for accessing university online learning resources, including those minimum requirements that are specific to your faculty and program.

11. Sensitive/Offensive Subject Matter

The classroom (both physical and virtual) is intended to provide a safe, open space for the critical and civil exchange of ideas and opinions. Some articles, media and other course materials may contain sensitive content that is offensive and/or disturbing. For example, some articles or videos may contain The Course Instructor will try to identify such material and communicate warnings to students in advance of the distribution and use of such materials, affording students the choice to either emotionally prepare for, or not to view or interact with, the content.

12. Student Support

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact studentlife@ontariotechu.ca for support. Furthermore, please notify your professor if you are comfortable in doing so. This will enable them to provide any resources and help that they can.

13. Sexual Violence Support and Education

Ontario Tech is committed to the prevention of sexual violence in all is forms. For any student who has experienced Sexual Violence, Ontario Tech can help. We will make accommodations to cater to the diverse backgrounds, cultures, and identities of students when dealing with individual cases.

If you think you have been subjected to or witnessed sexual violence:

- Reach out to a Support Worker, a specially trained individual authorized to receive confidential disclosures about incidents of sexual violence. Support Workers can offer help and resolution options which can include safety plans, accommodations, mental health support, and more. To make an appointment with a Support Worker, call 905.721.3392 or email studentlife@ontariotechu.ca
- Learn more about your options at: https://studentlife.ontariotechu.ca/sexualviolence/

14. Students with Disabilities

Accommodating students with disabilities at Ontario Tech is a responsibility shared among various partners: the students themselves, SAS staff and faculty members. To ensure that disability-related concerns are properly addressed during this course, students with documented disabilities and who may require assistance to participate in this class are encouraged to speak with me as soon as possible. **Students who suspect they have a disability that may affect their participation in this course are advised to go to Student Accessibility Services (SAS) as soon as possible.** Maintaining communication and working collaboratively with SAS and faculty members will ensure you have the greatest chance of academic success.

When on campus access is allowed, students taking courses on north Oshawa campus can visit Student Accessibility Services in the Student Life Building, U5, East HUB (located in the Founders North parking lot). Students taking courses on the **downtown Oshawa campus** can visit Student Accessibility Services in the 61 Charles St. Building, 2nd Floor, Room DTA 225 in the Student Life Suite.

Disability-related and accommodation support is available for students with mental health, physical, mobility, sensory, medical, cognitive, or learning challenges. Office hours are 8:30am-4:30pm, Monday to Friday, closed Wednesday's 8:30am – 10:00am. For more information on services provided, you can visit the SAS website at https://studentlife.ontariotechu.ca/services/accessibility/index.php. Students may contact Student Accessibility Services by calling 905-721-3266, or email studentaccessibility@ontariotechu.ca.

When on campus access is allowed, students who require the use of the Test Centre to write tests, midterms, or quizzes MUST register online using the SAS test/exam sign-up module, found here https://disabilityservices.ontariotechu.ca/uoitclockwork/custom/misc/home.aspx. Students must sign up for tests, midterms, or quizzes AT LEAST seven (7) days before the date of the test.

Students must register for final exams by the registration deadline, which is typically two (2) weeks prior to the start of the final examination period. SAS will notify students of the registration deadline date.

15. Professional Suitability (if applicable)

Faculty of Health Sciences members and students share an important responsibility to maintain the integrity of the teaching and learning relationship. This relationship is characterized by honesty, fairness and mutual respect for the aims and principles of the pursuit of education, as well as the intellectual property of others. Academic misconduct impedes these goals, disrupts the activities of the university community and is punishable by appropriate disciplinary action.

Students are expected to behave on-line as they would in a regular class setting – that is, in a professional, respectful manner towards the Course Instructor and other students enrolled in the course. This will help promote a welcoming learning environment in which all can learn.

It is the responsibility of students to be aware of the actions that constitute academic misconduct, the procedures for launching and resolving complaints, and the penalties for commission of acts of misconduct. A lack of familiarity with the university's policy on academic conduct and misconduct on the part of a student does not constitute a defence against its application.

16. Academic Integrity

Students and faculty at Ontario Tech University share an important responsibility to maintain the integrity of the teaching and learning relationship. This relationship is characterized by honesty, fairness and mutual respect for the aim and principles of the pursuit of education. Academic misconduct impedes the activities of the university community and is punishable by appropriate disciplinary action.

Students are expected to be familiar with and abide by Ontario Tech University's regulations on Academic Conduct which sets out the kinds of actions that constitute academic misconduct, including plagiarism, copying or allowing one's own work to copied, use of unauthorized aids in examinations and tests, submitting work prepared in collaboration with another student when such collaboration has not been authorized, among other academic offences. The regulations also describe the procedures for dealing with allegations, and the sanctions for any finding of academic misconduct, which can range from a resubmission of work to a failing grade to permanent expulsion from the university. A lack of familiarity with these regulations on academic conduct does not constitute a defense against its application. This information can be found at https://usgc.ontariotechu.ca/policy/policy-library/policies/academic/academic-integrity-policy.php

Extra support services are available to all Ontario Tech University students in academic development, study skills, counseling, and peer mentorship. More information on student support services can be found at https://studentlife.ontariotechu.ca/services/academic-support/index.php

17. Turnitin (if applicable)

Ontario Tech University and faculty members reserve the right to use electronic means to detect and help prevent plagiarism. Students agree that by taking this course all assignments are subject to submission for textual similarity review by Turnitin.com. Assignments submitted to Turnitin.com will be included as source documents in Turnitin.com's restricted access database solely for the purpose of detecting plagiarism in such documents. The instructor may require students to submit their assignments electronically to Turnitin.com or the instructor may submit questionable text on behalf of a student. The terms that apply to Ontario Tech University's use of the Turnitin.com service are described on the Turnitin.com website.

Students who do not wish to have their work submitted to Turnitin.com must provide with their assignment at the time of submission to the instructor a signed Turnitin.com Assignment Cover sheet: https://tlc.ontariotechu.ca/learning-technology/assignment-cover-sheet_updatedmay2021-1.pdf

18. Online Test and Exam Proctoring (Virtual Proctoring)

Ontario Tech University will conduct virtual monitoring of examinations in accordance with Ontario privacy legislation and all approved policy instruments.

19. Final Examinations

Final examinations are held during the final examination period at the end of the semester and **when on campus access is allowed,** may take place in a different room and on a different day from the regularly scheduled class. Check the published Examination Schedule for a complete list of days and times.

Students are required to show their Student ID card (campus ID) when **in-person examinations are allowed.** Students are advised to obtain their Student ID Card well in advance of the examination period as they will not be able to write their examinations without it. More information on ID cards can be found at https://registrar.ontariotechu.ca/campus-id/index.php.

Students who are unable to write a final examination when scheduled due to religious publications may make arrangements to write a deferred examination. These students are required to submit a Request for Accommodation for Religious Obligations to the Faculty concerned as soon as possible and no later than three weeks prior to the first day of the final examination period.

Further information on final examinations can be found at https://usgc.ontariotechu.ca/policy/policy-library/policies/academic/procedures-for-final-examination-administration.php

20. Freedom of Information and Protection of Privacy Act

The following is an important notice regarding the process for submitting course assignments, quizzes, and other evaluative material in your courses in the Faculty of Health Sciences.

Ontario Tech University is governed by the Freedom of Information and Protection of Privacy Act ("FIPPA"). In addition to providing a mechanism for requesting records held by the university, this

legislation also requires that the University not disclose the personal information of its students without their consent.

FIPPA's definition of "personal information" includes, among other things, documents that contain both your name and your Banner (student) ID. For example, this could include graded test papers or assignments. To ensure that your rights to privacy are protected, the Faculty of Health Sciences encourages you to use only your Banner ID on assignments or test papers being submitted for grading. This policy is intended to prevent the inadvertent disclosure of your information where graded papers are returned to groups of students at the same time. If you still wish to write both your name and your Banner ID on your tests and assignments, please be advised that Ontario Tech University will interpret this as an implied consent to the disclosure of your personal information in the normal course of returning graded materials to students.

If you have any questions or concerns relating to the new policy or the issue of implied consent addressed above, please contact accessandprivacy@ontariotechu.ca

Notice of Collection and Use of Personal Information
Throughout this course, personal information may be collected through the use of certain technologies under the authority of the *University of Ontario Institute of Technology Act, SO 2002, c. 8, Sch. O.* and will be collected, protected, used, disclosed and retained in compliance with Ontario's *Freedom of Information and Protection of Privacy Act R.S.O. 1990, c. F.31.*

This course will use the following technologies that may collect, use, disclose and retain personal information (including images) for the purposes described below:

- Google Meet and Kaltura Virtual Classroom to facilitate remote instruction and interactive learning;
- Peer-shared applications, services or technologies that may be reviewed, assessed, or used as part of coursework.
- Other applications, services, or technologies that support or enhance online learning that include, but are not limited to, the following: [Instructor to list all relevant components].

For more information relating to these technologies, we encourage you to visit: https://tlc.ontariotechu.ca/learning-technology/index.php Questions regarding personal information may be directed to: Ontario Tech University Access and Privacy Office, 2000 Simcoe Street North, Oshawa, ON L1G 0C5, email: accessandprivacy@ontariotechu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand, and agree to the terms and conditions under which the technology provider(s) may collect, use, disclose and retain your personal information. You agree to the university using the technologies and using your personal information for the purposes described in this course outline.

21. Human Rights and Respect

Ontario Tech University is committed to providing a campus environment in which all University Members are treated with dignity and to fostering a climate of understanding and mutual respect. The University will not tolerate, ignore or condone Discrimination or Harassment by or against anyone. Examples of Harassing behaviour include, but are not limited to; bullying, taunting or mocking someone's race or creed, ridiculing an individual's disability, or targeting individuals with unwanted sexual or negative stereotypical comments about one's sex, gender, sexual orientation, gender identity and/or gender expression. Pursuant to Ontario Tech's Respectful Campus Policy, students are reminded of their role in ensuring a

campus environment that is equitable and inclusive. Requirements to refrain from harassment and discrimination apply broadly to the classroom, including in lectures, labs and practicums, as well as through the use of sanctioned and unsanctioned technological tools that facilitate remote learning, e.g. class and other chat functions, video conferencing, electronic mail and texts, and social media content amongst or about University students, faculty and staff.

22. Freedom of Expression

Pursuant to Ontario Tech's Freedom of Expression Policy, all students are encouraged to express ideas and perspectives freely and respectfully in university space and in the online university environment, subject to certain limitations. Students are reminded that the limits on Freedom of Expression include speech or behaviour that: is illegal or interferes with the university's legal obligations; defames an individual or group; constitutes a threat, harassment or discrimination; is a breach of fiduciary, contractual, privacy or confidentiality obligations or commitments; and unduly disrupts and interferes with the functioning of the university. In the context of working online, different forms of communication are used. Where permitted, students using "chat" functions or other online forms of communication are encouraged to ensure that their communication complies with the Freedom of Expression Policy.

23. Copyright Notice

All teaching materials provided by the instructor throughout the course, including, but not limited to, in whole or in part, recorded lectures, slides, videos, diagrams, case studies, assignments, quizzes, and examinations are subject to the Copyright Act, R.S.C., 1985, c. C-42. Teaching materials are owned by the faculty member, instructor or other third party who creates such works. The copyright owner(s) reserves all intellectual property rights in and to the teaching materials, including the sole right to copy, reproduce, distribute, and modify the teaching materials. Consistent with the university's Intellectual Property Policy, teaching materials are intended only for the educational use of Ontario Tech University students registered in the course that is the subject of this course outline. Any distribution or publishing of this material (e.g. uploading material to a third-party website) is strictly prohibited under the law unless the student has obtained the copyright owner's prior written consent. Any violation of copyright law or the Intellectual Property Policy, if proven, may be subject to sanction as academic misconduct, and/or under the Student Conduct Policy.

24. Student Course Feedback Surveys

Student evaluation of teaching is a highly valued and helpful mechanism for monitoring the quality of Ontario Tech University's programs and instructional effectiveness. To that end, course evaluations are administered by an external company in an online, anonymous process during the last few weeks of classes. Students are encouraged to participate actively in this process and will be notified of the dates. Notifications about course evaluations will be sent via e-mail, and posted on Canvas, Weekly News, and signage around the campus.

University Response to COVID-19

The government response to the COVID-19 pandemic is continually evolving. As new information becomes available from federal and provincial public health authorities, the Province of Ontario and the Regional Municipality of Durham, Ontario Tech University will remain nimble and prepared to respond to government orders, directives, guidelines and changes in legislation to ensure the health and safety of all members of its campus community. In accordance with public health recommendations, the university may need to adjust the delivery of course instruction and the availability and delivery mode of campus services and co-curricular opportunities. Ontario Tech University appreciates the understanding and

flexibility of our students, faculty and staff as we continue to navigate the pandemic and work together to demonstrate our strong commitment to academic, research and service excellence during these challenging and unprecedented times.

The Accessibility for Ontarians with Disabilities Act (AODA) standards have been considered in the development of this model course template and it adheres to the principles outlined in the University's Accessibility Policy.

Faculty of Health Sciences

HLSC 3820U: Public Health I

Course Outline for Fall 2021

1. Course Details & Important Dates*

Term	Course Type	Day	Time
F	Synchronous	Tuesday	8:10-9:30 a.m.

Location	CRN #	Classes Start	Classes End	Final Exam Period
UA 1350	43649	September 7	December 6	No Final Exam

* Visit https://ontariotechu.ca/current-students/academics/important-dates-and-deadlines.php for other dates

2. Instructor Contact Information

Instructor Name	Office	Phone	Email
Milly Ryan-Harshman, PhD			
Office Hours: TBD			

Laboratory/Teaching Assistant Name	Office	Phone	Email
Office Hours:			

3. Course Description

Public health is a holistic and evidence-informed discipline that seeks to promote, maintain and/or restore the health and well-being of individuals, families, communities or entire populations over the lifespan through primary health care initiatives and interventions. This course provides an overview of the primary health care approach in Canada and introduces students to current public health theory, practice mandates and challenges facing public health in Canada. An overview of the 36 core competencies deemed essential as outlined by the Public Health Agency of Canada (PHAC, 2007) will be highlighted. Additionally, the role of health care professionals and public health workers in achieving the major goal of primary health care in Canada to build community capacity with the objective of achieving sustainable health and well-being through primary health care initiatives will be critically examined.

4. Learning Outcomes

On the successful completion of the course, students will be able to:

- Distinguish between the five levels of prevention (primordial, primary, secondary, tertiary, quaternary) and apply associated public health approaches to illustrate and critically evaluate the effectiveness of various local, regional, national and international public health initiatives, health promotion programs, and/or policies;

- Critically examine physical, biochemical, socio-political, cultural, spiritual and environmental factors that can both negatively and positively affect individuals, families, groups or entire communities;

- Describe and examine the strengths and limitations of the 15 social determinants from a public health perspective;

- Describe the importance and critically examine local, regional, national and international communicable and non-communicable disease tracking and surveillance public health systems;

- Describe and apply various population-based measures of health burden and how they are utilized to examine the impact and effectiveness of public health initiatives and programs in Canada and globally;

- Describe the role of public health professionals and workers in maintaining, achieving, restoring and promoting health and well-being across the lifespan, including vulnerable populations (e.g., Indigenous people, new immigrants, homeless, elderly);

- Critically examine and evaluate a variety of current and emerging public health issues and challenges facing Canadians across the lifespan in the new millennium, and

- Design and apply principles of public health theory and practice to plan for and/or address an actual or emerging public health concern in Canada.

5. Course Design

This course is a hybrid course (1.5 h in class and 1.5 h online (asynchronous) content. It's design reflects a commitment to the principles of adult education, including the concept of "learner centeredness" (i.e., maximizing instructional flexibility and accessibility while placing increased responsibility for learning on the learner). The use of audio-visual classroom solutions which permit synchronous participation by both classroom and remote students may be utilized.

Other weekly material may be provided in the form of recorded lectures and videos. Students are expected to read or review all posted materials thoroughly to provide the foundation for student learning of practical knowledge and understanding of public health.

6. Outline of Topics in the Course

Week	Dates	Topics	Notes
1	Sep 7	Module 1: Foundations and Essential Concepts for Public Health	
2	Sep 14	Module 2: Defining Health	

3	Sep 21	Module 3: Medicare in Canada	Test #1, Modules 1-3 Due Date: Sep 28
4	Sep 28	Module 4: Indigenous Health Part I	DB #1 TRC and Health Due Date: Oct 5
5	Oct 5	Module 4: Indigenous Health Part II	*Fall Break: Oct 11-17* Test #2, Module 4 Due Date: Oct 19
6	Oct 19	Module 5: Public Health Research Part I	
7	Oct 26	Module 5: Public Health Research Part II	DB #2 Public Health Research: Outcomes and Challenges Due Nov 2
8	Nov 2	Module 6: Public Health Epidemiology I	
9	Nov 9	Module 6: Public Health Epidemiology II	Test #3, Modules 5 & 6 Due Date: Nov 16
10	Nov 16	Module 7: Human Responses to Disease, Illness, and Sickness Part I	DB #3 Human Responses to Health Setbacks Due Nov 23
11	Nov 23	Module 7: Human Responses to Disease, Illness, and Sickness Part II	Test #4, Module 7 Due Date: Nov 30
12	Nov 30	*No New Material*	

7. Required Texts/Readings

Publication Manual of the American Psychological Association, (2020), 7th Edition. ISBN: 9781433832161

Additional readings will be assigned or recommended during the course.

8. Evaluation Method

Assessment	Percent of Course Grade	Due Date
Test #1 (Modules 1-3)	20	September 28 @ 11:59 p.m.
Test #2 (Module 4)	15	October 19 @ 11:59 p.m.
Test #3 (Modules 5 & 6)	20	November 16 @ 11:59 p.m.
Test #4 (Module 7)	15	November 30 @ 11:59 p.m.
Discussion Boards	15 (3 X 5% each)	October 5, November 2, 23 @ 11:59 p.m.
Comparative Analysis	15	December 6 @ 11:59 p.m.

Final course grades may be adjusted to conform to program or Faculty grade distribution profiles. Further information on grading can be found at:
http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Grading

9. Assignments and Tests

This course consists of 4 tests (delivered online), 3 discussion board posts, and one comparative analysis assignment. Additional details can be found in Canvas. The tests primarily measure knowledge and understanding while the discussion boards and assignments primarily measure application and critical thinking skills.

10. Technology Requirements and Learning Management System Information

Ontario Tech uses *Canvas*™ as its learning management system (LMS). Access to the LMS is limited to students formally registered in courses. That access is for the duration of the semester **and for an additional 120 days once the semester is over**. Students are strongly encouraged to download any/all relevant course material during that access period. Any requests for access post this period must be made in writing to the instructor/faculty member responsible for the course.

To support online learning, the university recommends certain technology requirements for laptops, software and internet connectivity which are available at: https://itsc.ontariotechu.ca/remote-learning.php.

Students experiencing technical difficulties such that they are unable to meet the technology requirements may contact the IT Service Help Desk at: servicedesk@dc-uoit.ca
Students experiencing financial difficulties such that they are unable to meet the technology requirements may contact Student Awards and Financial Aid Office at: connect@ontariotehu.ca

By remaining enrolled in this course, you acknowledge that you have read, understand and agree to observe the Recommended Technology Requirements for accessing university online learning resources, including those minimum requirements that are specific to your faculty and program.

11. Sensitive/Offensive Subject Matter

The classroom (both physical and virtual) is intended to provide a safe, open space for the critical and civil exchange of ideas and opinions. Some articles, media and other course materials may contain sensitive content that is offensive and/or disturbing. For example, some articles or videos may graphical depictions of violence, profanity, human anatomy, sexual acts, or matters pertaining to race, gender, or sexuality. The Course Instructor will try to identify such material and communicate warnings to students in advance of the distribution and use of such materials, affording students the choice to either emotionally prepare for, or not to view or interact with, the content.

12. Student Support

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact studentlife@ontariotechu.ca for support. Furthermore, please notify your professor if you are comfortable in doing so. This will enable them to provide any resources and help that they can.

13. Sexual Violence Support and Education

Ontario Tech is committed to the prevention of sexual violence in all is forms. For any student who has experienced Sexual Violence, Ontario Tech can help. We will make accommodations to cater to the diverse backgrounds, cultures, and identities of students when dealing with individual cases.

If you think you have been subjected to or witnessed sexual violence:

- Reach out to a Support Worker, a specially trained individual authorized to receive confidential disclosures about incidents of sexual violence. Support Workers can offer help and resolution options which can include safety plans, accommodations, mental health support, and more. To make an appointment with a Support Worker, call 905.721.3392 or email studentlife@ontariotechu.ca
- Learn more about your options at: https://studentlife.ontariotechu.ca/sexualviolence/

14. Students with Disabilities

Accommodating students with disabilities at Ontario Tech is a responsibility shared among various partners: the students themselves, SAS staff and faculty members. To ensure that disability-related concerns are properly addressed during this course, students with documented disabilities and who may require assistance to participate in this class are encouraged to speak with me as soon as possible. **Students who suspect they have a disability that may affect their participation in this course are advised to go to Student Accessibility Services (SAS) as soon as possible.** Maintaining communication and working collaboratively with SAS and faculty members will ensure you have the greatest chance of academic success.

When on campus access is allowed, students taking courses on north Oshawa campus can visit Student Accessibility Services in the Student Life Building, U5, East HUB (located in the Founders North parking lot). Students taking courses on the **downtown Oshawa campus** can visit Student Accessibility Services in the 61 Charles St. Building, 2nd Floor, Room DTA 225 in the Student Life Suite.

Disability-related and accommodation support is available for students with mental health, physical, mobility, sensory, medical, cognitive, or learning challenges. Office hours are 8:30am-4:30pm, Monday to Friday, closed Wednesday's 8:30am – 10:00am. For more information on services provided, you can visit the SAS website at https://studentlife.ontariotechu.ca/services/accessibility/index.php. Students may contact Student Accessibility Services by calling 905-721-3266, or email studentaccessibility@ontariotechu.ca.

When on campus access is allowed, students who require the use of the Test Centre to write tests, midterms, or quizzes MUST register online using the SAS test/exam sign-up module, found here https://disabilityservices.ontariotechu.ca/uoitclockwork/custom/misc/home.aspx. Students must sign up for tests, midterms, or quizzes AT LEAST seven (7) days before the date of the test.

Students must register for final exams by the registration deadline, which is typically two (2) weeks prior to the start of the final examination period. SAS will notify students of the registration deadline date.

15. Professional Suitability (if applicable)

Students in programs leading to professional certification must demonstrate behaviour appropriate to practice in those professions. Where a dean determines that behaviour inconsistent with the norms and expectations of the profession has been exhibited by a student, that student may be immediately withdrawn from the program by the dean or subject to one or more of the sanctions (described in Section 5.15.3). A student

demonstrating professional unsuitability may be immediately suspended from any practicum, field work or similar activity at the discretion of the dean pending a final decision. The *Professional Suitability* policy can be found at https://usgc.ontariotechu.ca/policy/policy-library/policies/academic/academic-conduct-and-professional-suitability-policy.php and the related procedures are hosted at https://usgc.ontariotechu.ca/policy/policy-library/policies/academic-misconduct-and-professional-unsuitability.php

16. Academic Integrity

Students and faculty at Ontario Tech University share an important responsibility to maintain the integrity of the teaching and learning relationship. This relationship is characterized by honesty, fairness and mutual respect for the aim and principles of the pursuit of education. Academic misconduct impedes the activities of the university community and is punishable by appropriate disciplinary action.

Students are expected to be familiar with and abide by Ontario Tech University's regulations on Academic Conduct which sets out the kinds of actions that constitute academic misconduct, including plagiarism, copying or allowing one's own work to copied, use of unauthorized aids in examinations and tests, submitting work prepared in collaboration with another student when such collaboration has not been authorized, among other academic offences. The regulations also describe the procedures for dealing with allegations, and the sanctions for any finding of academic misconduct, which can range from a resubmission of work to a failing grade to permanent expulsion from the university. A lack of familiarity with these regulations on academic conduct does not constitute a defense against its application. This information can be found at https://usgc.ontariotechu.ca/policy/policy-library/policies/academic/academic-integrity-policy.php

Extra support services are available to all Ontario Tech University students in academic development, study skills, counseling, and peer mentorship. More information on student support services can be found at https://studentlife.ontariotechu.ca/services/academic-support/index.php

17. Turnitin (if applicable)

Ontario Tech University and faculty members reserve the right to use electronic means to detect and help prevent plagiarism. Students agree that by taking this course all assignments are subject to submission for textual similarity review by Turnitin.com. Assignments submitted to Turnitin.com will be included as source documents in Turnitin.com's restricted access database solely for the purpose of detecting plagiarism in such documents. The instructor may require students to submit their assignments electronically to Turnitin.com or the instructor may submit questionable text on behalf of a student. The terms that apply to Ontario Tech University's use of the Turnitin.com service are described on the Turnitin.com website.

Students who do not wish to have their work submitted to Turnitin.com must provide with their assignment at the time of submission to the instructor a signed Turnitin.com Assignment Cover sheet: https://tlc.ontariotechu.ca/learning-technology/assignment-cover-sheet_updatedmay2021-1.pdf

18. Online Test and Exam Proctoring (Virtual Proctoring)

Ontario Tech University will conduct virtual monitoring of examinations in accordance with Ontario privacy legislation and all approved policy instruments.

19. Final Examinations (if applicable)

Final examinations are held during the final examination period at the end of the semester and **when on campus access is allowed,** may take place in a different room and on a different day

from the regularly scheduled class. Check the published Examination Schedule for a complete list of days and times.

Students are required to show their Student ID card (campus ID) when **in-person examinations are allowed.** Students are advised to obtain their Student ID Card well in advance of the examination period as they will not be able to write their examinations without it. More information on ID cards can be found at https://registrar.ontariotechu.ca/campus-id/index.php.

Students who are unable to write a final examination when scheduled due to religious publications may make arrangements to write a deferred examination. These students are required to submit a Request for Accommodation for Religious Obligations to the Faculty concerned as soon as possible and no later than three weeks prior to the first day of the final examination period.

Further information on final examinations can be found at https://usgc.ontariotechu.ca/policy/policy-library/policies/academic/procedures-for-final-examination-administration.php

20. Freedom of Information and Protection of Privacy Act

The following is an important notice regarding the process for submitting course assignments, quizzes, and other evaluative material in your courses in the Faculty of Health Sciences.

Ontario Tech University is governed by the Freedom of Information and Protection of Privacy Act ("FIPPA"). In addition to providing a mechanism for requesting records held by the university, this legislation also requires that the University not disclose the personal information of its students without their consent.

FIPPA's definition of "personal information" includes, among other things, documents that contain both your name and your Banner (student) ID. For example, this could include graded test papers or assignments. To ensure that your rights to privacy are protected, the Faculty of Health Sciences encourages you to use only your Banner ID on assignments or test papers being submitted for grading. This policy is intended to prevent the inadvertent disclosure of your information where graded papers are returned to groups of students at the same time. If you still wish to write both your name and your Banner ID on your tests and assignments, please be advised that Ontario Tech University will interpret this as an implied consent to the disclosure of your personal information in the normal course of returning graded materials to students.

If you have any questions or concerns relating to the new policy or the issue of implied consent addressed above, please contact accessandprivacy@ontariotechu.ca

Notice of Collection and Use of Personal Information
Throughout this course, personal information may be collected through the use of certain technologies under the authority of the *University of Ontario Institute of Technology Act, SO 2002, c. 8, Sch. O.* and will be collected, protected, used, disclosed and retained in compliance with Ontario's *Freedom of Information and Protection of Privacy Act R.S.O. 1990, c. F.31.*

This course will use the following technologies that may collect, use, disclose and retain personal information (including images) for the purposes described below:

- Respondus Monitor and Proctortrack to maintain academic integrity for examinations;
- Google Meet and Kaltura Virtual Classroom to facilitate remote instruction and interactive learning;
- Peer-shared applications, services or technologies that may be reviewed, assessed, or used as part of coursework.

- Other applications, services, or technologies that support or enhance online learning.

For more information relating to these technologies, we encourage you to visit: https://tlc.ontariotechu.ca/learning-technology/index.php Questions regarding personal information may be directed to: Ontario Tech University Access and Privacy Office, 2000 Simcoe Street North, Oshawa, ON L1G 0C5, email: accessandprivacy@ontariotechu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand, and agree to the terms and conditions under which the technology provider(s) may collect, use, disclose and retain your personal information. You agree to the university using the technologies and using your personal information for the purposes described in this course outline.

21. Human Rights and Respect

Ontario Tech University is committed to providing a campus environment in which all University Members are treated with dignity and to fostering a climate of understanding and mutual respect. The University will not tolerate, ignore or condone Discrimination or Harassment by or against anyone. Examples of Harassing behavior include, but are not limited to; bullying, taunting or mocking someone's race or creed, ridiculing an individual's disability, or targeting individuals with unwanted sexual or negative stereotypical comments about one's sex, gender, sexual orientation, gender identity and/or gender expression. Pursuant to Ontario Tech's Respectful Campus Policy, students are reminded of their role in ensuring a campus environment that is equitable and inclusive. Requirements to refrain from harassment and discrimination apply broadly to the classroom, including in lectures, labs and practicums, as well as through the use of sanctioned and unsanctioned technological tools that facilitate remote learning, e.g. class and other chat functions, video conferencing, electronic mail and texts, and social media content amongst or about University students, faculty and staff.

22. Freedom of Expression

Pursuant to Ontario Tech's Freedom of Expression Policy, all students are encouraged to express ideas and perspectives freely and respectfully in university space and in the online university environment, subject to certain limitations. Students are reminded that the limits on Freedom of Expression include speech or behaviour that: is illegal or interferes with the university's legal obligations; defames an individual or group; constitutes a threat, harassment or discrimination; is a breach of fiduciary, contractual, privacy or confidentiality obligations or commitments; and unduly disrupts and interferes with the functioning of the university. In the context of working online, different forms of communication are used. Where permitted, students using "chat" functions or other online forms of communication are encouraged to ensure that their communication complies with the Freedom of Expression Policy.

23. Copyright Notice

All teaching materials provided by the instructor throughout the course, including, but not limited to, in whole or in part, recorded lectures, slides, videos, diagrams, case studies, assignments, quizzes, and examinations are subject to the Copyright Act, R.S.C., 1985, c. C-42. Teaching materials are owned by the faculty member, instructor or other third party who creates such works. The copyright owner(s) reserves all intellectual property rights in and to the teaching materials, including the sole right to copy, reproduce, distribute, and modify the teaching materials. Consistent with the university's Intellectual Property Policy, teaching materials are intended only for the educational use of Ontario Tech University students registered in the course that is the subject of this course outline. Any distribution or publishing of this material (e.g. uploading material to a third-party website) is strictly prohibited under the law unless the student has obtained the copyright owner's prior written

consent. Any violation of copyright law or the Intellectual Property Policy, if proven, may be subject to sanction as academic misconduct, and/or under the Student Conduct Policy.

24. Student Course Feedback Surveys

Student evaluation of teaching is a highly valued and helpful mechanism for monitoring the quality of Ontario Tech University's programs and instructional effectiveness. To that end, course evaluations are administered by an external company in an online, anonymous process during the last few weeks of classes. Students are encouraged to participate actively in this process and will be notified of the dates. Notifications about course evaluations will be sent via e-mail, and posted on Canvas, Weekly News, and signage around the campus.

25. University Response to COVID-19

The government response to the COVID-19 pandemic is continually evolving. As new information becomes available from federal and provincial public health authorities, the Province of Ontario and the Regional Municipality of Durham, Ontario Tech University will remain nimble and prepared to respond to government orders, directives, guidelines and changes in legislation to ensure the health and safety of all members of its campus community. In accordance with public health recommendations, the university may need to adjust the delivery of course instruction and the availability and delivery mode of campus services and co-curricular opportunities. Ontario Tech University appreciates the understanding and flexibility of our students, faculty and staff as we continue to navigate the pandemic and work together to demonstrate our strong commitment to academic, research and service excellence during these challenging and unprecedented times.

The Accessibility for Ontarians with Disabilities Act (AODA) standards have been considered in the development of this model course template and it adheres to the principles outlined in the University's Accessibility Policy.

FACULTY OF SOCIAL SCIENCE & HUMANITIES

INDG 2000U: INTRODUCTION TO INDIGENOUS STUDIES COURSE OUTLINE FOR WINTER 2022

Ontario Tech University acknowledges the lands and people of the Mississaugas of Scugog Island First Nation. We are thankful to be welcomed on these lands in friendship. The lands we are situated on are covered under the Williams Treaties and the traditional territory of the Mississaugas, a branch of the greater Anishinaabeg Nation, including Algonquin, Ojibway, Odawa, and Pottawatomi. These lands remain home to several Indigenous nations and people.

Course Details

The delivery schedule for this course is currently online synchronous. Lectures will be delivered online per the meeting schedule. Please note that, in keeping with current circumstances, the course delivery may change as determined by the Faculty or Department.

Term	Course Type	Day	Time	Location
W	WEB – synchronous	Tuesday	2:10 – 5:00 pm	Online via Google Meet

CRN#	Classes Start	Classes End	Final Exam Period
74595	January 18, 2022	April 12, 2022	2:10 – 5:00 pm

Instructor Contact Information

Instructor Name	Office Hours	Email	Phone
Malinda Gray	By Appt.	Malinda.Gray@ontariotechu.net	705-957-1873 (Call/Text)

Course Description

The course will address the history and legacies of residential schools, perspectives on treaties, and the impacts of the Indian Act and 'Indian policy' on Indigenous peoples; promote critical reflection on the experiences of Indigenous peoples in Canada, and challenge students to appreciate Indigenous ways of knowing. Demonstrating a local focus but fanning out to recognize how colonialism has displaced people and displaced their sense of identity, the course will take past,

present and future relationships to the land on which Ontario Tech stands as the departure point for inquiry and instruction. The course incorporates Indigenous pedagogies, experiential and self-reflexive learning, and anti-racist approaches to foster the development of respectful relationships and reconciliation between Indigenous and non-Indigenous peoples, both at Ontario Tech and in students' future careers.

Course Design

This course is designed to develop the student's ability to critically reflect on their learning journey. Using an Indigenous pedagogy, the course material will incorporate experiential and theoretical learning opportunities. A critical element of this will be to engage in the subjective reflections as a way of helping students shift from a Western to an Indigenist lens. Attendance in class is highly encouraged to allow students to get the most from the course.

Learning Outcomes

- ✓ Discuss the history of residential schools and their ongoing legacies.
- ✓ Compare Indigenous and Canadian perspectives on treaty-making.
- ✓ Describe key impacts of the Indian Act and Canadian 'Indian policy' on Indigenous peoples.
- ✓ Demonstrate ability to think critically about historical and ongoing colonialism.
- ✓ Explain reconciliation and how they can contribute to reconciliation in their own lives.
- ✓ Use anti-racist, anti-oppressive, and decolonizing approaches to building new relations between Indigenous and non-Indigenous peoples.
- ✓ Demonstrate ability to learn through Indigenous pedagogies.
- ✓ Demonstrate ability to learn through self-reflection and written and oral self-expression.

Course Topic Outline

Date	Course Media	Lecture Topic
January 18	Syllabus	Terra Nullius
January 25	King/Reid	Doctrine of Discovery
February 1	Sanchez/Tuck & Yang	Settler Colonialism
February 8	Little Bear/CBC Docs	Intersection of Values
Study Break		
February 22	Black Elk/Taylor	Relationship w/Land
March 1	Weaver-Hightower/Heath-Rawlings	Settler Guilt
March 8	Partridge/TytonSound	Residential Schools
March 15	Regan/TRC	TRC
March 22	Manuel & Derrickson/UNDRIP	UNDRIP
March 29	Balkisson & Sung/Palmater	Identity
April 5	Tucker/REACT	Media
April 12	Morcom & Freeman/Mosby-Tyler	Allyship/Advocacy

Trigger Warning/Sensitive Content

The following media includes a discussion of the harsh treatment experienced by First Nations/Indigenous/Métis people. This content is disturbing, so I encourage everyone to prepare themselves emotionally before proceeding. Violence, sexual content, blatant racism, and war

experiences are prevalent. As the instructor, I will not always be able to warn about uncomfortable content but understand if students need to discuss course difficulties due to lived experiences. By viewing and/or interacting with the content you acknowledge and agree that you decide to view and interact with the content and to take the risk that you will experience a negative emotional response or reaction to the nature of the content

Course Materials

Please read/watch/listen BEFORE class. All materials/links posted on Canvas.

Balkissoon, D., & Sung, H. (2016, September 7). *Colour Code, Episode 1: "Race Card"*. (The Globe and Mail) Retrieved from YouTube: https://www.youtube.com/watch?v=5EqYtgRh7vs

Black Elk, L. (2016). Native Science: Understanding and Respecting Other Ways of Thinking. *Rangelands, 38*(1), 3-4.

Derrickson, G. C., & Manuel, A. (2015). The Fourth World: A Global Movement. In *Unsettling Canada: A National Wake-Up Call* (pp. 127-136). Toronto: Between the Lines.

Docs, C. (2021, May 19). *The power of a tree: why birch and its bark are so important to Anishinaabe culture: Wiigwaasabak*. Retrieved from YouTube: https://www.youtube.com/watch?v=mQE4g35nRRk

Heath-Rawlings, J. (2021, September 30). *How do we move past guilt and towards action on reconciliation?* Retrieved from The Big Story: https://thebigstorypodcast.ca/2021/09/30/3940/

King, T. (2003, November). *CBC Radio.* Retrieved from The 2003 CBC Massey Lectures, "The Truth about Stories: A Native Narrative" Part 5: https://www.cbc.ca/radio/ideas/the-2003-cbc-massey-lectures-the-truth-about-stories-a-native-narrative-1.2946870

Little Bear, L. (2012). Traditional Knowledge and Humanities: A Persptective by a Blackfoot. *Journal of Chinese Philosophy, 39*(4), 518-27.

Morcom, L., & Freeman, K. (2018). Niinwi - Kiinwa - Kiinwi: Building Non-Indigenous Allies in Education through Indigenous Pedagogy. *Canadian Journal of Education / Revue canadienne de l'éducation, 41*(3), 808-33.

Mosby-Tyler, D. (2019). *Want a more just world? Be an unlikely ally.* (Ted Talks) Retrieved from Ted.com: https://www.ted.com/talks/dwinita_mosby_tyler_want_a_more_just_world_be_an_unlikely_ally?language=en

Palmater, P. (2014). The Right to Belong: Charter Equality for Indigenous Peoples. In *Beyond Blood: Rethinking Indigenous Identity* (pp. 104-147). Vancouver: UBC Press.

Partridge, C. (2010). Residential Schools: The Intergenerational Impacts on Aboriginal Peoples. *Native Social Work Journal, 7*, 33-62.

REACT. (2019, Octobe 14). *Indigenous People React to Indigenous Representation in Film and TV (Pocahontas, The Long Ranger)*. Retrieved from YouTube: https://www.youtube.com/watch?v=7ZkyL5pn74E

Regan, P. (2011). Deconstructing Canada's Peacemaker Myth. In *Unsettling the Settler Within: Indian Residential Schools, Truth Telling, and Reconciliation in Canada* (pp. 83-110). Vancouver: UBC Press.

Reid, J. (2010). The Doctrine of Discovery and Canadian Law. *The Canadian Journal of Native Studies, 30*(2), 335-339.

Sanchez, N. (2019). *TEDx Talks.* (TEDxSFU) Retrieved from YouTube: https://www.youtube.com/watch?v=QP9x1NnCWNY

Taylor, D. H. (2020). *"Cottagers & Indians" fight over wild rice and water rights.* (CBC Docs POV) Retrieved from YouTube: https://www.youtube.com/watch?v=p9k42UkDvxc

Truth and Reconciliation Commission of Canada. (2015). *Truth and Reconciliation Commission of Canada: Calls to Action.* Retrieved from Government of British Columbia: https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/indigenous-people/aboriginal-peoples-documents/calls_to_action_english2.pdf

Tuck, E., & Yang, K. W. (2012). Decolonization is not a metaphor. *Decolonization: Indigeneity, Education & Society., 1*(1), 1-40.

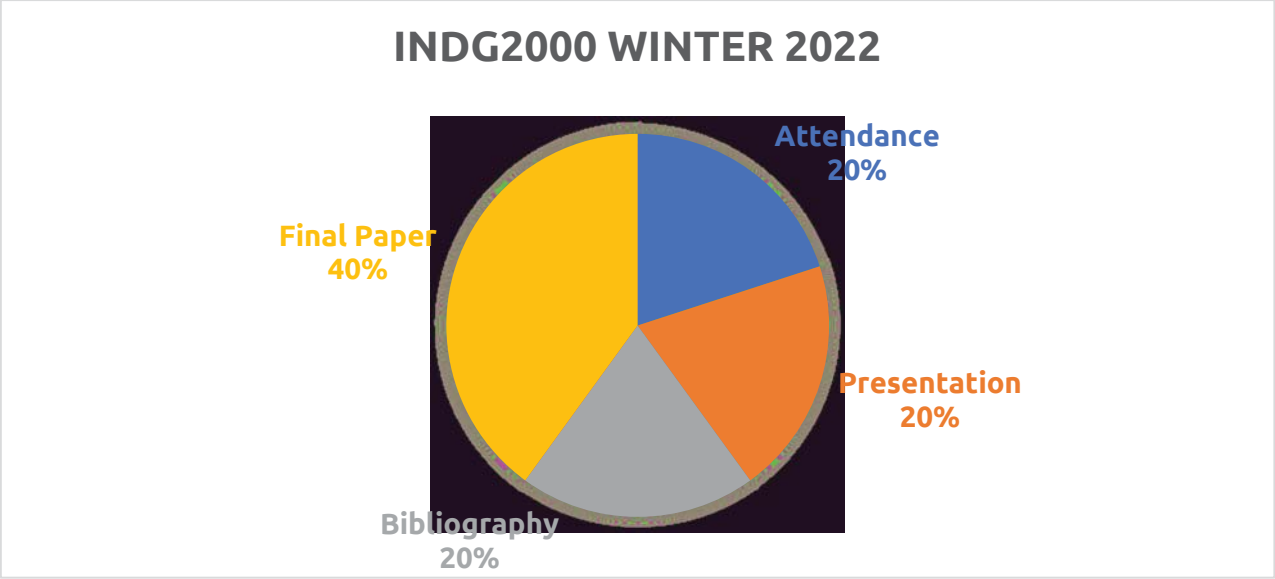
Tucker, A. (2016). Media and the Perpetuation of Western Bias: Deviations of Ideality. *Institute for Community Prosperity*, 2-20.

TytonSound. (2016, October 25). *Wawahte: Stories of Residential School Survivors.* Retrieved from YouTube: https://www.youtube.com/watch?v=oGrJNUCQ-r4

United Nations. (2007, September 13). *United Nations Declaration on the Rights of Indigenous Peoples.* Retrieved from Department of Economic and Social Affairs: Indigenous Peoples: https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf

Weaver-Hightower, R. (2017). "Do We Reverse the Medal?": Settler Guilt, the Indian Speech, and the Untold Side of the. *Western American Literature, 52*(1), 25-53.

Course Evaluation



Final course grades may be adjusted to conform to program or Faculty grade distribution profiles. Further information on grading can be found at: https://calendar.ontariotechu.ca/content.php?catoid=55&navoid=2422#grading-and-academic-standing.

Assignments

Syllabus Quiz = 5 bonus points

- Due by February 28, 2022
- Posted on Canvas.

Participation/Attendance = 20 points

- Student attendees will receive two (2) points per lecture x 10 sessions.
- Students are allowed two (2) absences without explanation. No deductions in points until the third absence.
- Perfect attendance will receive four (4) bonus points.
- If further absences are necessary, students will be excused if the instructor is emailed one (1) week before class.
- Excused absences may be given one point which will be determined by the instructor. No communication = zero (0) points.

Treaty Presentation = 20 points

- Due by February 22, 2022
- Each student (or group) will pick one treaty to discuss and unpack from the Government of Canada's Treaties and Agreements website:
    - https://www.rcaanc-cirnac.gc.ca/eng/1100100028574/1529354437231
    - Infographic: https://www.rcaanc-cirnac.gc.ca/eng/1380223988016/1544125243779
- You are not limited to these websites, some treaties pre-date the Canadian government. Groups (up to three students) are welcome.
- There will be a sign-up sheet on Canvas. This is a first come, first-serve basis as no treaties should be duplicated.
- For example, if a classmate/group picks the traditional territory of the Michi Saagig peoples, covered by Treaty #20, please pick another treaty.
- The video should be between 9-11 minutes.
    - Do NOT include any outside videos to fill the time.
- A minimum of five academic sources and five visual images are required.
- All sources and images must be cited per APA (6th or 7th edition) guidelines.
- Content should include:
    - Brief background of all parties that are involved.
    - Impacts of the treaty.
    - Advantages/disadvantages of the treaty.
    - Personal interpretation on equity regarding these agreements.
- All students (including groups) must voiceover or appear in their own video.
    - Groups should divide into sections and each person must present a portion.

Annotated Bibliography = 20 points

- Due Sunday, March 27, 2022
- This is an exercise to facilitate the research of your final paper. The final paper focuses on the correlation between three of the lecture topics.
- An annotated bibliography (AB) entry consists of two items: the citation and the annotation.
- Your AB should contain 10 sources, which include five journal articles from this course, and five additional outside academic sources (journal/book).
- Each source should be formatted per APA guidelines.
- The annotation should include:
    - A summary of the source
    - The source's strengths and weaknesses
    - Its conclusions
    - Why the source is relevant to your topic(s) of your final paper.
        - Remember to explain the relevance of this article to your paper topic How will it contribute to your discussion?
- Its relationships to other sources in the AB.
    - You should tie in articles in your AB to each other (one article may support or may support another aspect of the discussion).
- Information about the author's background
    - Keep this general
- Your personal conclusions about the source
    - Explain how this source contributes to your paper's topic.
- Each annotation should be approximately 200-300 words

Example below:
Alcorta, C., & Sosis, R. (2003). Signaling, solidarity, and the sacred: The evolution of religious behavior. *Evolutionary Anthropology: Issues, News, and Reviews., 12*(6), 264-274.
Alcorta and Sosis are researchers that question the purpose of ritual within religion is so important to the evolution of human culture. By exploring the various theories that surround rituals that strengthen social solidarity, invoke sacrifices, and explain intersexual relations. Their conclusion is that more research is needed in relation to various selective pressures. This source is beneficial in that it explored all angles of religion, evolution, and human sexuality; however, it is an older source and there may be more recent articles with extensive research. I will be able to use this article because it discusses religious uses that include menstrual huts and how this religious practice ensures fertility. That article reinforces Sanderson's questions on adaptation and how fertility seems to be the main objective within religion. Their research included collecting and comparing longevity data between members of communes and the religious community. Another research program involved testing religious and secular kibbutz community members and showing how the devoutly religious tended to have a more communal tendency. At the time of publication, Richard Sosis was an assistant professor of anthropology at the University of Connecticut; Candace Alcorta is currently a doctoral student in the Department of Anthropology at the University of Connecticut. This source will benefit my paper by giving me a broader role of how religion may be instrumental in ensuring that males are in good health and confirming that females are fertile.

Final Paper = 40%

- Due date: Sunday, April 17, 2022
- This paper is in lieu of a final exam.
- Students should focus on the correlation between three of the course topics.
- Paper word count should be between 2000-3000 words, not including title page and
- references.
- Must have a minimum of five academic sources from within the course readings and an additional five academic sources not provided in class/syllabus (10
- sources total minimum). You are encouraged to use your AB for your sources, but it is not mandatory and will not be cross-referenced when marking.
- All evidence must be cited per APA (6th or 7th edition).
- Paper must be double-spaced and formatted per APA guidelines.
- Absolutely NO extensions given for this assignment.

Late Assignments:

Students are advised to use the flexibility built into their course and work within the outlined deadlines and parameters. If, due to exceptional circumstances, you are unable to complete your course work or assessment (e.g., midterm, quiz, essay) by the posted deadline, please follow the following process:

- Missed coursework worth 25 percent or less of your final grade → contact your course instructor directly, no later than 48 hours from the deadline; however, do not wait for a response to submit your work – do so as soon as possible.
- All mid-term examinations/tests or any coursework worth more than 25 percent of your final grade → submit the FSSH Academic Consideration form
- For Final Examination(s) → submit (1) the FSSH Academic Consideration form AND (2) the Request for an Examination Deferral form.

Negotiated extensions where appropriate will be determined by the professor and late penalties up to 5% per day may apply. If you are ill and already seeking medical attention you may submit medical documentation; however, medical documentation is not a requirement at this time. If extreme medical or personal circumstances require extended absence or are impacting multiple courses, please contact academic advising at sshadvising@ontariotechu.ca (or SAS, if applicable) for support related to missed work.

Email Policy

Correspondence is encouraged using the Canvas Conversations/Inbox. This allows you to send a private message within the course. You may alternately send an email using your Ontario Tech account. Please include the course code within the subject of your email. Emails from personal email accounts will not be answered. Should the syllabus answer the student's question, the email may not garner a response by the instructor. Please allow one business day (Mon – Fri) for a response. If emailing regarding your marking on an assignment, please wait 24 hours after the grade is received before contacting the instructor.

Electronics/Webcams

Please silence your cell phones before the class begins. Using other electronic devices is discouraged and may reduce your participation mark for that class. A student's webcam should

remain on for a successful online class, but it is not required. Those with concerns about attending class online should notify the instructor to discuss alternate accommodations.

Policy on Children in Class

For any students who are parents – you are welcome to bring your infant/toddler/child to class if you are nursing or your childcare arrangements have fallen through for the day. As a parent and a course instructor, I believe that if parents/guardians are present in academia, there is an expectation that children will be present in some form. Please be aware that class content or discussion may not be censored due to the presence of children.

Cancelled Classes

If a class is cancelled, students will be notified as early as possible on the day of class via the class e-mail list. Please check your email before coming to class to ensure that class has not been cancelled if winter storms are predicted. Staff will also post a note on the classroom door. Adjustments to the schedule or alternative delivery of the course materials will be made to account for any classes missed by the instructor.

Technology Requirements and Learning Management System Information

Ontario Tech uses Canvas™ as its learning management system (LMS). Access to the LMS is limited to students formally registered in courses. That access is for the duration of the semester and for an additional 120 days once the semester is over. Students are strongly encouraged to download any/all relevant course material during that access period. Any requests for access post this period must be made in writing to the instructor/faculty member responsible for the course.

To support online learning, the university recommends certain technology requirements for laptops, software and internet connectivity which are available at: https://itsc.ontariotechu.ca/remote-learning.php.

Students experiencing technical difficulties such that they are unable to meet the technology requirements may contact the IT Service Help Desk at: servicedesk@dc.uoit.ca.

Students experiencing financial difficulties such that they are unable to meet the technology requirements may contact Student Awards and Financial Aid Office at: connect@ontariotehu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand, and agree to observe the Recommended Technology Requirements for accessing university online learning resources, including those minimum requirements that are specific to your faculty and program.

Accessibility, Individual Needs, Diversity, and Inclusivity

The Faculty of Social Science and Humanities is committed to building a truly inclusive educational community where faculty, students, and staff share the responsibility for promoting the values of fairness, justice, and non-discrimination, and for ensuring myriad voices, faces, and experiences are recognized and represented. We embrace and honour the dignity of individuals and groups, and believe that diversity, in all its complex dimensions, lays the foundation for academic excellence and creative learning. The Faculty is, therefore, dedicated to creating a welcoming and supportive

campus culture and to challenging all forms of systemic discrimination experienced by historically disadvantaged groups, including but not limited to groups marked by race, ethnicity, sex, religion, age, disability, sexuality, gender identity and expression, and socioeconomic status.

Sensitive/Offensive Subject Matter

The classroom (both physical and virtual) is intended to provide a safe, open space for the critical and civil exchange of ideas and opinions. Some articles, media and other course materials may contain sensitive content that is offensive and/or disturbing. For example, some articles or videos may contain descriptions of abuse and violence against children.

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Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact studentlife@ontariotechu.ca for support. Furthermore, please notify your professor if you are comfortable in doing so. This will enable them to provide any resources and help that they can.

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If you think you have been subjected to or witnessed sexual violence:

- Reach out to a Support Worker, a specially trained individual authorized to receive confidential disclosures about incidents of sexual violence. Support Workers can offer help and resolution options which can include safety plans, accommodations, mental health support, and more.
    - To make an appointment with a Support Worker, call 905.721.3392 or email studentlife@ontariotechu.ca..
- Learn more about your options at: https://studentlife.ontariotechu.ca/sexualviolence/.

Students with Disabilities

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When on-campus access is allowed, students who require the use of the Test Centre to write tests, midterms, or quizzes MUST register online using the SAS test/exam sign-up module, found here: https://disabilityservices.ontariotechu.ca/uoitclockwork/custom/misc/home.aspx.

> Students must sign up for tests, midterms, or quizzes AT LEAST seven (7) days before the date of the test. Students must register for final exams by the registration deadline, which is typically two (2) weeks prior to the start of the final examination period. SAS will notify students of the registration deadline date.

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Extra support services are available to all Ontario Tech University students in academic development, study skills, counseling, and peer mentorship. More information on student support services can be found at: https://studentlife.ontariotechu.ca/services/academic-support/index.php.

Turnitin

Ontario Tech University and faculty members reserve the right to use electronic means to detect and help prevent plagiarism. Students agree that by taking this course all assignments are subject to submission for textual similarity review by Turnitin.com. Assignments submitted to Turnitin.com will be included as source documents in Turnitin.com's restricted access database solely for the purpose of detecting plagiarism in such documents. The instructor may require students to submit their assignments electronically to Turnitin.com or the instructor may submit questionable text on behalf of a student. The terms that apply to Ontario Tech University's use of the Turnitin.com service are described on the Turnitin.com website.

Students who do not wish to have their work submitted to Turnitin.com must provide with their assignment at the time of submission to the instructor a signed Turnitin.com Assignment Cover sheet: https://tlc.ontariotechu.ca/learning-technology/assignment-cover-sheet_updatedmay2021-1.pdf

Freedom of Information and Protection of Privacy Act

The following is an important notice regarding the process for submitting course assignments, quizzes, and other evaluative material in your courses in the Faculty of Social Sciences and Humanities.

Ontario Tech University is governed by the Freedom of Information and Protection of Privacy Act ("FIPPA"). In addition to providing a mechanism for requesting records held by the university, this legislation also requires that the University not disclose the personal information of its students without their consent.

FIPPA's definition of "personal information" includes, among other things, documents that contain both your name and your Banner (student) ID. For example, this could include graded test papers or assignments. To ensure that your rights to privacy are protected, the Faculty of Social Sciences and Humanities encourages you to use only your Banner ID on assignments or test papers being submitted for grading. This policy is intended to prevent the inadvertent disclosure of your information where graded papers are returned to groups of students at the same time. If you still wish to write both your name and your Banner ID on your tests and assignments, please be advised that Ontario Tech University will interpret this as implied consent to the disclosure of your personal information in the normal course of returning graded materials to students.

If you have any questions or concerns relating to the new policy or the issue of implied consent addressed above, please contact accessandprivacy@ontariotechu.ca.

Notice of Collection and Use of Personal Information

Throughout this course, personal information may be collected through the use of certain technologies under the authority of the University of Ontario Institute of Technology Act, SO 2002, c. 8, Sch. O. and will be collected, protected, used, disclosed and retained in compliance with Ontario's Freedom of Information and Protection of Privacy Act R.S.O. 1990, c. F.31.

This course will use the following technologies that may collect, use, disclose and retain personal information (including images) for the purposes described below:

- Google Meet to facilitate remote instruction and interactive learning:
- Peer-shared applications, services or technologies that may be reviewed, assessed, or used as part of coursework.
- Other applications, services, or technologies that support or enhance online learning that include, but are not limited to, the following: Mentimeter.

For more information relating to these technologies, we encourage you to visit: https://tlc.ontariotechu.ca/learning-technology/index.php. Questions regarding personal information may be directed to: Ontario Tech University Access and Privacy Office, 2000 Simcoe Street North, Oshawa, ON L1G 0C5, email: accessandprivacy@ontariotechu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand, and agree to the terms and conditions under which the technology provider(s) may collect, use, disclose and retain your personal information. You agree to the university using the technologies and using your personal information for the purposes described in this course outline.

Human Rights and Respect

Ontario Tech University is committed to providing a campus environment in which all University Members are treated with dignity and to fostering a climate of understanding and mutual respect. The University will not tolerate, ignore, or condone Discrimination or Harassment by or against anyone. Examples of Harassing behavior include, but are not limited to; bullying, taunting or mocking someone's race or creed, ridiculing an individual's disability, or targeting individuals with unwanted sexual or negative stereotypical comments about one's sex, gender, sexual orientation, gender identity and/or gender expression. Pursuant to Ontario Tech's Respectful Campus Policy, students are reminded of their role in ensuring a campus environment that is equitable and inclusive. Requirements to refrain from harassment and discrimination apply broadly to the classroom, including in lectures, labs and practicums, as well as through the use of sanctioned and unsanctioned technological tools that facilitate remote learning, e.g. class and other chat functions, video conferencing, electronic mail and texts, and social media content amongst or about University students, faculty and staff.

Freedom of Expression

Pursuant to Ontario Tech's Freedom of Expression Policy, all students are encouraged to express ideas and perspectives freely and respectfully in university space and in the online university environment, subject to certain limitations. Students are reminded that the limits on Freedom of Expression include speech or behavior that: is illegal or interferes with the university's legal obligations; defames an individual or group; constitutes a threat, harassment or discrimination; is a breach of fiduciary, contractual, privacy or confidentiality obligations or commitments; and unduly disrupts and interferes with the functioning of the university. In the context of working online, different forms of communication are used. Where permitted, students using "chat" functions or other online forms of communication are encouraged to ensure that their communication complies with the Freedom of Expression Policy.

Copyright Notice

All teaching materials provided by the instructor throughout the course, including, but not limited to, in whole or in part, recorded lectures, slides, videos, diagrams, case studies, assignments, quizzes, and examinations are subject to the Copyright Act, R.S.C., 1985, c. C-42. Teaching materials are owned by the faculty member, instructor or other third parties who creates such works. The copyright owner(s) reserves all intellectual property rights in and to the teaching materials, including the sole right to copy, reproduce, distribute, and modify the teaching materials. Consistent with the university's Intellectual Property Policy, teaching materials are intended only for the educational use of Ontario Tech University students registered in the course that is the subject of this course outline. Any distribution or publishing of this material (e.g. uploading material to a third-party website) is strictly prohibited under the law unless the student has obtained the copyright owner's prior written consent. Any violation of copyright law or the Intellectual Property Policy, if proven, may be subject to sanction as academic misconduct, and/or under the Student Conduct Policy.

Student Course Feedback Surveys

Student evaluation of teaching is a highly valued and helpful mechanism for monitoring the quality of Ontario Tech University's programs and instructional effectiveness. To that end, course evaluations are administered by an external company in an online, anonymous process during the last few weeks of classes. Students are encouraged to participate actively in this process and will be notified of the dates. Notifications about course evaluations will be sent via e-mail, and posted on Canvas, Weekly News, and signage around the campus.

University Response to COVID-19

The government response to the COVID-19 pandemic is continually evolving. As new information becomes available from federal and provincial public health authorities, the Province of Ontario and the Regional Municipality of Durham, Ontario Tech University will remain nimble and prepared to respond to government orders, directives, guidelines, and changes in legislation to ensure the health and safety of all members of its campus community. In accordance with public health recommendations, the university may need to adjust the delivery of course instruction and the availability and delivery mode of campus services and co-curricular opportunities. Ontario Tech University appreciates the understanding and flexibility of our students, faculty, and staff as we continue to navigate the pandemic and work together to demonstrate our strong commitment to academic, research and service excellence during these challenging and unprecedented times.

The Accessibility for Ontarians with Disabilities Act (AODA) standards have been considered in the development of this model course template and it adheres to the principles outlined in the University's Accessibility Policy.

Looking forward to learning together this semester!

Course Syllabus

Jump to Today ✎ Edit

Instructor: Mihai Beligan

MATH1000: Introductory Calculus

Course outline for Fall 2020

1. Course Details & Important Dates*

Term	Course Type	Day	Time
F	Lec	Wed & Fri	12:40pm-2:00pm

Location	CRN #	Classes Start	Classes End	Final Exam Period
Online	41310	08/09/2020	04/12/2020	TBA

* For other important dates go to: **https://ontariotechu.ca/current-students/academics/important-dates-and-deadlines.php (https://ontariotechu.ca/current-students/academics/important-dates-and-deadlines.php)**

2. Instructor Contact Information

Instructor Name	Office	Phone	Email
Mihai Beligan	UA2018*	X5318*	In Canvas
Office Hours: ONLINE ONLY, Tue and Thu 1pm-2pm, Wed and Fri 11:30am-12:30pm in this **Kaltura room** (https://smart.newrow.com/room/nr2/?room_id=xqs-160&fr=lti)			

Teaching Assistants	
Leanna Calla	Contact through Canvas
Mia Mojica	Contact through Canvas
Tutorials and TA's office hours will start the week of Sep 14.	

*** I will not be on campus this term**

3. Course Description

This course provides an introduction to calculus through the study of limits and continuity, the derivative, integration, the Fundamental Theorem of Calculus, and other topics as time permits. Applications to science will be incorporated throughout the course. A detailed list of the main topics to be covered is listed below.

4. Learning Outcomes

On the successful completion of the course, students will be able to:

- define, work with, and differentiate the inverse trigonometric functions.

- evaluate limits graphically, numerically, and algebraically

- apply the rules of differentiation

- perform basic calculations related to integration

- apply the interpretations of derivatives to a variety of application problems

- solve multi-step Calculus problems

- recognize the appropriate technique to solve a problem

- justify a conclusion to a mathematical problem

5. Course Design

Two 1.5 hour lectures weekly. One 1.5 hour tutorial weekly. Maple software will be used in lecture and tutorial; students will take an end-of-year Maple test. Tutorial will allow students to do exploratory

learning activities and assignments, and to use technology to further explore concepts from class. Weekly online quizzes (in Maple T.A.) will allow for practice and feedback. Two midterms, 1 final exam.

6. Outline of Topics in the Course

Week 0 *Functions and Models*

- trigonometric functions and their inverses.

Week 1 *Functions and Models; Limits and Continuity*

- graphing with maple;
- limit laws.

Week 2 *Limits and Continuity*

- more limit laws, continuity;
- intermediate value theorem.

Week 3 *Limits and Continuity; Rates of Change*

- limits at infinity;
- rates of change, the tangent and velocity problems, applications to the sciences;
- derivatives, the derivative as a function.

Week 4 *Differentiation*

- differentiation formulas; higher order derivatives;
- derivatives of trigonometric functions;
- the chain rule.

Week 5 *Differentiation*

- the chain rule.

Week 6 *Differentiation; Applications of Differentiation*

- implicit differentiation;
- derivatives of inverse trigonometric and logarithmic functions;
- rates of change in the natural and social sciences;
- related rates.

Week 7 *Applications of Differentiation*

- linear approximations.

Week 8 *Applications of Differentiation*

- Fermat's Theorem, Max and Min Values;
- the Closed Interval Method;
- Rolle's Theorem, the Mean Value Theorem.

Week 9 *Applications of Differentiation*

- how derivatives affect the shape of a graph;
- summary of curve sketching;
- optimization problems.

Week 10 *Integrals*

Week 11 *Integrals*

- areas and distances;
- the definite integral;
- the Fundamental Theorem of Calculus;
- indefinite integrals.

Week 12 *Integration*

- the Net Change Theorem;
- the substitution rule.

7. Required Texts/Readings

REQUIRED (free book from E-Campus Ontario):

OpenStax, *Calculus Volume 1.* OpenStax. 7 March 2016. http://cnx.org/content/col11964/1.2

NOTE: You may also download the PDF here **CalculusVolume1-LR.pdf**

OPTIONAL:

Calculus: Early Transcendentals, James Stewart, Brooks/Cole, 8th edition,

ISBN: 9781285741550

8. Evaluation Method

The course mark will be calculated as follows:

Calculus Readiness Test: 4%

Online Quizzes: 12%

Assignments: 4%

Maple Test: 5%

Midterm I: 20% (Oct 2 during your regular lecture time)

Midterm II: 20% (Nov 13 during your regular lecture time)

Final Exam: 35%

Final course grades may be adjusted to conform to program or Faculty grade distribution profiles. Further information on grading can be found at: **http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Grading (http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Grading)**

9. Assignments and Tests

Calculus Readiness Test:

Administered through the online Mobius system. You will have 5 attempts during the period of availability (**ends September 18 at 8:00 pm**), and the best score will be counted towards your grade.

Online Quizzes: The online quiz will be completed in Mobius following each week of lectures (it will be **available from 3:00 pm each Fri until 12:00 pm (noon) on the following Wednesday**). It is an opportunity to practice and master basic concepts. The quizzes are cumulative, covering all material learned thus far, but with a focus on the current week. You will only get credit for the quiz if you achieve a minimum of 4 out of 5 on the quiz, but you may take each quiz up to 5 times in order to achieve this. (i.e. your best attempt counts, and you receive 1/1 if you get a min of 4, or 0 if you get less than 4). The *three* lowest online quiz marks will not count towards the final grade.

In lecture quizzes: administered using the Canvas, will test your comprehension of the material and demonstrate how the system works ahead of the term tests.

Maple Test: This open-laptop test will take place during lecture at the end of term; it will test you on your ability to use Maple to help you solve problems. It will be based on all the material throughout the course, including assignments.

NOTE: It is expected that all students have a device that meets the minimum Ontario Tech specifications for their Faculty; it is your responsibility to arrive to lectures, tutorials and the Maple test with a device that runs Maple.

Assignments: assignments are to be completed in groups of 4.

Assignments will be computer-oriented and will cover applications and extensions of material presented in class that students will be responsible for on tests; therefore **it is imperative that students complete honour homework** in order to prepare for online quizzes, midterms, and the final. Assignments are NOT a substitute for this!

The *two* lowest assignment grades will not count towards the final grade.

Missed Tests:
In the case of a missed midterm, you will need to complete an Academic Consideration form. For information about the deadline and associated process, please contact Science Advising immediately science.advising@ontariotechu.ca (mailto:science.advising@ontariotechu.ca)

Although material that will be tested on the first midterm will not be directly tested on the second midterm, understanding of the concepts which appear in the first part of the course will be necessary for the second midterm. The final exam will test all material covered in the course.

NOTE: We do not release final exam grades to students; if you would like to view your exam/find out your exam grade, you will need to do an exam view – details on how to do this will be posted in "Announcements" towards the end of the course.

10. Technology Requirements

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16. Online Test and Exam Proctoring (Virtual Proctoring)

Ontario Tech University will conduct virtual monitoring of examinations in accordance with Ontario privacy legislation and all approved policy instruments.

17. Final Examinations

Final examinations are held during the final examination period at the end of the semester and **when on campus access is allowed,** may take place in a different room and on a different day from the regularly scheduled class. Check the published Examination Schedule for a complete list of days and times.

Students are required to show their Student ID card (campus ID) when **in-person examinations are allowed.** Students are advised to obtain their Student ID Card well in advance of the examination period as they will not be able to write their examinations without it. More information on ID cards can be found at **https://registrar.ontariotechu.ca/campus-id/index.php (https://registrar.ontariotechu.ca/campus-id/index.php)** .

Students who are unable to write a final examination when scheduled due to religious publications may make arrangements to write a deferred examination. These students are required to submit a Request for Accommodation for Religious Obligations to the Faculty concerned as soon as possible and no later than three weeks prior to the first day of the final examination period.

Further information on final examinations can be found at **https://usgc.ontariotechu.ca/policy/policy-library/policies/academic/procedures-for-final-examination-administration.php (https://usgc.uoit.ca/policy/policy-library/policies/academic/procedures-for-final-examination-administration.php)**

18. Freedom of Information and Protection of Privacy Act

The following is an important notice regarding the process for submitting course assignments, quizzes, and other evaluative material in your courses in the Faculty of [Insert Faculty name]

Ontario Tech University is governed by the Freedom of Information and Protection of Privacy Act ("FIPPA"). In addition to providing a mechanism for requesting records held by the university, this legislation also requires that the University not disclose the personal information of its students without their consent.

FIPPA's definition of "personal information" includes, among other things, documents that contain both your name and your Banner (student) ID. For example, this could include graded test papers or assignments. To ensure that your rights to privacy are protected, the Faculty of [Insert Faculty name] encourages you to use only your Banner ID on assignments or test papers being submitted for grading. This policy is intended to prevent the inadvertent disclosure of your information where graded papers are returned to groups of students at the same time. If you still wish to write both your name and your Banner ID on your tests and assignments, please be advised that Ontario Tech University will interpret this as an implied consent to the disclosure of your personal information in the normal course of returning graded materials to students.

If you have any questions or concerns relating to the new policy or the issue of implied consent addressed above, please contact **accessandprivacy@ontariotechu.ca (mailto:accessandprivacy@ontariotechu.ca)**

Notice of Collection and Use of Personal Information

Throughout this course, personal information may be collected through the use of certain technologies under the authority of the *University of Ontario Institute of Technology Act, SO 2002, c. 8, Sch. O.* and will be collected, protected, used, disclosed and retained in compliance with Ontario's *Freedom of Information and Protection of Privacy Act R.S.O. 1990, c. F.31.*

This course will use the following technologies that may collect, use, disclose and retain personal information (including images) for the purposes described below:

- Respondus Monitor to maintain academic integrity for examinations;
- Google Meet and Kaltura Virtual Classroom to facilitate remote instruction and interactive learning;
- Peer-shared applications, services or technologies that may be reviewed, assessed, or used as part of coursework.
- Other applications, services, or technologies that support or enhance online learning that include, but are not limited to, the following: [Instructor to list all relevant components].

For more information relating to these technologies, we encourage you to visit: **https://tlc.ontariotechu.ca/learning-technology/index.php (https://tlc.ontariotechu.ca/learning-technology/index.php)** Questions regarding personal information may be directed to: Ontario Tech University Access and Privacy Office, 2000 Simcoe Street North, Oshawa, ON L1G 0C5, email: **accessandprivacy@ontariotechu.ca (mailto:accessandprivacy@ontariotechu.ca)** .

By remaining enrolled in this course, you acknowledge that you have read, understand, and agree to the terms and conditions under which the technology provider(s) may collect, use, disclose and retain your personal information. You agree to the university using the technologies and using your personal information for the purposes described in this course outline.

19. Freedom of Expression

Pursuant to Ontario Tech's Freedom of Expression Policy all students are encouraged to express ideas and perspectives freely and respectfully in university space and in the online university environment, subject to certain limitations. Students are reminded that the limits on Freedom of Expression include speech or behaviour that: is illegal or interferes with the university's legal obligations; defames an individual or group; constitutes a threat, harassment or discrimination; is a breach of fiduciary, contractual, privacy or confidentiality obligations or commitments; and unduly disrupts and interferes with the functioning of the university. In the context of working online, different forms of communication are used. Where permitted, students using "chat" functions or other online forms of communication are encouraged to ensure that their communication complies with the Freedom of Expression Policy.

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Student evaluation of teaching is a highly valued and helpful mechanism for monitoring the quality of Ontario Tech University's programs and instructional effectiveness. To that end, course evaluations are administered by an external company in an online, anonymous process during the last few weeks of classes. Students are encouraged to participate actively in this process and will be notified of the dates. Notifications about course evaluations will be sent via e-mail, and posted on Canvas, Weekly News, and signage around the campus.

University Response to COVID-19

The government response to the COVID-19 pandemic is continually evolving. As new information becomes available from federal and provincial public health authorities, the Province of Ontario and the Regional Municipality of Durham, Ontario Tech University will remain nimble and prepared to respond to government orders, directives, guidelines and changes in legislation to ensure the health and safety of all members of its campus community. In accordance with public health recommendations, the university may need to adjust the delivery of course instruction and the availability and delivery mode of campus services and co-curricular opportunities. Ontario Tech University appreciates the understanding and flexibility of our students, faculty and staff as we continue to navigate the pandemic and work together to demonstrate our strong commitment to academic, research and service excellence during these challenging and unprecedented times.

The Accessibility for Ontarians with Disabilities Act (AODA) standards have been considered in the development of this model course template and it adheres to the principles outlined in the University's Accessibility Policy.

Course Summary:

Date	Details
	Access to Mobius Online Quizzes (https://learn.ontariotechu.ca/courses/8086/assignments/50197)
	File Submission Rehearsal (https://learn.ontariotechu.ca/courses/8086/assignments/48666)

FACULTY OF SOCIAL SCIENCE AND HUMANITIES

POSC 1000U – Introduction to Political Science
Course outline for Winter 2022

1. Course Details & Important Dates*

Term	Course Type	Day	Time
Winter 2022	Lecture	Monday	11:00 am-2:00 pm

Location	CRN #	Classes Start	Classes End
Online	72078 72079	Jan 17, 2021	April 14, 2021

For other important dates go to: https://uoit.ca/current-students/academics/important-dates-and-deadlines.php

2. Instructors Contact Information

Instructor	Office	Phone	Email
Ruth Felder	DTB 313	905-721-9668 ext. 5858	ruth.felder@ontariotechu.ca
Online office hours by appointment.			

Teaching Assistants	Email
Funmilola Ogunseye	funmilola.ogunseye@ontariotechu.net
Isabelle Simard	isabelle.simard@ontariotechu.net

UOIT is proud to acknowledge the lands and people of the Mississaugas of Scugog Island First Nation. We are situated on the Traditional Territory of the Mississaugas,

a branch of the greater Anishinaabeg Nation, which includes Ojibway, Odawa and Pottawatomi.

3. Course Description

This course introduces students to the central concepts of political science. The course deals with the scope, concerns, orienting concepts, leading approaches and methodologies of political inquiry, the major political ideologies, formal and informal institutions in the political process, problems of political and social change and Canadian and international politics. The emphasis is on how individuals participate in politics and on how politics may be changed through mobilization, social movements and globalization. This course cultivates an understanding of municipal, provincial, national and international levels of politics.

4. Learning Outcomes

By the end of the term, you will be able to:

- Define key political science concepts and engage with questions about the nature of the state, democracy and power.
- Become familiar with different ideological perspectives about politics.
- Apply theoretical concepts to the analysis of contemporary political issues and events and think critically about political life and political values.
- Develop skills for comprehending lectures and readings and communicate ideas in written and oral forms.

5. Course Design

This is a fully online course with asynchronous lectures and synchronous tutorials. You will watch the lectures and read and/or watch the assigned chapters and other class materials before meeting your tutorial leader and your colleagues on Mondays. You are expected to engage in active work during your tutorial, including participating in seminars, group discussions, workshops, writing exercises, etc. You will also be able to ask questions, clarify doubts and share your views and reactions to class materials with their peers.

The study of politics entails controversy and different views and requires a collegial and respectful learning environment in which all students are able to actively participate in building knowledge, exchange ideas and support your peers.

This general format is flexible and may change depending on the topics and the dynamic of the group among other factors.

6. Schedule of Topics, Readings and assignments

1	Jan 17	**Introduction to the course** Read the syllabus.
		Part I: Basic concepts
2	Jan 24	**What is politics and how do we study it?** Heywood, A. (2019). *Politics.* Chapter 1. "What is politics?" Aquanno, S. (2021, November 16). *Political Science at Ontario Tech | Discover the Difference* [Video]. https://youtu.be/prR8XVNfByY
4	Jan 31	**The state** Heywood, A. (2019). Politics. Chapter 3. "Politics and the state". **Academic Integrity quiz due.**
3	Feb 7	**Democracy** Heywood, A. (2019). Politics. Chapter 4. "Democracy and legitimacy".
5	Feb 14	**Ideologies** Heywood, A. (2019). Politics. Chapter 2. "Political ideas and ideologies".
6	Feb 21	**Winter study break**
		Part II: Politics and society
7	Feb 28	**Political identities, political culture and the media** Heywood, A. (2019). Politics. Chapter 8 "Politics, society and identity" and chapter 9 Political culture and the media".
		Heywood, A. (2019). Politics. Chapter 10 "Representation, elections and voting" and chapter 11"Parties and party systems".
9	March 14	**Interest groups and social movements** Heywood, A. (2019). Politics. Chapter 12 "Groups, interests and movements".

10	March 21	Work on your case analysis.
Structure of government		
11	March 28	**Constitutions and the Judiciary. Executive** Heywood, A. (2019). Politics. Chapter 13 "Constitutions, law and judges" and chapter 14 "Political executives and leadership". **Case analysis due.**
12	April 4	**Legislative. Bureaucracies** Heywood, A. (2019). Politics. Chapter 15 "Assemblies" and chapter 16 "Public policy and the bureaucracy".
Global politics		
13	April 11	**Political economy. Governance** Heywood, A. (2019). Politics. Chapter 7. "Political economy and globalization" and chapter 19. "World order and global governance".
		Take home final exam due.

7. Required Textbook

Heywood, A. (2019). *Politics* (fifth edition). Macmillan International Higher Education/Red Globe Press.

You get an electronic copy at https://www.vitalsource.com/en-ca/products/politics-andrew-heywood-v9781352005462

or at

https://www.macmillanihe.com/page/detail/politics-andrew-heywood/?sf1=barcode&st1=9781352005455

If you buy a second hand book be sure that it is a recent edition (preferably 2019 or 2014).

8. Evaluation method

I. Weekly Quizzes

At the end of each class with the exception of March 21 you will answer four multiple-choice questions. You will get 0.5 points for each correct answer. The purpose of the quizzes is that you test your knowledge and understanding of the class topi.

II. Academic integrity quiz

You will read the academic integrity materials and complete the quiz. The purpose of this assignment is that you familiarize yourself with academic integrity rules.

III. Reading notes

You will write reading notes for one of the following readings of your choice (600-900 words). The instructions for the reading notes will be available on Canvas.

- Heywood, A. (2019). Politics. Chapter 3. “Politics and the state”.
- Heywood, A. (2019). Politics. Chapter 4. “Democracy and legitimacy”.
- Heywood, A. (2019). Politics. Chapter 2. “Political ideas and ideologies”.

The purpose of this assignment is that you hone your ability to develop your active reading skills, including thinking critically about what you are reading, identifying the main points and retaining relevant information, and your ability to communicate ideas by synthesizing the content of other authors’ work and presenting ideas in an organized and clear way.

IV. Case analysis

Working in groups of 3 or 4 students with colleagues from your tutorial group, you will address a political problem from specific theoretical and ideological perspectives. Each group will submit a report. The instructions for the case analysis will be posted on Canvas. You will have time to work with your group during the class on March 21st.

The case analysis gives you the opportunity to apply key political science concepts to real-life situations and think about the theories and ideas underlying different political options. It is also an invitation to consider the multiple dimensions of political issues and see the world from various perspectives by assuming alternative identities. Finally, you will hone your skills to work collaboratively with your colleagues and develop your writing skills.

V. Take-home final exam

You will write a take-home cumulative exam at the end of the term. The questions for the exam will be available on Canvas on April 11 after the class. You will upload your answers by April 18 02:00 PM EST.

The purpose of the exam is that you demonstrate that you are familiar with, and have a critical understanding of the course's concepts and discussions. You will have to demonstrate that you read and understood the readings and class discussions.

VII. Participation

Class participation and engagement with your peers' work and ideas is fundamental to build a supportive learning community. A supportive community requires that all of us are aware of our responsibilities to others, help to develop a group dynamics conducible to learning and find ways to engage with others in the face of the challenges posed by our online communication.

With this in mind, you will attend online classes and engage in class activities and participate in discussion forums. Your participation will demonstrate your critical reading of class materials, your engagement with others' points of view, your willingness to rethink your own ideas, etc.

9. Assignments and grading

Assignment	Percentage of the final grade	Due
Syllabus scavenger hunt quiz.	2 %	January 21, 11:59 PM EST
Weekly quizzes	2% each.	Every Monday 11:59 PM EST after the class except January 17 and March 21st.
Academic integrity learning quiz.	6%	January 31 11:00 AM EST (at the beginning of the class).
Reading notes	20%	February 28 11:00 AM EST (at the beginning of the class).
Case analysis	15%	March 28 11:00 AM EST (at the beginning of the class).
Take-home final exam	30 %	April 18 11:59 PM EST
Class participation	9 %	

Final course grades may be adjusted to conform to program or Faculty grade distribution profiles.
Further information on grading can be found at:
http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Grading

Grading

Information on grading can be found at:
http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Grading

Late assignments

If due to exceptional circumstances (certified medical illness or another similarly compelling reason, see rules below) you are unable to complete your assignment by the posted deadline contact me through Canvas or by email within 48 hours after the deadline. Do not wait for a response to submit your work – do so as soon as possible. Negotiated extensions where appropriate will be determined by the professor, and late penalties of 10% point per day including weekends apply.

If you are ill and already seeking medical attention you may submit medical documentation – however medical documentation is not a requirement at this time. In instances where extreme medical or personal circumstances require extended absence, or are impacting multiple courses please contact academic advising at sshadvising@ontariotechu.ca or SAS if applicable, for support related to missed work.

Faculty rules on missed coursework

If a student has missed coursework (e.g., quizzes, in-class exercises, assignments) that is less than 26% of the final grade due to physical or psychological illness, she or he must submit a UOIT Medical Statement Form directly to the course instructor within 3 days of the missed due date. Note: The medical statement form must be signed by the treating physician or licensed practitioner within 24hrs of the missed date or deadline. If a student has missed coursework (e.g., quizzes, in-class exercises, assignments) that is less than 26% of the final grade due to exceptional circumstances, she or he must submit a UOIT Academic Consideration Form, along with supporting documentation, directly to the course instructor within 3 days of the missed due date. Course instructors will review the documentation and inform the student of the outcome of their request in writing via email or blackboard. All missed coursework worth less than 26% will be handled directly by the course instructor for consideration and resolution. It will be at the course instructor's discretion to determine how the missed work will be addressed and resolved (e.g., penalties, re-writes, make-ups, extension, alternate assignment, etc.).

If a student has missed coursework (e.g., quizzes, in-class exercises, assignments) that is equal to or higher than 26% of the final grade due to physical or psychological illness, she or he must submit a UOIT Medical Statement Form to the FSSH Academic Advising Office within 3 working days of the missed due date. Note: The medical statement form must be signed by the treating physician or licensed

practitioner within 24hrs of the missed date or deadline. If a student has missed coursework (e.g., quizzes, in-class exercises, assignments) that is equal to or higher than 26% of the final grade due to exceptional circumstances, she or he must submit an Academic Consideration Form, along with supporting documentation, to the FSSH Academic Advising Office within 3 days of the missed due date. The Academic Advising Office will review the documentation and inform the student of the outcome of his or her request in writing via email. It will be at the course instructor's discretion to determine how the missed in-term exam will be addressed and resolved (e.g., make-ups). The most recent version of all forms can be found on MyCampus under the 'OT Documents' tab. The UOIT grading policy can be found at the following:
https://usgc.uoit.ca/policy/policy-library/policies/academic/examination-and-grading-policy.php

Religious Observance

If a student is requesting consideration for a religious observance for missed coursework (e.g., quizzes, in-class exercises, assignments) that is less than 26% of the final grade, she or he must submit a UOIT Academic Consideration Form directly to the course instructor 7 working days prior to the due date. Course instructors will review the form and inform the student of the outcome of their request in writing via email or blackboard. All missed coursework worth less than 26% will be handled directly by the course instructor for consideration and resolution. It will be at the course instructor's discretion to determine how the missed work will be addressed and resolved.

If a student is requesting consideration for a religious observance for any in-term exam (irrespective of weight) or missed coursework (e.g., quizzes, in-class exercises, assignments) that is equal to or higher than 26% of the final grade, she or he must submit a UOIT Academic Consideration Form to the FSSH Academic Advising Office15 working days prior to the exam date. The Academic Advising Office will review the form and inform the student of the outcome of his or her request in writing via email. It will be at the course instructor's discretion to determine how the missed in-term exam will be addressed and resolved (e.g., make-ups).

If a student is requesting consideration for a religious observance for a final exam, she or he must apply for a deferral using the Application for Deferred Final Examination and a UOIT Academic Consideration Form 15 working days prior to the first final examination date. The most recent version of all forms can be found on MyCampus under the 'OT Documents' tab.

10. Technology Requirements

To support online learning, the university recommends certain technology requirements for laptops, software and internet connectivity which are available at https://itsc.ontariotechu.ca/remote-learning.php.

Students experiencing technical difficulties such that they are unable to meet the technology requirements may contact the IT Service Help Desk at servicedesk@dc-uoit.ca

Students experiencing financial difficulties such that they are unable to meet the technology requirements may contact Student Awards and Financial Aid Office at connect@ontariotehu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand and agree to observe the Recommended Technology Requirements for accessing university online learning resources, including those minimum requirements that are specific to your faculty and program.

11. Sensitive/Offensive Subject Matter

The classroom (both physical and virtual) is intended to provide a safe, open space for the critical and civil exchange of ideas and opinions. Some articles, media and other course materials may contain sensitive content that is offensive and/or disturbing. For example, some articles or videos may contain [Instructors should provide examples that are applicable to the course subject matter – e.g. graphical depictions of violence, profanity, human anatomy, sexual acts, matters pertaining to race, gender, or sexuality]. The Course Instructor will try to identify such material and communicate warnings to students in advance of the distribution and use of such materials, affording students the choice to either emotionally prepare for, or not to view or interact with, the content.

12. Student Support

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact studentlife@uoit.ca for support. Furthermore, please notify your professor if you are comfortable in doing so. This will enable them to provide any resources and help that they can.

13. Sexual Violence Support and Education

Ontario Tech is committed to the prevention of sexual violence in all is forms. For any student who has experienced Sexual Violence, Ontario Tech can help. We will make accommodations to cater to the diverse backgrounds, cultures, and identities of students when dealing with individual cases.

If you think you have been subjected to or witnessed sexual violence reach out to a Support Worker, a specially trained individual authorized to receive confidential disclosures about incidents of sexual violence. Support Workers can offer help and resolution options which can include safety plans, accommodations, mental health support, and more. To make an appointment with a Support Worker, call 905.721.3392 or email studentlife@uoit.ca

Learn more about your options at: https://studentlife.uoit.ca/sexualviolence/

14. Students with Disabilities

Accommodating students with disabilities at Ontario Tech is a responsibility shared among various partners: the students themselves, SAS staff and faculty members. To ensure that disability-related concerns are properly addressed during this course, students with documented disabilities and who may require assistance to participate in this class are encouraged to speak with me as soon as possible. Students who suspect they have a disability that may affect their participation in this course are advised to go to Student Accessibility Services (SAS) as soon as possible. Maintaining communication and working collaboratively with SAS and faculty

When on campus access is allowed, students taking courses on north Oshawa campus can visit Student Accessibility Services in the Student Life Building, U5, East HUB (located in the Founders North parking lot). Students taking courses on the downtown Oshawa campus can visit Student Accessibility Services in the 61 Charles St. Building, 2nd Floor, Room DTA 225 in the Student Life Suite. Disability-related and accommodation support is available for students with mental health, physical, mobility, sensory, medical, cognitive, or learning challenges. Office hours are 8:30am-4:30pm, Monday to Friday, closed Wednesday's 8:30am – 10:00am. For more information on services provided, you can visit the SAS website at https://studentlife.ontariotechu.ca/services/accessibility/index.php. Students may contact Student Accessibility Services by calling 905-721-3266, or email studentaccessibility@ontariotechu.ca.

When on campus access is allowed, students who require the use of the Test Centre to write tests, midterms, or quizzes MUST register online using the SAS test/exam sign-up module, found here https://disabilityservices.ontariotechu.ca/uoitclockwork/custom/misc/home.aspx Students must sign up for tests, midterms, or quizzes AT LEAST seven (7) days before the date of the test.

Students must register for final exams by the registration deadline, which is typically two (2) weeks prior to the start of the final examination period. SAS will notify students of the registration deadline date.

15. Class rules and professional conduct

Use of Canvas

You will upload an electronic copy (Microsoft Word) of your assignments to Canvas. Canvas will also be used for course content and announcements.

E-mail

Emails should be written in a professional manner, including salutation and grammar. Use your university email, refer to your question/problem in the subject line and sign your full name. Substantive course issues should be dealt with in class or during your instructors' office hours. Allow up to 48 hours to get an answer. Please consult this syllabus and Canvas first to see if the answer to your question

might be answered by course material before emailing your instructor.

Office hours

A meeting with your instructor is an opportunity to talk about the course, your expectations, doubts, concerns and other relevant issues.
Instructors' office hours will be posted on Canvas. When you sign for an appointment, you will receive a link for a virtual meeting. Keep in mind that it is extremely unprofessional to miss an appointment with your instructor. You should contact your instructor ASAP if you are unable to make it.

Class behavior

You are expected to participate in class in a collegial and respectful manner. All of us will share our knowledge with the rest of the class and will learn from what other people have to say. We are dealing with controversial political and social issues about which we may have quite diverse positions and nobody should feel intimidated about intervening in our discussion.

Attendance

Attendance is mandatory. Unless your absences are justified, you lose 1 participation point for each missed class if you miss more than three classes. You should contact your instructor as soon as possible if you have to miss a class.

Additional information on professional suitability can be found at
http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Academic_conduct

16. Academic Integrity

Students and faculty at Ontario Tech University share an important responsibility to maintain the integrity of the teaching and learning relationship. This relationship is characterized by honesty, fairness and mutual respect for the aim and principles of the pursuit of education. Academic misconduct impedes the activities of the university community and is punishable by appropriate disciplinary action.

Students are expected to be familiar with and abide by Ontario Tech University's regulations on Academic Conduct which sets out the kinds of actions that constitute academic misconduct, including plagiarism, copying or allowing one's own work to copied, use of unauthorized aids in examinations and tests, submitting work prepared in collaboration with another student when such collaboration has not been authorized, among other academic offences. The regulations also describe the procedures for dealing with allegations, and the sanctions for any finding of academic misconduct, which can range from a resubmission of work to a failing grade to permanent expulsion from the university. A lack of familiarity with these regulations on academic conduct does not constitute a defense against its application. This information can be found at http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Academic_conduct

Extra support services are available to all Ontario Tech University students in academic development, study skills, counseling, and peer mentorship. More information on student support services can be found at https://studentlife.uoit.ca/services/academic-support/index.php

17. Turnitin

Ontario Tech University and faculty members reserve the right to use electronic means to detect and help prevent plagiarism. Students agree that by taking this course all assignments are subject to submission for textual similarity review by Turnitin.com. Assignments submitted to Turnitin.com will be included as source documents in Turnitin.com's restricted access database solely for the purpose of detecting plagiarism in such documents. The instructor may require students to submit their assignments electronically to Turnitin.com or the instructor may submit questionable text on behalf of a student. The terms that apply to Ontario Tech University's use of the Turnitin.com service are described on the Turnitin.com website.

Students who do not wish to have their work submitted to Turnitin.com must provide with their assignment at the time of submission to the instructor a signed Turnitin.com Assignment Cover sheet: https://shared.uoit.ca/shared/department/academic-integrity/Forms/assignment-cover-sheet.pdf

Students whose assignments are submitted to Turnitin.com agree to abide by all the relevant Turnitin.com terms and conditions which may be found on the Turnitin.com website https://help.turnitin.com/Privacy_and_Security/Privacy_and_Security.htm#Privacy_Policy which is subject to change from time to time.

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- Kaltura Virtual Classroom and/or Google Meet to facilitate remote instruction and interactive learning.
- Peer-shared applications, services or technologies that may be reviewed, assessed, or used as part of coursework.

For more information relating to these technologies, we encourage you to visit: https://tlc.ontariotechu.ca/learning-technology/index.php Questions regarding personal information may be directed to: Ontario Tech University Access and Privacy Office, 2000 Simcoe Street North, Oshawa, ON L1G 0C5, email: accessandprivacy@ontariotechu.ca.

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FACULTY OF SOCIAL SCIENCE AND HUMANITIES

POSC 3303U – Policies for Sustainability
Course outline for Winter 2022

1. Course Details & Important Dates*

Term	Course Type	Day	Time
Winter 2022	Lecture	Friday	2:00pm-5:00pm EST

Location	CRN #	Classes Start	Classes End
Online	74724	Jan 17, 2022	April 14, 2022

* For other important dates go to: https://uoit.ca/current-students/academics/important-dates-and-deadlines.php

2. Instructor Contact Information

Instructor Name	Office	Phone	Email
Ruth Felder	DTB 313	905-721-9668 ext 5858	ruth.felder@uoit.ca
Office Hours: Tuesdays 2:30-3:30pm EST or by appointment.			

UOIT is proud to acknowledge the lands and people of the Mississaugas of Scugog Island First Nation. We are situated on the Traditional Territory of the Mississaugas, a branch of the greater Anishinaabeg Nation, which includes Ojibway, Odawa and Pottawatomi.

3. Course Description

Students will apply their knowledge and skills to solve practical problems that will help to develop policies for a more sustainable global society. Students will participate in small and large group activities, using case studies, to develop problem-solving skills and the ability to analyze complex challenges to various aspects of sustainability (social, economic and environmental). Students will work individually and in teams to research and analyze a chosen problem to produce a workable solution and policy. Students will be expected to present their findings in oral and written formats.

4. Learning Outcomes

By the end of the term students will be able to:

- Define sustainability, recognizing controversies around the definition, the multiple dimensions of sustainability and the complex relations between these dimensions.
- Recognize the political, economic, social and cultural dimensions of sustainability and the role of state and non-state actors in various forms of sustainability governance.
- Identify inequalities and relations of power underlying definitions and policy initiatives.
- Connect sustainability concepts to real-world challenges, including social needs and political choices.
- Present complex material in a clear and effective manner combining rigorous evidence-based research and creative approaches to address sustainability issues.
- Develop teamwork skills.

5. Course Design

The course is divided into five parts: 1) What is sustainability; 2) The roots of the problems; 3) Exploring the answers to the problems; 4) Sustainability policies and indicators and 5) Topics and cases on sustainability. The course includes two in-class exercises (case studies).

Classes will start with a lecture in which you are expected to participate, ask and answer questions and clarify their doubts. The lecture will be followed by group discussions, seminars, workshops, presentations, etc. You are expected do the readings before the class and to actively engage in various forms of individual and group work.

This design is flexible and subject to change.

6. Schedule of topics and readings

1	Jan 21	**Introduction to the course**
PART I. WHAT IS SUSTAINABILITY?		
2	Jan 28	**Sustainability: the history and the meanings of the concept** *Mandatory readings* Joseph, J. M., and A. McGregor (2020). *Wellbeing, Resilience and Sustainability: The new trinity of governance.* Cham: Springer. Chapter 4. "Sustainability". Boström, M. (2012). A missing pillar? Challenges in theorizing and practicing social sustainability: introduction to the special issue. *Sustainability: Science, Practice and Policy*, *8*(1), 3–14. *Suggested readings* Michelsen, G., Adomßent, M., Martens, P., & von Hauff, M. (2016). Sustainable Development – Background and Context. In H. Heinrichs, P. Martens, G. Michelsen, & A. Wiek (Eds.), *Sustainability Science* (pp. 5–29). Springer Netherlands.
PART II. THE ROOTS OF THE PROBLEMS		
3	Feb 4	**Human action and environmental impacts. Debates around the Anthropocene** Dalby, S. (2020). *Anthropocene geopolitics: Globalization, security, sustainability*. University of Ottawa Press. Chapter 9. "Anthropocene discourse." Moore, J. W. (2016). The Rise of Cheap Nature. In C. Parenti & J. W. Moore (Eds.), *Anthropocene or capitalocene? Nature, history, and the crisis of capitalism* (pp. 78–115). PM Press.
4	Feb 11	**Environmental injustice** Nesmith, A. A., Schmitz, C. L., Machado-Escudero, Y., Billiot, S., Forbes, R. A., Powers, M. C. F., Buckhoy, N., & Lawrence, L. A. (2021). *The Intersection of Environmental Justice, Climate Change, Community, and the Ecology of Life*. Springer International Publishing. Chapter 4. "Environmental Injustice: Transformative Change Toward Justice."

		Connecting Environmental Justice, Sustainability, and Vulnerability. Christopher G. Boone and Michail Fragkias en Boone, C. G. (2012). *Urbanization and sustainability: Linking urban ecology, environmental justice and global environmental change*. Springer.
PART III. EXPLORING THE ANSWERS TO THE PROBLEMS		
5	Feb 18	**Market, technical, political and social paths to sustainability: an overview** Scoones, I. (2016). The Politics of Sustainability and Development. *Annual Review of Environment and Resources*, *41*(1), 293–319.
6	Feb 25	**Winter break**
7	March 4	**Controversies around economic growth and sustainability: green growth, decoupling and degrowth** Hickel, J., & Hallegatte, S. (2022). Can we live within environmental limits and still reduce poverty? Degrowth or decoupling? *Development Policy Review*, *40*(1). Kedward, K., & Ryan-Collins, J. (2022). A Green New Deal: Opportunities and Constraints. In P. Arestis & M. Sawyer (Eds.), *Economic Policies for Sustainability and Resilience* (pp. 269–317). Springer International Publishing.
PART IV. SUSTAINABILITY POLICIES AND INDICATORS		
8	March 11	**Policy processes and dilemmas** Dryzek, J. S. (2013). *The politics of the earth: Environmental discourses* (Third edition). Oxford: Oxford University Press. Part III: "Solving Environmental problems." Bruckmeier, K. (2020). *Economics and Sustainability: Social-Ecological Perspectives*. Springer International Publishing. Chapter 1. "The policy context of the sustainability discourse."
9	March 18	**Measuring sustainability** Fahy, Fances & Rau, Henrike. (2013). Sustainability Research in the Social Sciences – Concepts, Methodologies and the Challenge of Interdisciplinarity. In F. Fahy, H. Rau, & H. Rau (Eds.), *Methods of sustainability research in the social sciences* (pp. 3–24). SAGE.

		Requena-i-Mora, M., & Brockington, D. (2021). Seeing environmental injustices: The mechanics, devices and assumptions of environmental sustainability indices and indicators. *Journal of Political Ecology*, *28*(1).
PART V. TOPICS AND CASE STUDIES IN SUSTAINABILITY		
10	March 25	**Mobility and transportation** Golub, A. (2016). Mobility and Sustainability. In H. Heinrichs, P. Martens, G. Michelsen, & A. Wiek (Eds.), *Sustainability Science* (pp. 261–272). Springer Netherlands. Figueroa, M. (2010). Linking Mobility, democracy and Sustainability in an inclusive Approach to transport development in the global South. In K. A. Nielsen (Ed.), *A new agenda for sustainability* (pp. 271–288). Ashgate. Docherty, I. & J. Shaw (2012) Transport in a sustainable urban future. In J. Flint, J. (Ed.). *The future of sustainable cities: Critical reflections*. Bristol: Policy. Newman, P., Beatley, T., & Boyer, H. (2009). *Resilient cities: Responding to peak oil and climate change*. Washington, DC: Island Press. Chapter 5. Hope for resilient cities: Transportation.
11	April 1	**Work on your group case report**
12	April 8	**The problem of food insecurity** Holt-Giménez, E. (2011). Food Security, Food Justice, or Food Sovereignty? In A. H. Alkon & J. Agyeman (Eds.), *Cultivating food justice: Race, class, and sustainability* (pp. 309–330). MIT Press. Heynen, N. (2006). Justice of eating in the city: the political ecology of urban hunger. In N. Heynen, M. Kaika & E. Swyngedovw (Eds.), *In the nature of cities: urban political ecology and the politics of urban metabolism*. (pp. 129-142). Routledge. Garnett, T. (2014). Three perspectives on sustainable food security: efficiency , demand restraint , food system transformation . What role for LCA? Journal of Cleaner Production 73: 10-18.
13	April 9	**Work on your group case report**

Additional readings may be assigned or recommended during the course.

7. Required Readings

Required readings will be available on Canvas.

8. Evaluation method

a. Assessment of Oshawa Strategic Planning

You will write a report on Oshawa's strategic planning assessing the relevance of sustainability goals and the notions of sustainability underlying it.

You will explore the Strategic Planning for the City of Oshawa's site [https://www.oshawa.ca/city-hall/strategic-planning.asp] and one of the following plans of your choice [https://www.oshawa.ca/city-hall/other-strategic-plans.asp]:

- Diversity and Inclusion Downtown Oshawa Plan 20Twenty;
- Economic Development;
- Emergency Master Plan;
- Parks, Recreation and Culture Strategy: Vision 2020.

b. Take-home exam.

You will write a take home exam on Parts I to 4. The exam will test your familiarity and understanding of key concepts and controversies associated with sustainability, the factors that account for unsustainability, the strategies to overcome it and the characteristics of sustainability policies and measurements. You will receive the questions and instructions for the exam in advance.

c. Case study reports

You will work in groups on analyzing and/or offering solutions to 1) access to food and food security and 2) problems of mobility and transportation with a focus on Oshawa. You will read a series of documents in advance, do further research on the issue and work in class on the case. After the class the group will submit a report presenting the results of its work

d. Final reflection paper

You will write a final reflection paper integrating the main themes of the class and your classroom experience and reflecting on how both have informed your thinking and practices.

e. Class participation

Participation in class is always crucial to learn and understand concepts and it is even more important in a course focused on applying theoretical concepts to real-life situations and solving problems. You are expected to attend classes regularly, complete the required readings before the class, and actively and

respectfully engage in debates in class. The grade pertaining to participation will be based on your ability to answer questions and engage in discussions about the readings and on the quality of your contribution to the two case studies and the collaborative map. The expression of general ideas or opinions will not alone suffice for a satisfactory grade.

9. Assignments and grading

Assignment	Percentage of the final grade	Due
Assessment of Oshawa Strategic Planning	20	February 18, 2:00 pm
Take-home exam	25	March 25, 2:00 pm
Case study report I. Access to food	10	April 8, 2:00 pm
Case study report II. Mobility and transportation	10	April 14, 11:59 pm
Final reflection paper	20	April 18, 2020 11:59 PM
Participation	15	

Final course grades may be adjusted to conform to program or Faculty grade distribution profiles.
Further information on grading can be found at:
http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Grading

Grading

Information on grading can be found at:
http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Grading

Late assignments

You will have three grace days, which you can use to submit late assignments without penalty. No questions asked. You should include information about using your grace period or part of it when you submit your late assignment.

If due to exceptional circumstances (certified medical illness or another similarly compelling reason, see rules below) you are unable to complete your assignment by the posted deadline contact me through Canvas or by email within 48 hours after the deadline. Do not wait for a response to submit your work – do so as soon as possible. Negotiated extensions where appropriate will be determined by the professor, and late penalties of

5% per day including weekends apply.

If you are ill and already seeking medical attention you may submit medical documentation – however medical documentation is not a requirement at this time. In instances where extreme medical or personal circumstances require extended absence, or are impacting multiple courses please contact academic advising at sshadvising@ontariotechu.ca or SAS if applicable, for support related to missed work.

Faculty rules on missed coursework

If a student has missed coursework (e.g., quizzes, in-class exercises, assignments) that is less than 26% of the final grade due to physical or psychological illness, she or he must submit a UOIT Medical Statement Form directly to the course instructor within 3 days of the missed due date. Note: The medical statement form must be signed by the treating physician or licensed practitioner within 24hrs of the missed date or deadline. If a student has missed coursework (e.g., quizzes, in-class exercises, assignments) that is less than 26% of the final grade due to exceptional circumstances, she or he must submit a UOIT Academic Consideration Form, along with supporting documentation, directly to the course instructor within 3 days of the missed due date. Course instructors will review the documentation and inform the student of the outcome of their request in writing via email or blackboard. All missed coursework worth less than 26% will be handled directly by the course instructor for consideration and resolution. It will be at the course instructor's discretion to determine how the missed work will be addressed and resolved (e.g., penalties, re-writes, make-ups, extension, alternate assignment, etc.).

If a student has missed coursework (e.g., quizzes, in-class exercises, assignments) that is equal to or higher than 26% of the final grade due to physical or psychological illness, she or he must submit a UOIT Medical Statement Form to the FSSH Academic Advising Office within 3 working days of the missed due date. Note: The medical statement form must be signed by the treating physician or licensed practitioner within 24hrs of the missed date or deadline. If a student has missed coursework (e.g., quizzes, in-class exercises, assignments) that is equal to or higher than 26% of the final grade due to exceptional circumstances, she or he must submit an Academic Consideration Form, along with supporting documentation, to the FSSH Academic Advising Office within 3 days of the missed due date. The Academic Advising Office will review the documentation and inform the student of the outcome of his or her request in writing via email. It will be at the course instructor's discretion to determine how the missed in-term exam will be addressed and resolved (e.g., make-ups). The most recent version of all forms can be found on MyCampus under the 'OT Documents' tab. The UOIT grading policy can be found at the following:
https://usgc.uoit.ca/policy/policy-library/policies/academic/examination-and-grading-policy.php

Religious Observance

If a student is requesting consideration for a religious observance for missed coursework (e.g., quizzes, in-class exercises, assignments) that is less than 26% of the final grade, she or he must submit a UOIT Academic Consideration Form directly to the course

instructor 7 working days prior to the due date. Course instructors will review the form and inform the student of the outcome of their request in writing via email or blackboard. All missed coursework worth less than 26% will be handled directly by the course instructor for consideration and resolution. It will be at the course instructor's discretion to determine how the missed work will be addressed and resolved.

If a student is requesting consideration for a religious observance for any in-term exam (irrespective of weight) or missed coursework (e.g., quizzes, in-class exercises, assignments) that is equal to or higher than 26% of the final grade, she or he must submit a UOIT Academic Consideration Form to the FSSH Academic Advising Office15 working days prior to the exam date. The Academic Advising Office will review the form and inform the student of the outcome of his or her request in writing via email. It will be at the course instructor's discretion to determine how the missed in-term exam will be addressed and resolved (e.g., make-ups).

If a student is requesting consideration for a religious observance for a final exam, she or he must apply for a deferral using the Application for Deferred Final Examination and a UOIT Academic Consideration Form 15 working days prior to the first final examination date. The most recent version of all forms can be found on MyCampus under the 'OT Documents' tab.

10. Technology Requirements

To support online learning, the university recommends certain technology requirements for laptops, software and internet connectivity which are available at https://itsc.ontariotechu.ca/remote-learning.php.

Students experiencing technical difficulties such that they are unable to meet the technology requirements may contact the IT Service Help Desk at servicedesk@dc-uoit.ca.

Students experiencing financial difficulties such that they are unable to meet the technology requirements may contact Student Awards and Financial Aid Office at connect@ontariotehu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand and agree to observe the Recommended Technology Requirements for accessing university online learning resources, including those minimum requirements that are specific to your faculty and program.

11. Sensitive/Offensive Subject Matter

The classroom (both physical and virtual) is intended to provide a safe, open space for the critical and civil exchange of ideas and opinions. Some articles, media and other course materials may contain sensitive content that is offensive and/or disturbing. For example, some articles or videos may contain [Instructors should provide examples that are applicable to the course subject matter – e.g. graphical depictions of violence, profanity, human anatomy, sexual acts, matters pertaining to race, gender, or

sexuality]. The Course Instructor will try to identify such material and communicate warnings to students in advance of the distribution and use of such materials, affording students the choice to either emotionally prepare for, or not to view or interact with, the content.

12. Student Support

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact studentlife@uoit.ca for support. Furthermore, please notify your professor if you are comfortable in doing so. This will enable them to provide any resources and help that they can.

13. Sexual Violence Support and Education

Ontario Tech is committed to the prevention of sexual violence in all is forms. For any student who has experienced Sexual Violence, Ontario Tech can help. We will make accommodations to cater to the diverse backgrounds, cultures, and identities of students when dealing with individual cases.

If you think you have been subjected to or witnessed sexual violence reach out to a Support Worker, a specially trained individual authorized to receive confidential disclosures about incidents of sexual violence. Support Workers can offer help and resolution options which can include safety plans, accommodations, mental health support, and more. To make an appointment with a Support Worker, call 905.721.3392 or email studentlife@uoit.ca

Learn more about your options at: https://studentlife.uoit.ca/sexualviolence/

14. Students with Disabilities

Accommodating students with disabilities at Ontario Tech is a responsibility shared among various partners: the students themselves, SAS staff and faculty members. To ensure that disability-related concerns are properly addressed during this course, students with documented disabilities and who may require assistance to participate in this class are encouraged to speak with me as soon as possible. Students who suspect they have a disability that may affect their participation in this course are advised to go to Student Accessibility Services (SAS) as soon as possible. Maintaining communication and working collaboratively with SAS and faculty members will ensure you have the greatest chance of academic success.

When on campus access is allowed, students taking courses on north Oshawa campus can visit Student Accessibility Services in the Student Life Building, U5, East HUB (located in the Founders North parking lot). Students taking courses on the downtown Oshawa campus can visit Student Accessibility Services in the 61 Charles St. Building, 2nd Floor, Room DTA 225 in the Student Life Suite.
Disability-related and accommodation support is available for students with mental health, physical, mobility, sensory, medical, cognitive, or learning challenges. Office

hours are 8:30am-4:30pm, Monday to Friday, closed Wednesday's 8:30am – 10:00am. For more information on services provided, you can visit the SAS website at https://studentlife.ontariotechu.ca/services/accessibility/index.php. Students may contact Student Accessibility Services by calling 905-721-3266, or emailstudentaccessibility@ontariotechu.ca.

When on campus access is allowed, students who require the use of the Test Centre to write tests, midterms, or quizzes MUST register online using the SAS test/exam sign-up module, found
here https://disabilityservices.ontariotechu.ca/uoitclockwork/custom/misc/home.aspx
Students must sign up for tests, midterms, or quizzes AT LEAST seven (7) days before the date of the test.

Students must register for final exams by the registration deadline, which is typically two (2) weeks prior to the start of the final examination period. SAS will notify students of the registration deadline date.

15. Class rules and professional conduct

Use of Canvas

You will upload an electronic copy (Microsoft Word) of your assignments to Canvas. Canvas will also be used for course content and announcements.

E-mail

Emails should be written in a professional manner, including salutation and grammar. Use your university email, refer to your question/problem in the subject line and sign your full name. Substantive course issues should be dealt with in class or during your instructors' office hours. Allow up to 48 hours to get an answer.
Please consult this syllabus and Canvas first to see if the answer to your question might be answered by course material before emailing your instructor.

Office hours

A meeting with your instructor is an opportunity to talk about the course, your expectations, doubts, concerns and other relevant issues.
Instructors' office hours will be posted on Canvas. When you sign for an appointment, you will receive a link for a virtual meeting. Keep in mind that it is extremely unprofessional to miss an appointment with your instructor. You should contact me ASAP if you are unable to make it.

Class behaviour

You are expected to participate in class in a collegial and respectful manner. All of us will share our knowledge with the rest of the class and will learn from what other people have to say. We are dealing with controversial political and social issues about which we may have quite diverse positions and nobody should feel intimidated about intervening in our discussion.

Attendance

Attendance is mandatory. Unless your absences are justified, you lose 1 participation point for each missed class if you miss more than three classes. You should contact your instructor as soon as possible if you have to miss a class.

Additional information on professional suitability can be found at http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Academic_conduct

16. Academic Integrity

Students and faculty at Ontario Tech University share an important responsibility to maintain the integrity of the teaching and learning relationship. This relationship is characterized by honesty, fairness and mutual respect for the aim and principles of the pursuit of education. Academic misconduct impedes the activities of the university community and is punishable by appropriate disciplinary action.

Students are expected to be familiar with and abide by Ontario Tech University's regulations on Academic Conduct which sets out the kinds of actions that constitute academic misconduct, including plagiarism, copying or allowing one's own work to copied, use of unauthorized aids in examinations and tests, submitting work prepared in collaboration with another student when such collaboration has not been authorized, among other academic offences. The regulations also describe the procedures for dealing with allegations, and the sanctions for any finding of academic misconduct, which can range from a resubmission of work to a failing grade to permanent expulsion from the university. A lack of familiarity with these regulations on academic conduct does not constitute a defense against its application. This information can be found at http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Academic_conduct

Extra support services are available to all Ontario Tech University students in academic development, study skills, counseling, and peer mentorship. More information on student support services can be found at https://studentlife.uoit.ca/services/academic-support/index.php

17. Turnitin

Ontario Tech University and faculty members reserve the right to use electronic means to detect and help prevent plagiarism. Students agree that by taking this course all assignments are subject to submission for textual similarity review by Turnitin.com. Assignments submitted to Turnitin.com will be included as source documents in Turnitin.com's restricted access database solely for the purpose of detecting plagiarism in such documents. The instructor may require students to submit their assignments electronically to Turnitin.com or the instructor may submit questionable text on behalf of a student. The terms that apply to Ontario Tech University's use of the Turnitin.com service are described on the Turnitin.com website.

Students who do not wish to have their work submitted to Turnitin.com must provide with their assignment at the time of submission to the instructor a signed Turnitin.com

Assignment Cover sheet: https://shared.uoit.ca/shared/department/academic-integrity/Forms/assignment-cover-sheet.pdf

Students whose assignments are submitted to Turnitin.com agree to abide by all the relevant Turnitin.com terms and conditions which may be found on the Turnitin.com website https://help.turnitin.com/Privacy_and_Security/Privacy_and_Security.htm#Privacy_Policy which is subject to change from time to time.

18. Freedom of Information and Protection of Privacy Act

Notice of Collection and Use of Personal Information
Throughout this course, personal information may be collected through the use of certain technologies under the authority of the University of Ontario Institute of Technology Act, SO 2002, c. 8, Sch. O. and will be collected, protected, used, disclosed and retained in compliance with Ontario's Freedom of Information and Protection of Privacy Act R.S.O. 1990, c. F.31.

This course will use the following technologies that may collect, use, disclose and retain personal information (including images) for the purposes described below:

- Kaltura Virtual Classroom and/or Google Meet to facilitate remote instruction and interactive learning.
- Peer-shared applications, services or technologies that may be reviewed, assessed, or used as part of coursework.

For more information relating to these technologies, we encourage you to visit: https://tlc.ontariotechu.ca/learning-technology/index.php Questions regarding personal information may be directed to: Ontario Tech University Access and Privacy Office, 2000 Simcoe Street North, Oshawa, ON L1G 0C5,
email: accessandprivacy@ontariotechu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand, and agree to the terms and conditions under which the technology provider(s) may collect, use, disclose and retain your personal information. You agree to the university using the technologies and using your personal information for the purposes described in this course outline.

19. Freedom of Expression

Pursuant to Ontario Tech's Freedom of Expression Policy all students are encouraged to express ideas and perspectives freely and respectfully in university space and in the online university environment, subject to certain limitations. Students are reminded that the limits on Freedom of Expression include speech or behaviour that: is illegal or interferes with the university's legal obligations; defames an individual or group; constitutes a threat, harassment or discrimination; is a breach of fiduciary, contractual, privacy or confidentiality obligations or commitments; and unduly disrupts and interferes with the functioning of the university. In the context of working online, different forms of

communication are used. Where permitted, students using “chat” functions or other online forms of communication are encouraged to ensure that their communication complies with the Freedom of Expression Policy.

20. Student Course Feedback Surveys

Student evaluation of teaching is a highly valued and helpful mechanism for monitoring the quality of Ontario Tech University’s programs and instructional effectiveness. To that end, course evaluations are administered by an external company in an online, anonymous process during the last few weeks of classes. Students are encouraged to participate actively in this process and will be notified of the dates. Notifications about course evaluations will be sent via e-mail, and posted on Blackboard, Weekly News, and signage around the campus.

University Response to COVID-19

The government response to the COVID-19 pandemic is continually evolving. As new information becomes available from federal and provincial public health authorities, the Province of Ontario and the Regional Municipality of Durham, Ontario Tech University will remain nimble and prepared to respond to government orders, directives, guidelines and changes in legislation to ensure the health and safety of all members of its campus community. In accordance with public health recommendations, the university may need to adjust the delivery of course instruction and the availability and delivery mode of campus services and co-curricular opportunities. Ontario Tech University appreciates the understanding and flexibility of our students, faculty, and staff as we continue to navigate the pandemic and work together to demonstrate our strong commitment to academic, research and service excellence during these challenging and unprecedented times.

Faculty of Social Science & Humanities

SOCI1000: Introductory Sociology
Course outline for Winter 2022

1. Course Details & Important Dates*

Term	Section	Course Type	Day	Time
W	002	Lecture	ONLINE Synchronous	By Tuesdays (watch pre-recorded lecture) 3:10 Tuesdays (optional tutorial hour)

Location	CRN #	Classes Start	Classes End	Final Exam
ONLINE	70484	Jan 17	Apr 11	Before Apr 22

* for other important dates go to: www.uoit.ca >Current Students >Important Dates

2. Instructor Contact Information

Instructor Name	Office	Phone	Email
Dr. Timothy MacNeill	N/A	N/A	timothy.macneill@uoit.ca
Office Hours: By appointment			

Laboratory/Teaching Assistant Name	Email
TBA	
Office Hours: By Appointment	

3. Course Description

Foundational topics in sociological research and theory will be discussed. These include socialization, culture, inequality, the economy, the environment, gender, race, sexuality, and globalization. The course will also emphasize sociological theory and research, which will be practiced via a short research paper.

4. Learning Outcomes

On the successful completion of the course, students will be able to:
Understand and explain the key concepts and debates in sociology. Critically reflect on the biggest problems of our world using an evidence/science based method. Create a sociological research paper.

5. Course Design

Students will view pre-recorded lectures (in "Media Gallery") and follow along with Power Point slides (in "Files") while making their own notes.

Students may take part in an optional tutorial hour at 1:10 on Tuesdays via "Big Blue Button" link (on the left in Canvas)

Students will also need to link to web-based content from the lecture slides (they will be told when to do so during the pre-recorded lecture). They will also complete required readings.

Pre-recorded lectures will be provided in the "Media Gallery" section on the course's Canvas page. Each class topic has an associated weekly discussion assignment. There is a midterm and final test plus a research paper.

6. Lecture Outline, Discussion Dates, and Readings:

For each class/lecture, there is usually a reading and associated discussion group assignment with a firm due date. All of this is listed in the chart on the following page. Readings are listed for both the 3rd and 4th editions of the textbook, so you can use either of those. Details on the assignments and tests are discussed in **section 8 and section 9** of this syllabus.

Discussion Post Due Date:	**CLASS TOPICS**	**READINGS**
Jan 17	Intro The Social Brain	No Reading No Reading
Jan 24	What is Sociology	Chapter 1
Jan 31	Culture and Socialization	**Chpt 2 (4th edition)** Or Chpt 2 (32-45 3rd edition) Chpt 3 (58-70 3rd edition)
Feb 7	Inequalities of Class, Gender, Ethnicity	**Chpt 6 (4th edition)** Or Chpt 6 (126-130 3rd ed.) Chpt 7 (133-146 3rd ed.) Chpt 8 (158-164 3rd. ed.)
Feb 14	**Mid-Term (25%)** **Due by 11:59pm; ONLINE** (Canvas)	**No Reading or Discussion**
Feb 21	FALL STUDY WEEK – No assignment	
Feb 28	Mass Media and Communication	Chpt 16 (4th edition) Or Chptr 17 (3rd edition)
Mar 7	Deviance and Counterculture	Chapter 5
Mar 14	Families, Love, Relationships **Research PAPER DUE!! (30%) SUBMIT ONLINE** (Canvas)	Chapter 9
Mar 21	Religion	Chapter 12 (4th Edition) Or Chapter 13 (3rd Edition)
Mar 28	Politics and Social Movements	Chapter 13 (4th edition) Or Chapter 14 (3rd edition)
Apr 4	Population, Urbanization, Environment	(Chapter 15 (4th edition) Or Chapter 16 (3rd edition)
Apr 11	Globalization and Social Change	Chapter 14 (4th edition) Or Chapter 15 (3rd edition)
	FINAL EXAM (Due by Apr 22, 11:59pm); 35%; non-cumulative	

7. Required Texts/Readings

Tepperman & Curtis. (2013). *Principles in Sociology, 4th Edition*. Toronto: Oxford University Press.
https://www.amazon.ca/Principles-Sociology-Perspectives-Lorne-Tepperman/dp/0199023735/ref=dp_ob_image_bk

- Note: you may use a 3nd Edition if you find a used one – some page numbers might change however.

8. Evaluation Method

Discussion (10%) –	Post 1 comment and 1 response for each topic. **Due by 11:59pm pm the due date for each week.** Late or missed discussions will get a 0 No extensions You may miss 1 topic, or gain 1 bonus point if all are completed.
Mid-term test (25%) –	Multiple choice; **Due by Feb 14, 11:59pm** 75 minutes / 50 questions
Research Paper (30%) –	Instructions provided on Canvas "Files" section. **Due Mar 14, by 11:59pm**
Final test (35%) –	**M**ultiple choice (not cumulative) **Due Apr 22, 11:59pm** 90 minutes / 70 questions

9. Assignments and Tests

Graded Discussion Posts (1 per lecture topic – up to 10 points)
Each class topic discussion post has a strict due date. This is listed beside class topics in the class schedule (above here in the syllabus). You must submit before 11:59pm on that date. For each lecture topic, you will be required to submit at least two comments in the discussion (available through either the course home page or discussions page).

Details: After viewing the associated lecture and doing the readings, you are to post 1 answer to the question in the week's discussion associated with this class' topic (worth 1/2 point). Then you must post at least one response to another student's post (worth 1/2 point). Posts must be at least THREE SENTENCES long.

There is no right or wrong answer for posts, but students are required to - at minimum - show that they read and understood readings and lectures. Students must also be able to debate in a respectful, non-offensive, non-personal, way. Any student being disrespectful or inappropriate to others will lose their points for that topic's post.

Students must post comments for 10 out of the 11 course topic sections to receive the full 10 points. Thus, students may miss one discussion during the run of the course. If a student completes all 11 discussions properly, they will receive 11/10 points – in other words: one bonus point will be applied.

Each discussion has a due date. All comments must be posted before the listed due date. Students who miss will not be given a chance to post late.

Mid Term Test (25%) and Final Test (35%):
The midterm test will be 50 multiple choice or T/F questions (worth ½ point each), online, and you will have 75 minutes to complete (1.5 minutes per question). This time restriction is meant to require you to study instead of just look up the answers in your notes. You likely will not be able to complete the exams on time if you have not studied the material. You will be required to complete the midterm by 11:59pm on October 19th. Once started, you will have 75 minutes to complete. Be sure you begin so that you are able to complete the test before the deadline.

The final test will cover only material since the mid-term and not before. It will consist of 70 multiple choice or T/F questions (worth ½ points each). To reward those who study, and prevent cheating, students will have about 85 seconds to complete each question. Once started, students will have 90 minutes to complete the entire test. You will be required to complete the final exam by 11:59pm on December 18th. Once started, you will have 90 minutes to complete. Be sure you begin so that you are able to complete the test before the deadline. This test window will be scheduled within the final exam period for the term.

Research Paper (30%):
Will be handed in electronically via Canvas. This will automatically be shared with Turnitin. See "Paper Instructions" document for details. Due on Nov 2 by 11:59pm.

Missed Course Work
If, due to incapacitating illness, you are unable to complete any portion of the term work, you must submit a completed UOIT Medical Statement to the Academic Advising Office within 5 business days of the missed exam/deadline. Please note: All UOIT Medical Statement forms must be completed, signed and dated by the treating physician no later than 24 hrs. after the missed exam/deadline. If the missed work is due to extreme compassionate circumstances (e.g., death in the family, etc.), relevant documentation is required. Please contact the Academic Advising Office for details.

If your documentation is approved, the student and the professor will be notified by email. All communication will be sent to the official UOIT.net email. It is the student's responsibility to follow up with the professor within 48 hrs. of receiving the approval from Academic Advising. It will be at the Professor's discretion to determine how the missed work will be addressed (e.g., re-writes, re-weight, extension, alternate assignment, etc.) and any late penalties (if applicable).

10. Accessibility

Students with disabilities may request to be considered for formal academic accommodation in accordance with the Ontario Human Rights Code. Students seeking accommodation must make their requests through Student Accessibility Services in a timely manner, and provide relevant and recent documentation to verify the effect of their disability and to allow the University to determine appropriate accommodations.

Accommodation decisions will be made in accordance with the Ontario Human Rights Code. Accommodations will be consistent with and supportive of the essential requirements of courses and programs, and provided in a way that respects the dignity of students with disabilities and encourages integration and equality of opportunity. [NOTE: Reasonable academic accommodation may require instructors to exercise creativity and flexibility in responding to the needs of students with disabilities while maintaining academic integrity.]

11. Academic Integrity

Students and faculty at UOIT share an important responsibility to maintain the integrity of the teaching and learning relationship. This relationship is characterized by honesty, fairness and mutual respect for the aims and principles of the pursuit of education. Academic misconduct impedes the activities of the university community and is punishable by appropriate disciplinary action.

Students are expected to be familiar with UOIT's regulations on Academic Conduct (Section 5.16 of the Academic Calendar) which sets out the kinds of actions that constitute academic misconduct, including plagiarism, copying or allowing one's own work to copied, use of unauthorized aids in examinations and tests, submitting work prepared in collaboration with another student when such collaboration has not been authorized, and other academic offences. The regulations also describe the procedures for dealing with allegations, and the sanctions for any finding of academic misconduct, which can range from a written reprimand to permanent expulsion from the university. A lack of familiarity with UOIT's regulations on academic conduct does not constitute a defense against its application.

Further information about academic misconduct can be found in the Academic Integrity link on your laptop. Extra support services are available to all UOIT students in academic development, study skills, counseling, and peer mentorship. More information on student support services can be found in the Academic Calendar (Section 8).

13. Turnitin

We will use Turnitin to detect and help prevent plagiarism. Students agree that by taking this course all assignments are subject to submission for textual similarity review by Turnitin.com. Assignments submitted to Turnitin.com will be included as source documents in Turnitin.com's restricted access database solely for the purpose of detecting plagiarism in such documents for five academic years. The instructor may require students to submit their assignments electronically to Turnitin.com or the instructor may submit questionable text on behalf of a student. The terms that apply to UOIT's use of the Turnitin.com service are described on the Turnitin.com website.

Students who do not wish to have their work submitted to Turnitin.com must inform their instructor at the time the work is assigned and provide, with their assignment, a signed Turnitin.com Assignment Cover sheet.

FACULTY OF SOCIAL SCIENCE AND HUMANITIES

70502 – SSCI 2920U – 003: QUALITATIVE RESEARCH METHODS

WINTER 2021

1. Course Details & Important Dates*

Term	Course Type	Day	Time	Location
W	Lecture	***ONLINE***	***Thursdays***	***Canvas***

Classes Start	Classes End	Final Exam Period
January 4, 2021	April 12, 2021	April 14 to 25, 2021

* For other important dates go to:
https://uoit.ca/current-students/academics/important-dates-and-deadlines.php

2. Instructor Contact Information

Instructor Name	Email	Office Hours
Dr. Vivian Stamatopoulos	Vivian.stamatopoulos@uoit.ca	By Appt only (using face-face google meet)

Teaching Assistants	Email	Office Hours
Natalie Azzi	natalie.azzi1@ontariotechu.net	Thurs 3:00pm-4:00pm

3. Course Description

This course is designed to provide undergraduate students an interactive, first-hand experience in planning, conducting and analyzing their own qualitative social science research. Working alongside the instructor, the students will select a special topic of interest and work throughout the semester to explore the issue in more depth using a variety of qualitative research techniques. By the end of the course, students will be able to: (1) determine which areas of investigation are best suited to qualitative methods; (2) Identify the strengths and weaknesses of various qualitative research techniques, and (3) analyze and report original qualitative data.

4. Course Text/Readings

RECOMMENDED (not required):
Van den Hoonaard, D. (2018). Qualitative Research in Action: A Canadian Primer. Third Edition. Oxford University Press. Social Science Library Call Number H 62 .V33 2018 (on reserve: 3hr loan).

*Any additional readings will be assigned in class can be retrieved from the library website.

5. Course Design

Assignment	Weight	Due Date
Test 1	25%	Week 04 – January 28
Test 2	25%	Week 07 – February 25
Transcription Assignment	15%	Week 10 – March 18
Final Assignment (no final exam)	25%	Week 12 – April 1 (due on last day)
Lecture-based mini assignments	15%	Ongoing (you must tune in every week to find out if there will be one)

Exams: Each exam will be worth 25% of your final grade. Exams will consist of multiple choice, and true-false questions. Exams are NOT cumulative. *ONLINE EXAMS ARE TIMED AND OPEN BOOK (90 mins)*

Final Assignment: The final assignment can be completed individually or in groups (up to you!). This final paper revolves around the in-class focus group based on a topic chosen by the class. The paper involves a formal analysis and write-up of the data from the focus group. A more detailed assignment handout will be provided to students after the second exam. *Note: Plagiarism will not be tolerated in this course and will result in a final assignment grade of 0 and a referral to the committee on academic misconduct.*

Focus Group: A small number of students will be selected to participate in an online focus group moderated by your professor (Dr. Vivian). The topic will be chosen by students via what is of interest to them and the focus group will be audio-recorded for the subsequent transcription and final paper assignments.

Transcription Assignment: Students will be required to provide a full transcription of the class-based focus group. Submitted transcriptions will be graded based on their level of detail and clarity. Successful completion of this assignment is necessary for the subsequent analytical and write-up stage required for your final assignments.

Lecture-based mini assignments: Small mini-assignments will be assigned after key lectures to help build and apply developing skills. I will NOT tell you ahead of time when these will occur so to provide you with an incentive to stay up to date each week. These short assignments will be due by MIDNIGHT on the days they are assigned. *No make-ups for these as they are meant to measure weekly attendance.*

6. Weekly Outline

Week 1: January 7: Introduction to the Course
Required reading: Chapters 1

Week 2: January 14: Foundations (Assumptions, Goals & Design Approaches)
Required reading: Chapter 2, 3

Week 3: January 21: Ethics and Qualitative Research
Required reading: Chapter 4

Week 4: January 28: Exam 1 (You can write anytime today between 6:00am-11:59pm)

Week 5: February 4: Field Research & Unobtrusive Research
Required reading: Chapter 5, 8
Supplementary Reading 1: DuRant, R. H., Rome, E. S., Rich, M., Allred, E., Emans, S. J., & Woods, E. R. (1997). Tobacco and alcohol use behaviors portrayed in music videos: a content analysis. *American Journal of Public Health*, 87(7), 1131-1135.

Week 6: February 11: Focus Groups & In-depth Interviewing
Required reading 1: Chapter 6, 7 (text)
Required reading 2: Elliot, H. (2005). Guidelines for conducting a Focus group. *American Journal for Researchers*, 1-10.
Supplementary reading 1: Redmond & Curtis Redmond, R. A., & Curtis, E. A. (2009). Focus groups: principles and process: *Nurse Researcher*, 16(3), 57-69.

********** February 16 to 21: MIDTERM BREAK, NO LECTURES **********

Week 7: February 25: Exam 2 (same window/format at exam 1)

Week 8: March 4: In-Class Focus Group (no lecture for everyone else)
***Students will be randomly selected on a volunteer basis (with a reward to those who participate)

Week 9: March 11: Analyzing Qualitative Data
Required reading: Chapter 9
Supplementary Reading 1: Bailey, J. (2008). First steps in qualitative data analysis: transcribing. *Family practice, 25(2), 127-131.*
Your TA and I will have office hours this week to help with transcription reports.

Week 10: March 18: Writing Up Qualitative Data
Required reading: Chapter 10
***Transcription Assignment Due on Canvas by midnight.**

Week 11: March 25: Paper Work Day (no lecture)
**Note: I will hold extended office hours today to answer any student inquiries re: the papers. You can also use this time to get extra writing help from the amazing team at the Writing Centre: https://studentlife.ontariotechu.ca/services/academic-support/dropins-and-workshops/writing-room.php*

Week 12: April 1: Final Paper due on Canvas (due before midnight)

7. Missed Assessments

EXAMS:

Students have the full (up to midnight) to complete each module test so I don't anticipate any absences and only provide exceptions in serious circumstances where documentation must be provided.

- **IF AN EMERGENCY OCCURS, you MUST *alert the teaching team (professor/TA) before the same day midnight deadline (NOT the next day).***

MINI LECTURE-BASED ASSIGNMENTS

**** NO MAKE-UPS ****

- This is an incentive for students to stay up to date each class with material. If you do, then you will be able to complete the assignments. If you do not, that is your choice to receive 0 on those. This is not intro Methods and I expect more independence and initiative from my higher level students ☺

1. **TRANSCRIPTION AND FINAL PAPERS:**
2. Students will receive a late penalty of 5% per day (includes sat/sun.) for up to five days.
3. After the fifth day, any missed submissions will receive a mark of ZERO.

8. Course Communication

I ask that you reserve your help questions for your TAs weekly google meet office hours (Natalie is lovely and wants to help so do not hesitate!). You may also email me (your professor) but I ask that you remember I have several courses so I need SPECIFIC DETAILS provided to me in any course emails:

My email: Vivian.stamatopoulos@uoit.ca

1. Let me know which class this email is in reference to ☺
2. Please use FULL sentences and always provide a respectful opener and signing off note ***(it's rude to start an email with a question without first greeting your email recipient e.g., Dear TA, Professor etc.,). This should be common sense, after all.***
3. Please sign off on your email stating your FULL NAME.
4. Be concise and courteous. Review what you have written before you hit send button. "Hey Prof", "Yo", etc. do not qualify as appropriate language for academic correspondence or writing.

Notes:

- Emails that ask a question your professor has ALREADY answered in the syllabus or previous course announcements will not be answered.
    - Please make sure you READ ALL COURSE ANNOUNCEMENTS since I likely have provided the information you are looking in existing announcements.
- Exam days: We do not answer emails on exam days since students are writing at various times.
    - Exam-related help emails must come in prior to 6pm the day before each exam.

Final note: To help maintain work/life balance, both my TA and I will only answer emails up to 6pm on weekdays. That said, you should start your post-lecture assignments EARLY IN THE DAY as we cannot help in the evenings due to our own family obligations ☺

9. Student Support

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact studentlife@uoit.ca for support. Furthermore, please notify your professor if you are comfortable in doing so. This will enable them to provide any resources and help that they can.

10. Sexual Violence Support and Education

Ontario Tech is committed to the prevention of sexual violence in all is forms. For any student who has experienced Sexual Violence, Ontario Tech can help. We will make accommodations to cater to the diverse backgrounds, cultures, and identities of students when dealing with individual cases.

If you think you have been subjected to or witnessed sexual violence:

- Reach out to a Support Worker, a specially trained individual authorized to receive confidential disclosures about incidents of sexual violence. Support Workers can offer help and resolution options which can include safety plans, accommodations, mental health support, and more. To make an appointment with a Support Worker, call 905.721.3392 or email studentlife@uoit.ca
- Learn more about your options at: https://studentlife.uoit.ca/sexualviolence/

11. Students with Disabilities

Accommodating students with disabilities at Ontario Tech is a responsibility shared among various partners: the students themselves, SAS staff and faculty members. To ensure that disability-related concerns are properly addressed during this course, students with documented disabilities and who may require assistance to participate in this class are encouraged to speak with me as soon as possible. Students who suspect they have a disability that may affect their participation in this course are advised to speak to the Student Accessibility Services (SAS) as soon as possible.

Students taking courses on north Oshawa campus can visit Student Accessibility Services in UL Building, Room 2 (located near the library). Students taking courses on the **downtown Oshawa campus** can visit Student Accessibility Services in the 61 Charles St. Building, 2nd Floor, Room DTA 225 in the Student Life Suite. Disability-related and accommodation support is available for students with mental health, physical, mobility, sensory, medical, cognitive, or learning challenges. For more information on services provided, you can visit the SAS website at https://studentlife.uoit.ca/services/accessibility/index.php

Students may contact Student Accessibility Services by calling 905-721-3266, or email studentaccessibility@uoit.ca.

12. Academic Integrity

Students and faculty at Ontario Tech University share an important responsibility to maintain the integrity of the teaching and learning relationship. This relationship is characterized by honesty, fairness and mutual respect for the aim and principles of the pursuit of education. Academic misconduct impedes the activities of the university community and is punishable by appropriate disciplinary action.

Students are expected to be familiar with and abide by Ontario Tech University's regulations on Academic Conduct which sets out the kinds of actions that constitute academic misconduct, including plagiarism, copying or allowing one's own work to copied, use of unauthorized aids in examinations and tests, submitting work prepared in collaboration with another student when such collaboration has not been authorized, among other academic offences. The regulations also describe the procedures for dealing with allegations, and the sanctions for any finding of academic misconduct, which can range from a resubmission of work to a failing grade to permanent expulsion from the university. A lack of familiarity with these regulations on academic conduct does not constitute a defense against its application. This information can be found at http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Academic_conduct

13. Freedom of Information and Protection of Privacy Act

The following is an important notice regarding the process for submitting course assignments, quizzes and other evaluative material in your courses in the Faculty of Social Sciences and Humanities.

As you may know, Ontario Tech University is governed by the Freedom of Information and Protection of Privacy Act ("FIPPA"). In addition to providing a mechanism for requesting records held by the university, this legislation also requires that the University not disclose the personal information of its students without their consent. FIPPA's definition of "personal information" includes, among other things, documents that contain both your name and your Banner (student) ID. For example, this could include graded test papers or assignments. To ensure that your rights to privacy are protected, the Faculty of [Insert Faculty name] encourages you to use only your Banner ID on assignments or test papers being submitted for grading. This policy is intended to prevent the inadvertent disclosure of your information where graded papers are returned to groups of students at the same time. If you still wish to write both your name and your Banner ID on your tests and assignments, please be advised that Ontario Tech University will interpret this as an implied consent to the disclosure of your personal information in the normal course of returning graded materials to students. If you have any questions or concerns relating to the new policy or the issue of implied consent addressed above, please contact accessandprivacy@uoit.ca

14. Student Course Feedback Surveys

Student evaluation of teaching is a highly valued and helpful mechanism for monitoring the quality of Ontario Tech University's programs and instructional effectiveness. To that end, course evaluations are administered by an external company in an online, anonymous process during the last few weeks of classes. Students are encouraged to participate actively in this process and will be notified of the dates.

FACULTY OF SCIENCE

STAT2020U: Statistics & Probability for Biological Science

Course outline for Fall, 2022

1. Course Details & Important Dates*

Course Type	CRN	Day	Time	Location
*HYW In person & online	40414	Thursday Friday	5:10-6:30 pm Virtual (online)	SIRC2060 online video

Classes Start	Classes End	Final Exam Period
Sept 6, 2022	Dec 5, 2022	Dec 7 – 16, 2022

See below "Outline of Topics in this Course" for a detailed week by week breakdown of both online and in class lectures.

* for other important dates go to: www.ontariotechu.ca >Current Students >Important Dates and Deadlines

Important Note – Final Exams

The final exam for this course is planning to run ON CAMPUS during the regular final exam period. However, the final exam for this course **may** run virtually during the regular final exam period. If this is the case, students may have an option to book a formal space on campus should they wish. If a student wishes to write on campus you **must submit a request through the link:** Final Examination: On-campus Space Request **ASAP** regarding the possibility of alternate arrangement.

2. Instructor Contact Information

Instructor Name	Office	Phone	Email
Paula Di Cato (section 001)	UA3018	Ext. 2825	Please use Canvas E-mail
Office Hours: Monday's from 1:10-2:30pm (virtually at the following google meet link: https://meet.google.com/nvs-mwar-ume) and Tuesday's from 12:40-2:00pm in UA3018. Please see office hours link in Canvas on the main page as these may change from week to week.			
Grader/Teaching Assistant Name	Office	Phone	Email
Ruth Li	UA4280	N/A	Please use Canvas E-mail
Office Hours: Please see office hours link in Canvas on the main page.			

3. Course Description

This course introduces the concepts and techniques of statistics and probability to collect, present, analyze and interpret data, and make decisions in the presence of variability. Students study a selection of topics relevant to biological science, selected from: basic concepts of probability theory: events, sample spaces, probability; basic concepts of discrete mathematics: set theory, propositional logic, combinatorics; probability: marginal probability, conditional probability, independence, discrete and continuous random variables; probability distributions: binomial, exponential, uniform, normal, etc.; mean and variance; the central limit theorem; statistical inference: estimation, significance tests, confidence intervals; Chi Square Tests; introduction to experimental design. Introduction to correlation and regression.

4. Learning Outcomes

On the successful completion of the course, students will be able to:
Describe, interpret and analyze data. Calculate summary statistics such as central tendencies, dispersion, quartiles and percentiles. Graphically display data using histograms, stem-and-leaf plots and boxplots. Describe shape and skewness of data. Compute the probability of an event, marginal, joint and conditional probabilities. Describe the concept of random variables, and setting up a discrete mass function. Identify a variety of probability distributions, both discrete and continuous and the ability to calculate various probabilities, and distribution summary statistics. Computing confidence intervals for both large and small sample sizes based on a single mean. Distinguish between independent, paired or pooled data and calculating confidence intervals based on the difference between two means. Write a testable hypothesis and explain the difference between the null and alternative hypothesis. Define statistical significance and explain the meaning of a p-value. Carry out a hypothesis test for univariate (large and small sample size), bivariate data (independent, paired or pooled) and multivariate data. Describe the purpose and calculate Pearson Correlation Coefficient as well as the least squares line and goodness of fit. Applying all learning outcomes stated above in SAS (statistical analysis system).

5. Course Design

Each week you will have 1 in-class lecture and 1 online video lecture made available to you through canvas. Your 1st in class lecture is Thursday, Sept 8. Your online lecture is a video lecture pre-recorded in Camtasia and will be posted Friday of each week (your 1st video lecture is Friday Sept 9). The online lectures posted each Friday will be accessible throughout the duration of the course. A total of 6 online timed quizzes (in Mobius) will be completed throughout the duration of the course, consisting of 10 multiple choice/true false/fill in the blank questions (see below “Assignment and Tests” to view a detailed breakdown of quiz dates). 5 assignments will be completed based on the material taught throughout the course. Pop quizzes in lecture will allow for practice and feedback. SAS software will be used near the end of the semester in lectures, quizzes and assignments. One midterm and 1 final exam.

6. Outline of Topics in the Course

Week 1 (Sept 5-9) *Chapter 1: Data and Distributions*

In-class lecture 1, Thursday Sept 8:
- Data, Populations and Samples (Section 1.1);
- Histograms and Stem and Leaf Plots (Section 1.2).

Video lecture 2 posted Friday Sept 9:
- Histograms and Stem and Leaf Plots – Cont'd (Section 1.2);
- Continuous Distributions (Section 1.3).

Week 2 (Sept 12-16) *Chapter 1: Data and Distributions*

In-class lecture 3, Thursday Sept 15:
- Discrete Distributions – Cont'd (Section 1.3).

Video lecture 4 posted Friday Sept 16:
- Standard Normal and Nonstandard Normal Distribution (Section 1.4).

Week 3 (Sept 19-23) *Chapter 1: Data and Distributions & Chapter 2: Measures of Center*

In-class lecture 5, Thursday Sept 22:
- Binomial Distribution (Section 1.6);
- Measures of Center for Data and Distributions (Section 2.1).

Video lecture 6 posted Friday Sept 23:
- The Mean and Median of Continuous Distributions (Section 2.1);
- Measures of Variability (Section 2.2).

Week 4 (Sept 26-30) *Chapter 2: Measures of Center & Chapter 3: Bivariate and Multivariate Data and Distributions*

In-class lecture 7, Thursday Sept 29:
- Quartiles and the Interquartile Range, Boxplots and outliers (Section 2.3).

Video lecture 8 posted Friday Sept 30:
- Bivariate Data (Section 3.1);
- Correlation, Pearson's Sample Correlation Coefficient and Causation (Section 3.2);
- Fitting a line to Bivariate Data (Section 3.3).

6. Outline of Topics in the Course cont…

Week 5 (Oct 3-7) *Chapter 3: Bivariate and Multivariate Data and Distributions & Chapter 5: Probability and Sampling Distributions*

In-class lecture 9, Thursday Oct 6:
- The Least Squares Regression Line and Assessing the Fit of the Least Squares Line (Section 3.3);
- Plotting the Residuals (Section 3.3).

Video lecture 10 posted Friday Oct 7:
- Probability, sampling space and events (Section 5.1);
- Operations on Events and Associated Rules of Probability (Section 5.2).

Reading Week (Oct 10-14) *Co-curricular period*

No lecture during Co-curricular period (No lectures Oct 10-14)

Week 6 **(Oct 17-21)** *Chapter 5: Probability and Sampling Distributions*

In-class lecture 11, Thursday Oct 20:
- Conditional Probability and Independence (Section 5.3);
- Random Variables and Probability Distributions (Section 5.4).

Video lecture 12 posted Friday Oct 21:
- Mean and Variance of a Random Variable (Section 5.4);
- Sampling Distributions (Section 5.5);
- The Mean, Variance and Standard Deviation of the Sample Mean (Section 5.6).

Week 7 (Oct 24-28) *Chapter 5: Probability and Sampling Distributions & Chapter 7: Estimation and Statistical Intervals*

In-class lecture 13, Thursday Oct 27:
- The Central Limit Theorem, empirical rule and continuity correction (Section 5.6).

Video lecture 14 posted Friday Oct 28:
- Large-Sample Confidence Intervals for a Population Mean (Section 7.2);
- 95% Confidence Interval, Other Confidence Levels and a General Formula and Sample Size Formula (Section 7.2).

Week 8 (Oct 31 - Nov 4) *Chapter 7: Estimation and Statistical Intervals*

MIDTERM IN-CLASS ON THURSDAY, NOV 3

Video lecture 15 posted Friday Nov 4:
- Large-Sample One sided Confidence Intervals (Section 7.2);
- Large-Sample Confidence Intervals for a Population Proportion and Sample Size Formula (Section 7.3);
- The t-Distribution and Small-Sample t Confidence Interval (Section 7.4).

6. Outline of Topics in the Course cont…

Week 9 (Nov 7-11) *Chapter 7: Estimation and Statistical Intervals & Chapter 8: Testing Statistical Hypotheses*

In-class lecture 16, Thursday Nov 10:
- The t-Distribution and Small-Sample t Confidence Interval – Cont'd (Section 7.4);
- Hypothesis Testing, Type I and Type II Error and p-values (Section 8.1).

Video lecture 17 posted Friday Nov 11:
- Hypothesis Testing, Type I and Type II Error and p-values – Cont'd (Section 8.1);
- Tests Concerning a Single Mean (Section 8.2).

Week 10 (Nov 14-18) *Chapter 8: Testing Statistical Hypotheses*

In-class lecture 18, Thursday Nov 17:
- Tests Concerning a Single Mean – Cont'd (Section 8.2);
- Tests Concerning a Difference Between Two Means: Paired Data (Section 8.2).

Video lecture 19 posted Friday Nov 18:
- Tests Concerning a Difference Between Two Means: Independent Data (Section 8.2);
- The Pooled Two-Sample t Procedure (Section 8.2).

Week 11 (Nov 21-25) *Chapter 8: Testing Statistical Hypotheses*

In-class lecture 20, Thursday Nov 24:
- The Pooled Two-Sample t Procedure – Cont'd (Section 8.2);
- Review of all hypothesis procedures;
- Chi-Squared Test for Independence (Section 8.3).

Video lecture 21 posted Friday Nov 25:
- Chi-Squared Test for Independence – Cont'd (Section 8.3);
- Chi-Squared Test for Comparing Several Populations (Section 8.3).

Week 12 (Nov 28- Dec 2) *SAS Statistical Program*

In-class lecture 22, Thursday Dec 1:
- Introductory to SAS;
- Understanding the Basic Concepts of SAS;
- Univariate analysis in SAS (histogram/boxplot/stem and leaf), Correlation and Regression in SAS, Single Mean Hypothesis in SAS.

Video lecture 23 posted Friday Dec 2:
- Understanding How to Read SAS output;
- Ability to interpret SAS output;
- Paired/Independent/Pooled Hypothesis and Confidence intervals in SAS, Chi Square Test in SAS.

7. Required Texts/Readings

REQUIRED:
Applied Statistics FOR ENGINEERS AND SCIENTISTS, Devore – Farnum - Doi, Third Edition, CENGAGE Learning Nelson Education, 2014. ISBN 113311136X.

RECOMMENDED/OPTIONAL:

Student Solutions Manual For Devore – Farnum - Doi 3rd ed. Applied Statistics for Engineers and Scientists. 2014. ISBN 1133492185.

Note: All homework questions and full homework solutions are available in Canvas.

The text and solution manual is available on reserve at the library.

Additional readings may be assigned or recommended during the course.

8. Evaluation Method

The course mark will be calculated as follows:

In lecture pop quizzes: 10%
Online quizzes: 10%
Assignments: 10%
Midterm: 30% **(Thursday, November 3 – in class)**
Final Exam: 40%

IMPORTANT: You may be required to use Respondus Lockdown Browser and Monitor for the midterm and Final Exam. This will require a working webcam. You must show your student ID.

Final course grades may be adjusted to conform to program or Faculty grade distribution profiles. Further information on grading can be found in Section 5 of the Ontario Tech Academic Calendar.

9. Assignments and Tests

In lecture Pop Quizzes:
These short quizzes will take place using Canvas and must be completed in your in-class lecture section. They will not be announced in advance, and can occur at any point during the in-class lecture but will typically occur at the end of lecture. They will be completed in groups. The lowest *two* in lecture pop quizzes will not count towards your final grade.

9. Assignments and Tests cont…

Online Quizzes:

Online quizzes will be completed in Mobius and are to be completed individually. There will be 6 online quizzes throughout this course. Your *single* lowest quiz will be dropped. Quizzes will consist of 10 multiple choice/fill in the blank questions and you will have 30 minutes to complete each quiz. Each quiz will be made available for ~3 days, and you have TWO attempts at each quiz (this is to account for possible technical issues or syntax mistakes, so if you experience an issue, please just re-take the quiz – we will not make changes to scores). Your best attempt counts. The quiz schedule is as follows:

Quiz 1 – covers lectures 1, 2, 3 and 4. Must be taken sometime between 7pm Friday September 16 and 7pm Monday September 19.

Quiz 2 – covers lectures 5, 6 and 7. Must be taken sometime between 7pm Friday September 30 and 7pm Monday October 3.

*Quiz 3 – covers lectures 8 and 9. Must be taken sometime between 7pm Friday October 14 and 7pm Tuesday October 18. Extended 1 day due to reading week.

*Quiz 4 – covers lectures 10, 11, 12 and 13. Must be taken sometime between 7pm Friday October 28 and 7pm Monday October 31. (3 attempts for this quiz)

Quiz 5 – covers lectures 14, 15, 16, 17, 18 and 19. Must be taken sometime between 7pm Friday November 18 and 7pm Monday November 21.

Quiz 6 – covers lectures 20, 21 and 22. Must be taken sometime between 7pm Friday December 2 and 7pm Monday December 5.

Assignments:

Assignments are to be completed individually. There will be 5 assignments throughout this course. Your *single* lowest assignment will be dropped. **There are 2 forms of submission for your assignments, please read carefully:** Assignment 1, Assignment 4 and Assignment 5 are to be submitted to your grader/teaching assistants dropbox (Ruth Li) located on the 4th floor of the UA building (near the west atrium). Be sure to submit your assignment on time and to the correct drop box. The dropbox closes precisely at the due date/time and late assignments are not accepted in this course. Assignments submitted into the incorrect drop box are not accepted in this course. Your drop box is labelled **Ruth Li – STAT 2020**

Assignment 2 and Assignment 3 will be submitted as a quiz format within Canvas and final answers are graded only. You must submit your final answers via the quiz format within Canvas on time as the Assignment quiz closes precisely at the due date/time.

9. Assignments and Tests cont…

Here is the assignment schedule:

-Assignment 1 is posted on Friday, Sept 9 and is due on Friday, Sept 23 at 5:00pm in Ruth Li's drop box

-Assignment 2 is posted on Friday, Sept 23 and is due on Friday, Oct 7 at 5:00pm in Canvas Assignment 2 quiz submission

-Assignment 3 is posted on Friday, Oct 7 and is due on Friday, Oct 28 at 5:00pm in Canvas Assignment 3 quiz submission

-Assignment 4 is posted on Friday, Oct 28 and is due on Friday, Nov 18 at 5:00pm in Ruth Li's drop box

-Assignment 5 is posted on Friday, Nov 18 and is due on Friday, Dec 2 at 5:00pm in Ruth Li's drop box

NOTE: Regarding missed work:

If you miss an online quiz, in lecture pop quiz or an assignment, then you receive a 0 on it. We recognize that times may arise when you are forced to miss a quiz/assignment, but it is for this very reason that the single lowest online quiz mark, 2 lowest in lecture pop quizzes and the single lowest assignment mark is dropped. This is extremely generous, so no notes will be accepted for missed quizzes and/or assignments. This policy applies to all students.

Midterm Tests and Final Exam:

The midterm and final exam may be done online through Respondus Lockdown Browser and Monitor. A webcam and strong internet access is necessary to complete these tests if it is decided that the test in done online through Respondus Lockdown Browser and Monitor, otherwise the tests are done in class on paper. A non-graphing, non-programmable calculator is permitted. The final exam will test all material covered in the course. The midterm test and final exam may consist of a hand written component OR a timed multiple choice component OR a combination of both. You will be provided a formula sheet for both the midterm and the final exam.

9. Assignments and Tests cont…

Missed Tests (Midterm or Final Exam):

The new Covid-19 policy on missed (midterm and other) tests is as follows: If you miss a test for a legitimate reason and can provide appropriate documentation, you will not be penalized. Legitimate reasons are illness or death in the family, and appropriate documentation is an Academic Consideration Form or a photocopy of a death certificate. For information about the deadline and associated process, please contact Science Advising immediately (science.advising@ontariotechu.ca). The usual accommodation for a missed midterm test will be to re-weight the grading scheme to allocate the missed test mark to the final exam mark.

If you miss a test without a legitimate reason or do not provide the proper documentation, you will receive a mark of zero. If the test is written, the decision is irreversible. If you are contemplating not writing a test for any reason, please speak to the science academic advisor in advance of the test, as well as informing the instructor.

For further policies and information relating to the Faculty of Science and this course, please refer to https://science.ontariotechu.ca/undergraduate/current-students/academic-policies.php

You can also find the answers to many frequently asked advising questions at: https://science.ontariotechu.ca/undergraduate/current-students/academic-advising/faqs/

10. Technology Requirements

Ontario Tech uses *Canvas*™ as its learning management system (LMS). Access to the LMS is limited to students formally registered in courses. That access is for the duration of the semester **and for an additional 120 days once the semester is over**. Students are strongly encouraged to download any/all relevant course material during that access period. Any requests for access post this period must be made in writing to the instructor/faculty member responsible for the course.

To support online learning, the university recommends certain technology requirements for laptops, software and internet connectivity which are available at: https://itsc.ontariotechu.ca/remote-learning.php.

Students experiencing technical difficulties such that they are unable to meet the technology requirements may contact the IT Service Help Desk at: servicedesk@dc-uoit.ca
Students experiencing financial difficulties such that they are unable to meet the technology requirements may contact Student Awards and Financial Aid Office at: connect@ontariotehu.ca

By remaining enrolled in this course, you acknowledge that you have read, understand and agree to observe the Recommended Technology Requirements for accessing university online learning resources, including those minimum requirements that are specific to your faculty and program.

11. Sensitive/Offensive Subject Matter

The classroom (both physical and virtual) is intended to provide a safe, open space for the critical and civil exchange of ideas and opinions. Some articles, media and other course materials may contain sensitive content that is offensive and/or disturbing. For example, some articles or videos may contain human anatomy, matters pertaining to race, gender, or sexuality. The Course Instructor will try to identify such material and communicate warnings to students in advance of the distribution and use of such materials, affording students the choice to either emotionally prepare for, or not to view or interact with, the content. The warning will be: "The content you are about to view contains sensitive subject matter that may be considered offensive and/or disturbing to some viewers. By viewing and/or interacting with the content you acknowledge and agree that it is your decision to view and interact with the content and to take the risk that you will experience a negative emotional response or reaction to the nature of the content."

12. Student Support

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact studentlife@ontariotechu.ca for support. Furthermore, please notify your professor if you are comfortable in doing so. This will enable them to provide any resources and help that they can.

13. Sexual Violence Support and Education

Ontario Tech is committed to the prevention of sexual violence in all is forms. For any student who has experienced Sexual Violence, Ontario Tech can help. We will make accommodations to cater to the diverse backgrounds, cultures, and identities of students when dealing with individual cases.

If you think you have been subjected to or witnessed sexual violence:

- Reach out to a Support Worker, a specially trained individual authorized to receive confidential disclosures about incidents of sexual violence. Support Workers can offer help and resolution options which can include safety plans, accommodations, mental health support, and more. To make an appointment with a Support Worker, call 905.721.3392 or email studentlife@ontariotechu.ca
- Learn more about your options at: https://studentlife.ontariotechu.ca/sexualviolence/

14. Students with Disabilities

Accommodating students with disabilities at Ontario Tech is a responsibility shared among various partners: the students themselves, SAS staff and faculty members. To ensure that disability-related concerns are properly addressed during this course, students with documented disabilities and who may require assistance to participate in this class are encouraged to speak with me as soon as possible. **Students who suspect they have a disability that may affect their participation in this course are advised to go to Student Accessibility Services (SAS) as soon as possible.** Maintaining communication and working collaboratively with SAS and faculty members will ensure you have the greatest chance of academic success.

When on campus access is allowed, students taking courses on north Oshawa campus can visit Student Accessibility Services in the Student Life Building, U5, East HUB (located in the Founders North parking lot). Students taking courses on the **downtown Oshawa campus** can visit Student Accessibility Services in the 61 Charles St. Building, 2nd Floor, Room DTA 225 in the Student Life Suite.

Disability-related and accommodation support is available for students with mental health, physical, mobility, sensory, medical, cognitive, or learning challenges. Office hours are 8:30am-4:30pm, Monday to Friday, closed Wednesday's 8:30am – 10:00am. For more information on services provided, you can visit the SAS website at https://studentlife.ontariotechu.ca/services/accessibility/index.php. Students may contact Student Accessibility Services by calling 905-721-3266, or email studentaccessibility@ontariotechu.ca.

When on campus access is allowed, students who require the use of the Test Centre to write tests, midterms, or quizzes MUST register online using the SAS test/exam sign-up module, found here https://disabilityservices.ontariotechu.ca/uoitclockwork/custom/misc/home.aspx. Students must sign up for tests, midterms, or quizzes AT LEAST seven (7) days before the date of the test.

Students must register for final exams by the registration deadline, which is typically two (2) weeks prior to the start of the final examination period. SAS will notify students of the registration deadline date.

15. Academic Integrity

Students and faculty at Ontario Tech University share an important responsibility to maintain the integrity of the teaching and learning relationship. This relationship is characterized by honesty, fairness and mutual respect for the aim and principles of the pursuit of education. Academic misconduct impedes the activities of the university community and is punishable by appropriate disciplinary action.

Students are expected to be familiar with and abide by Ontario Tech University's regulations on Academic Conduct which sets out the kinds of actions that constitute academic misconduct, including plagiarism, copying or allowing one's own work to copied, use of unauthorized aids in examinations and tests, submitting work prepared in collaboration with another student when such collaboration has not been authorized, among other academic offences. The regulations also describe the procedures for dealing with allegations, and the sanctions for any finding of academic misconduct, which can range from a resubmission of work to a failing grade to permanent expulsion from the university. A lack of familiarity with these regulations on academic conduct does not constitute a defense against its application. This information can be found at http://calendar.uoit.ca/content.php?catoid=22&navoid=879#Academic_conduct

Extra support services are available to all Ontario Tech University students in academic development, study skills, counseling, and peer mentorship. More information on student support services can be found at https://studentlife.ontariotechu.ca/services/academic-support/index.php

16. Online Test and Exam Proctoring (Virtual Proctoring)

To maintain academic integrity in online testing, your instructor may require the use of Respondus LockDown Browser and Respondus Monitor or a similar virtual proctoring platform. In doing so, you will be required to use a computer with a webcam (either built-in or USB plug in). Please advise your instructor as soon as possible if you do not have a computer with a camera. This is a link to a short video that explains the basics of Respondus LockDown Browser: https://web.respondus.com/lockdownbrowser-student-video/

17. Final Examinations

Final examinations are held during the final examination period at the end of the semester and may take place in a different room and on a different day from the regularly scheduled class. Check the published Examination Schedule for a complete list of days and times.

While the University is returning to campus, final exams may require online submission, so you will require internet access along with a webcam.

Students are required to show their Student ID card (campus ID). Students are advised to obtain their Student ID Card well in advance of the examination period as they will not be able to write their examinations without it. More information on ID cards can be found at https://registrar.ontariotechu.ca/campus-id/index.php.

Students who are unable to write a final examination when scheduled due to religious obligations may make arrangements to write a deferred examination. These students are required to submit a Request for Accommodation for Religious Obligations to the Faculty concerned as soon as possible and no later than three weeks prior to the first day of the final examination period.

Further information on final examinations can be found at https://usgc.ontariotechu.ca/policy/policy-library/policies/academic/procedures-for-final-examination-administration.php

18. Freedom of Information and Protection of Information Act

The following is an important notice regarding the process for submitting course assignments, quizzes, and other evaluative material in your courses in the Faculty of Science.

Ontario Tech University is governed by the Freedom of Information and Protection of Privacy Act ("FIPPA"). In addition to providing a mechanism for requesting records held by the university, this legislation also requires that the University not disclose the personal information of its students without their consent.

FIPPA's definition of "personal information" includes, among other things, documents that contain both your name and your Banner (student) ID. For example, this could include graded test papers or assignments. To ensure that your rights to privacy are protected, the Faculty of Science encourages you to use only your Banner ID on assignments or test papers being submitted for grading. This policy is intended to prevent the inadvertent disclosure of your information where graded papers are returned to groups of students at the same time.

18. Freedom of Information and Protection of Information Act cont…

If you still wish to write both your name and your Banner ID on your tests and assignments, please be advised that Ontario Tech University will interpret this as an implied consent to the disclosure of your personal information in the normal course of returning graded materials to students.

If you have any questions or concerns relating to the new policy or the issue of implied consent addressed above, please contact accessandprivacy@ontariotechu.ca

Notice of Collection and Use of Personal Information
Throughout this course, personal information may be collected through the use of certain technologies under the authority of the *University of Ontario Institute of Technology Act, SO 2002, c. 8, Sch. O.* and will be collected, protected, used, disclosed and retained in compliance with Ontario's *Freedom of Information and Protection of Privacy Act R.S.O. 1990, c. F.31.*

This course will use the following technologies that may collect, use, disclose and retain personal information (including images) for the purposes described below:

- Respondus Monitor or Proctortrack to maintain academic integrity for examinations;
- Google Meet and Kaltura Virtual Classroom to facilitate remote instruction and interactive learning;

Peer-shared applications, services or technologies that may be reviewed, assessed, or used as part of coursework.

For more information relating to these technologies, we encourage you to visit: https://tlc.ontariotechu.ca/learning-technology/index.php Questions regarding personal information may be directed to: Ontario Tech University Access and Privacy Office, 2000 Simcoe Street North, Oshawa, ON L1G 0C5, email: accessandprivacy@ontariotechu.ca.

By remaining enrolled in this course, you acknowledge that you have read, understand, and agree to the terms and conditions under which the technology provider(s) may collect, use, disclose and retain your personal information. You agree to the university using the technologies and using your personal information for the purposes described in this course outline.

19. Human Rights and Respect

Ontario Tech University is committed to providing a campus environment in which all University Members are treated with dignity and to fostering a climate of understanding and mutual respect. The University will not tolerate, ignore or condone Discrimination or Harassment by or against anyone. Examples of Harassing behavior include, but are not limited to; bullying, taunting or mocking someone's race or creed, ridiculing an individual's disability, or targeting individuals with unwanted sexual or negative stereotypical comments about one's sex, gender, sexual orientation, gender identity and/or gender expression. Pursuant to Ontario Tech's Respectful Campus Policy, students are reminded of their role in ensuring a campus environment that is equitable and inclusive. Requirements to refrain from harassment and discrimination apply broadly to the classroom, including in lectures, labs and practicums, as well as through the use of sanctioned and unsanctioned technological tools that facilitate remote learning, e.g. class and other chat functions, video conferencing, electronic mail and texts, and social media content amongst or about University students, faculty and staff.

20. Freedom of Expression

Pursuant to Ontario Tech's Freedom of Expression Policy all students are encouraged to express ideas and perspectives freely and respectfully in university space and in the online university environment, subject to certain limitations. Students are reminded that the limits on Freedom of Expression include speech or behavior that: is illegal or interferes with the university's legal obligations; defames an individual or group; constitutes a threat, harassment or discrimination; is a breach of fiduciary, contractual, privacy or confidentiality obligations or commitments; and unduly disrupts and interferes with the functioning of the university. In the context of working online, different forms of communication are used. Where permitted, students using "chat" functions or other online forms of communication are encouraged to ensure that their communication complies with the Freedom of Expression Policy.

21. Copyright Notice

22. Student Course Feedback Surveys

Student evaluation of teaching is a highly valued and helpful mechanism for monitoring the quality of Ontario Tech University's programs and instructional effectiveness. To that end, course evaluations are administered by an external company in an online, anonymous process during the last few weeks of classes. Students are encouraged to participate actively in this process and will be notified of the dates. Notifications about course evaluations will be sent via e-mail, and posted on Canvas, Weekly News, and signage around the campus.

23. Final Exam Views

Once grades are released in mycampus, if you want to view your final exam/find out your exam grade, you need to **complete the Exam View Request Form for STAT2020 that's available here (copy and paste the link) ->** https://shared.uoit.ca/shared/faculty/fsci/forms/Science-Final-Exam-View-May-2014.pdf

Notes regarding exam views:

-the above form is the only way to request an exam view for this course; e-mail me the form within canvas.

-as per the University policy, you have 5 business days from the day that marks are released to submit the exam view request form. **Late requests will not be accepted.** Once the form is submitted, your instructor will then contact you regarding a date/time to view your exam.

-unless there is a clerical mistake, instructors cannot change marks as a result of an exam view

University Response to COVID-19

The government response to the COVID-19 pandemic is continually evolving. As new information becomes available from federal and provincial public health authorities, the Province of Ontario and the Regional Municipality of Durham, Ontario Tech University will remain nimble and prepared to respond to government orders, directives, guidelines and changes in legislation to ensure the health and safety of all members of its campus community. In accordance with public health recommendations, the university may need to adjust the delivery of course instruction and the availability and delivery mode of campus services and co-curricular opportunities. Ontario Tech University appreciates the understanding and flexibility of our students, faculty and staff as we continue to navigate the pandemic and work together to demonstrate our strong commitment to academic, research and service excellence during these challenging and unprecedented times.

The Accessibility for Ontarians with Disabilities Act (AODA) standards have been considered in the development of this model course template and it adheres to the principles outlined in the University's Accessibility Policy.

SUST1001U
Foundations of Sustainability I
Fall 2023 Syllabus

Course Description

This course provides the foundations of sustainability in two broad areas: (i) basic science of sustainability, and; (ii) application and measurement of sustainability. We will introduce the conceptual, interdisciplinary framework of sustainability science by examining its physical, biological, economic and social components. This will be followed by discussion of how this scientific knowledge might be applied and measured in order to enhance. Canadian examples will be used wherever possible but the underlying themes will highlight the need for a global approach.

Part 1: Foundation of the Foundation

Provided by Faculty of Science and The Faculty of Engineering & Applied Science

We start with some history… Agencies, history, and principles of sustainable development

Part 2: Basic Science of Sustainability

Provided by Faculty of Science

Biology, chemistry, physics and earth sciences are critical to innovation of sustainable solutions and their application.

Topics

- Ecology
- Human Populations and Health
- Water
- Aquatic & Terrestrial Resources
- Air, Water and Soil Pollution
- Climate Change.

Part 3: Application and Measurement of Sustainability

Provided by Faculty of Engineering & Applied Science

Topics

- Energy and materials: global energy and electricity, GHG emissions, solid waste, cement, palm oil
- Measuring sustainability
- Communicating sustainability, the case of fossil fuels
- Urban metabolism, a day in the life of a city
- The role of infrastructure – supporting and hindering sustainability
- Engineering a better world – getting there from here

Class material: Timeline of Sustainable Development (provided); Measuring Sustainability (provided).

Social media: students will be asked to join Twitter (they can do so anonymously) and follow at least 15 key individuals/agencies (list provided first class), plus at least 10 additional Twitter accounts (selected by student).

Web and phone app – CityWatch: students are asked to install and follow the app to become familiar with energy and material flows of a typica city (starting with Oshawa)

Who Teaches

Dr Dan Hoornweg (Faculty of Engineering & Applied Science)
Dr Robert Bailey (Faculty of Science)

Evaluation

Component	Mark	Details
Online Quizzes	**60%**	**Six (6) online quizzes**, delivered via Canvas, designed to assess lecture content throughout the term
Social Media Engagement	**10%**	Demonstrated engagement with Twitter in social media engagement
Take Home Exam	**30%**	A **1500 – 2500 word essay** on an approved sustainability topic

SUST1002U
Foundations of Sustainability II
Winter 2024 Syllabus

Course Description

This course builds on Foundations of Sustainability I and provides the foundations of sustainability with a particular focus on (i) Health Sciences, and (Iii) Social Sciences and Humanities.

The course will introduce the conceptual, interdisciplinary framework of sustainability in health sciences and social sciences. Canadian examples will be used wherever possible but the underlying themes will highlight the need for a global approach.

Part 1: Health Sciences and Sustainability

Provided by Faculty of Health Sciences

Topics

- Environmental quality and human health
- Health issues related to climate change (malnutrition, sanitation, heat-stress, flooding, vector-borne diseases, etc…)
- Integrated mobility, linking non-motorized travel
- Trends in health care
- Fundamentals of Public Health
- Healthcare Environmental Services
- Global health (sanitation, dietary paradox, global consumption / waste, etc…)

Part 2: Social Sciences, the Humanities and Sustainability

Provided by Faculty of Social Sciences and Humanities

Topics

- What is the Environment and What is Wrong with it?
- Environment, Culture, and Identity
- Population Technology, and Environment
- Environment and Economy
- Environment and Globalization
- Solutions for a Just and Sustainable Society

Who Teaches

Dr Caroline Barakat (Faculty of Health Sciences)
Dr Timothy MacNeill (Faculty of Social Science & Humanities)

Evaluation

Component	Mark	Details
Online Quizzes	**20%**	**Part 1 –** Four (4) online quizzes
Reflection	**10%**	**Part 1** - Reflection based on a case study
Midterm	**20%**	**Part 1** - Short answer and essay written exam
Research Paper	**20%**	**Part 2** - Focus group discussions on weekly topics
Discussions	**10%**	**Part 2** - Focus group discussions on weekly topics
Final Exam	**20%**	**Part 2** - Short answer and essay written exam

SUST4001U/4002U
Capstone I & II
Fall 2026 Winter 2027 Syllabus

Course Description

The capstone course provides BASc students with the opportunity, under the supervision of a faculty member, to integrate and synthesize knowledge gained throughout their program of study. Through completion of their Capstone, students working in a team, will demonstrate an understanding of the multi-disciplinary, integrated nature of sustainability.

The topic will be selected to include at least three key aspects of sustainability. Students will be required to organize and conduct a Capstone project with a significant analytical component and demonstrate understanding of several aspects such as political, technical, economic, environmental and other societal impacts. Capstone 1, will typically be a group project, but with each student having clearly defined roles, objectives and outcomes.

Course Outcomes:

- To integrate, synthesize, and apply knowledge gained throughout their program of study
- To demonstrate the ability to take a loosely defined problem, define it clearly, and establish an approach to solve it.
- To investigate a broadly defined problem and demonstrate the ability to define it and develop an approach to solve it in a manner that key objectives are met.
- To demonstrate the ability to specify requirements and satisfy those requirements as defined for a project.
- To demonstrate the ability to assess likelihood of success in different and at times, competing objective categories, e.g., economic versus cultural appropriateness.
- To demonstrate the ability to apply Team skills in applied sustainability
- To apply oral and written skills in a problem-solving focused environment.
- To develop and apply project management knowledge and skills to deliver a project solution safely, with high quality and on schedule and on budget.
- To develop the ability to search out relative information for a subject and recognize and address knowledge gaps
- To balance an array of imperatives and objectives in identifying sustainability solutions, e.g., speed, cost, replicability and scalability

Course Organization and Delivery Mode:

The course features a one-hour lecture weekly to support project execution. Each student will have a Faculty Supervisor(s).
Project work will be executed in project teams - typically 3 to 6 students per team.

Capstone deliverables include:

- a project proposal/plan
- a design requirements/brief
- an oral presentation
- a project design report
- completion of a final exam based on the lecture series

Scheduled Regular Class Meeting Times:
Weekly Lecture: TBD
Location: TBD

Final Grade Breakdown:

- Project Proposal/Plan: 10%
- Design Requirements/Brief: 10%
- Oral Presentation: 20%
- Capstone 1 exam: 15%
- Design Project/Report: 45%

Dates for deliverables will be agreed to by the student's Faculty Supervisor.

Other Course Information:

The course has a one hour per week lecture component. A one hour 'tutorial' time is provided to facilitate regular team meetings and/or meetings with the Faculty Supervisor or other support resources. A 5 hour per week allocation of schedule is timetabled to enable team meetings but these can be adjusted to better suit team members.

A list of Capstone topics will be provided at the end of Year 3. Students can form groups and select these topics (first come, first served) or suggest topics on their own. Each topic must have a community involvement component with at least one external advisor. A list of potential advisors will be provided (in confidence) to third year students. Teams are encouraged to seek out additional advisors (and inform course supervisor).

Teams should establish a ‘secretary(ies)’ to coordinate meeting requests, issue letters of request and appreciation, and issue invitations to key Capstone activities. All meetings with the course supervisor are to be booked and coordinated by Capstone teams. Teams are encouraged to have a draft Table of Contents for final report no later than week 5 of the course.

Capstone is divided into two with Capstone 1 typically taking place in the fall semester with one summary report from all team members. Capstone 2 is the same topic as Capstone 1 but with more in-depth analysis for specific aspects. Groups can still work in teams but each student submits a final report. This Capstone 2 report is often a key document used in employment interviews and graduate

pursuits. Capstone 2 will include an Executive Summery (limit 1000 words and 5 minute video) which will be catalogued on the University website (students may request in writing that they not be posted).

Students who complete Capstone 1 but are unable to attend Capstone 2 as scheduled will need to carry out Capstone 2 in subsequent years with a course waiver from the Instructor. Students will typically complete their specific component from before but will need to meet specific report milestones agreed with the course instructor.

Appendix C2: Sustainability Elective Course Information

NATURAL SCIENCES & TECHNOLOGY

BIOL 2010U – Human Physiology

Overview of the physiology of major human organ systems. Topics include the physiology of the nervous system, muscle, the cardiovascular and respiratory system, as well as the gastrointestinal, urinary, reproductive and endocrine systems. Clinical connections will be made when appropriate to current real-world human health topics. Laboratories will reinforce the lecture topics and allow students to apply their knowledge in an experimental setting.
Credit hours: 3
Lecture hours: 3
Laboratory hours: 3 (biweekly)
Prerequisite(s): BIOL 1020U
Experiential learning: Yes

BIOL 2020U – Genetics and Molecular Biology

An introduction to the fields of genetics and molecular biology. Topics include the science of inheritance, DNA structure and replication, meiosis, regulation of gene expression, sex-linked inheritance, analyzing inheritance and heredity, human genetic disorders, and the molecular biology technology on which DNA cloning, and construction of recombinant DNA and of transgenic organisms are based on.
Credit hours: 3
Lecture hours: 3
Laboratory hours: 3 (biweekly)
Prerequisite(s): BIOL 1020U
Credit restriction(s): HLSC 3463U, BIOL 2840U
Experiential learning: Yes

BIOL 2030U – Cell Biology

Provides a basic knowledge of the structural and functional properties of cells. Emphasizes the mechanisms by which signalling molecules and the process of signal transduction integrate and co-ordinate the functions of many individual cells in a multi-cellular organism. Explores factors regulating the cell cycle and growth.
Credit hours: 3
Lecture hours: 3
Laboratory hours: 3 (biweekly)
Prerequisite(s): BIOL 1020U
Credit restriction(s): BIOL 2840U
Experiential learning: Yes

BIOL 2060U – Fundamentals of Microbiology

This course provides an introduction to key and current concepts in microbiology. Topics include bacterial cell structure, function and genetics, metabolism, growth and cultivation, prokaryotic classification and systematics, microbial diversity, microbe-host interactions and applications. An introduction to viruses and to eukaryotic pathogens will be included, and strategies for dealing with infectious microbes through antimicrobial therapies will be integrated throughout. Key features of the immune response to infection will be introduced. An understanding of the immune system and its responses to infection is important to understanding interactions with microorganisms.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): BIOL 2030U
Credit restriction(s): BIOL 2830U, BIOL 3030U, MLSC 2130U

BIOL 2080U – Biochemistry I

This course examines the chemical nature of the building blocks found in cells. The topics covered include an overview of organic chemistry principles that relate to biological systems; protein structures and functions; enzymes thermodynamics, kinetics and regulation; lipids structures and functions; role of lipids and proteins in the structure of biological membranes; nucleotides and the structure of nucleic acids; the biochemistry of DNA replication, transcription and translation; carbohydrate structures and functions, and introduction to metabolism.
Credit hours: 3
Lecture hours: 3
Tutorial hours: 2
Prerequisite(s): BIOL 1020U and CHEM 2020U
Credit restriction(s): BIOL 1800U and BIOL 2040U

BIOL 3020U – Principles of Pharmacology and Toxicology

An overview of the action and toxicity of drugs that affect the autonomic nervous system, the central nervous system, and cardiovascular function in both normal and pathological conditions. Toxicological effects of food, food additives, household and industrial products and wastes will also be examined.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): BIOL 2010U and (BIOL 2030U or CHEM 3250U) and (BIOL 2080U or BIOL 2040U)

BIOL 3620U – Conservation Biology

Designed to help students of biodiversity develop practical skills and knowledge that they can use in their professional and personal lives. Integrates local (Ontario), regional (Canada) and global scales of diversity, both of life and of our human responses to these issues. The first unit explores the diversity of species and the genetic basis for their evolution and adaptation. The tools used to measure biodiversity are introduced and the moral and management issues involved in the protection of biodiversity are addressed.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): BIOL 2020U
Experiential learning: Yes

BIOL 4020U – Introduction to Environmental Toxicology

An introductory course using the concepts from ecology and toxicology to understand the principles of ecotoxicology. Topics will include an exploration of the complex interactions that lead to contaminant issues in ecosystems, types of toxicological responses in wildlife, and the methodologies used in lab and field settings to examine the effects of contaminants in the environment. With this background, 'real-world' applications such as adverse outcome pathways, environmental risk assessment and management, traditional environmental knowledge, and environmental policy will be introduced.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): BIOL 3020U
Recommended: BIOL 3660U (recommended prerequisite or corequisite)

BIOL 4660U – Aquatic Ecology: Concepts and Environmental Applications

This course covers the fundamental concepts and theories in freshwater ecology, including topics in limnology and aquatic ecosystem science. The structure of biological communities and food webs in rivers and lakes will be described within the context of their physical and chemical environments. Environmental problems such as pollution and global warming will be addressed with a particular focus on Canadian aquatic ecosystems.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): BIOL 3660U
Experiential learning: Yes

CHEM 2020U – Introduction to Organic Chemistry

An introduction to the principles and techniques of organic chemistry, including a study of the correlation of reactions and physical properties of organic compounds with structure and energetic concepts; structure, bonding, properties, reactions and synthesis of mono-functional aliphatic and aromatic compounds; stereochemistry and reaction mechanism theory; study of infrared, nuclear magnetic resonance and mass spectroscopy.
Credit hours: 3
Lecture hours: 3
Laboratory hours: 3 (biweekly)
Tutorial hours: 1.5
Prerequisite(s): CHEM 1020U
Experiential learning: Yes

CHEM 2130U – Analytical Chemistry for Biosciences

A study of the principles of analytical chemistry through demonstrations of applications in chemistry, biology, medicine and the study of the environment. Includes: standard analytical chemistry techniques based on chemical equilibrium, volumetric analysis, analytical electrochemistry; use of buffers for pH control; statistical treatment of analytical data.
Credit hours: 3
Lecture hours: 3
Laboratory hours: 3 (biweekly)
Tutorial hours: 1.5 (biweekly)
Prerequisite(s): CHEM 1020U
Credit restriction(s): CHEM 2030U
Note(s): This course is intended for students in Biological Science programs.
Experiential learning: Yes

ENVS 2010U – Introductory Environment Science

This course will introduce the scientific framework associated with the Earth's environment system. Topics include Earth's energy budget, structure and circulation of the atmosphere and oceans, hydrologic cycle, mass budget, cloud formation, precipitation, and surface runoff. Particular attention will be focused on the science of important environmental issues including climate change, ozone layer depletion, pollutant transport, impact of mercury, PCB and other contaminants, and land-use influence on precipitation run-off and flooding. Whenever possible, case studies of actual environmental problems will be used to highlight the importance of the scientific issues.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): (CHEM 1020U or CHEM 1800U) and (PHY 1020U or PHY 1040U) and (MATH 1015U or MATH 1020U)
Experiential learning: Yes

ENVS 4010U – Geographic Information Systems (GIS) & Spatial Analysis

This course is dedicated to equipping students to both use and understand the use of Geographic Information Systems (GIS) and spatial analysis in environmental research.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): STAT 2010U OR STAT 2020U OR STAT 2800U
Cross-listed: APBS 6800G
Experiential learning: Yes

MECE 3260U – Introduction to Energy Systems

Energy systems, resources and use; energy classifications and terminology; energy sources and currencies; energy supply and demand; energy conversion and utilization technologies; energy storage and distribution; energy use in countries and sectors of economies; energy intensity; global energy flows and utilization patterns; principal fuels; fuel science and technology: origins of fuels, classifications and physical and chemical properties of fuels, fuel handling and fire hazards, non-conventional fuels; sustainability, sustainable development and energy; clean energy systems. Environmental impact of energy systems such as power generation, industrial processes and transportation; air, soil and water pollution and their effects on the environment; generation mechanisms of chemical pollutants, photochemical pollutants and smog. Introduction to renewable energy resources (solar, wind, geothermal, biomass), photovoltaics, microturbines. Introduction to energy storage systems. Introduction to hydrogen and fuel cells. Introduction to life cycle assessment, industrial ecology, and key environmental tools. Application of energy and exergy analysis to energy systems.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): (NUCL 2010U or MECE 2320U or MECE 2640U) and (ENVS 1000U or ENGR 1015U)

PHY 1010U – Physics I

This calculus-based course is intended for students who have completed high school calculus. It gives an introduction to basic mechanics, Newton's laws of motion; kinematics and dynamics in one and two dimensions; work and energy; friction; momentum and collisions; angular momentum, torque and rotation of rigid bodies; gravitation; simple harmonic motion; mechanical and sound waves; static equilibrium; fluid mechanics; kinetic theory of gases and thermodynamics.
Credit hours: 3
Lecture hours: 3
Laboratory hours: 3 (biweekly)
Tutorial hours: 1.5 (biweekly)
Prerequisite(s): Grade 12 Calculus and Vectors (MCV4U)
Credit restriction(s): PHY 1030U, PHY 1810U
Recommended: Grade 12 Physics (SPH4U)
Note(s): Students without the recommended Physics prerequisite will be responsible for making up background material.
Experiential learning: Yes

PHY 1020U – Physics II

Introduction to electromagnetism and optics: electric charge and Coulomb's law; electric field, electric flux, Gauss' law; electrostatic potential, capacitance; Kirchoff's laws in DC circuits. Magnetic forces and magnetic field; Biot-Savart law; Ampere's law; magnetic flux, Faraday's law, inductance; AC circuits. Electromagnetic waves; wave propagation; waves in matter. Geometrical and wave optics; special relativity.
Credit hours: 3
Lecture hours: 3
Laboratory hours: 3 (biweekly)
Tutorial hours: 1.5 (biweekly)
Prerequisite(s): PHY 1010U or (PHY 1030U and MATH 1000U)
Credit restriction(s): PHY 1040U, PHY 1810U
Experiential learning: Yes

RADI 3570U – Environmental Effects of Radiation

Topics include: natural and artificial environmental radiation; units and measurements; biological effects of radiation; maximum permissible public dose, magnitude and frequency; release of radioisotopes to the environment; dispersion in the atmosphere; dispersion in aquatic environment; food chain; calculation of total dose consequence; site demographic, meteorological, geologic, hydrologic and seismic characteristics; derived emission limits; radiation dose due to the nuclear fuel cycle; As Low As Reasonably Achievable (ALARA) principle; emergency preparedness; on-site and off-site emergency procedures.
Credit hours: 3
Lecture hours: 3
Laboratory hours: 2
Prerequisite(s): ENGR 2950U or NUCL 2950U
Credit restriction(s): ENGR 3570U

SOCIAL SCIENCES

BUSI 2050U – Managerial Economics

This core course provides students with analytical tools useful for dealing with microeconomics from a manager's perspective. It is concerned with the application of economic principles and methodologies to key management decisions within organizations. It provides principles to foster the goals of the organization, as well as a better understanding of the external business environment in which an organization operates. It shows a unique way of thinking about problems, issues and decisions that managers face in each of the functional areas of the organization as well as the strategic ones faced by general managers while competing with their rivals.
Credit hours: 3
Lecture hours: 3
Credit restriction(s): ECON 2010U

COMM 1100U – Introduction to Communication Studies

This course introduces students to communication studies with an overview of key topics in the field as defined by the various courses included in this degree. It will examine how knowledge of communication theory, communication processes, and communication skills can be applied to successful communication practices.
Credit hours: 3
Lecture hours: 3
Experiential learning: Yes

COMM 3350U – Environmental Communication

This course explores the communication of the environment by a plurality of social actors: governments, politicians, companies, scientists, news organizations, PR firms, polls, entertainment industries, NGOs, social movements and citizens. Students learn about environmental public relations, journalism, advertising, pop culture, advocacy and public opinion. Media stories about and images of climate change, climate science, resource extraction, energy, ecological risk, crisis, sustainability and adaptation, animals, water, food security and green technologies are explored with regard to normative theories of environmental communication for a socially just and sustainable planet.
Credit hours: 3
Lecture hours: 3

COMM 4530U – Research within Communities: Alternative Methods for Social Sciences

This course will provide an understanding of participatory modes of research for social change by drawing upon traditions such as action research, co-research, participatory theatre, militant ethnography, and institutional analysis. This course is designed for students interested in social activism.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): Fourth-year standing in Communication, Criminology, Legal Studies, Forensic Psychology or Political Science

COMM 4610U – Communication and Conflict Resolution

This course allows for students to explore communication and conflict resolution at a variety of levels including intrapersonal, interpersonal, group, organizational and global conflict. Students are exposed to issues such as personal conflict relating to beliefs, attitudes, values, and worldviews; how communication can help (or hinder) interpersonal relationships; communication and conflict in groups such as tribes, gangs, or social collectives; and how communication strategies are meaningful in conflict amongst organizational systems such as business/economic institutions including schools, healthcare and governments. The course also considers communication and conflict on a broader level by examining political relationships between nations, and peoples' relationships with the natural world. Students are exposed to practical strategies for using communication to resolve conflict and build understanding at both the personal and global levels.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): COMM 1100U and a fourth-year standing in Communication, Legal Studies or Political Science
Experiential learning: Yes

INDG 2100U – Endaayaang - Storying Home in Michi Saagiig Territory

Stories of the Michi Saagiig nation and its territory, in what is now known as Durham Region and southern Ontario, create the foundation of understanding the divergent perspectives on the history of this land. The idea of land-as-home is foundational to Indigenous worldview. How do colonial and Indigenous stories conceptualize home? What does it mean to be homeless in one's own territory? This course examines the erasure of Indigenous presence in southern Ontario. Students analyze the ways in which resistance and resurgence enable reassertion of Indigenous presence and agency through contemporary stories of this land. The course is based on Indigenous pedagogies and experiential, self-reflexive learning, leading students to a deeper understanding of Indigenous worldviews and experiences of colonialism.
Credit hours: 3.0
Lecture hours: 3.0
Experiential learning: Yes

INDG 2200U – Indigenous Digital and Visual Media

This course explores the ways in which Indigenous peoples represent themselves, through media and technology such as computer and video games. The unique approaches taken by Indigenous creatives in various digital media provide powerful counter-narratives to the stereotypic tropes that have been promoted through western film, television, news sources, and the like. Centering Indigenous voices and agency in these media creates space for stories of surviving and thriving, despite the impacts of colonization. Different mediums are explored to develop a foundational understanding of the dynamic and sometimes controversial nature of Indigenous self-representation.
Credit hours: 3.0
Lecture hours: 3.0
Experiential learning: Yes

INDG 3310U – Indigenous Peoples, Sustainability and Development: A Global Perspective

This course takes a global perspective on the relationship between Indigenous peoples, sustainability, and development. Students will explore concepts such as Indigeneity, Indigenization, decoloniality, sustainability, and development as they relate to Indigenous cultures and communities throughout the world. We will ask whether "Western" concepts such as "sustainability" and "development" can or should be "Indigenized" or, alternatively, should a more thorough "decolonial" approach be used. Case studies will explore indigenous movements against westernizing "development" and toward Indigenous concepts of well-being from around the world. Theory and case-studies will be examined in the context of historical colonialism and current neocolonialism. Focus will be on understanding Indigeneity as a locally-rooted global social movement that seeks to push back against Western imperialism and neo-imperialism while defining Indigenous alternatives to the current global consumer capitalism paradigm and its allied concept: sustainable development. Students will engage these concepts in various ways, many of which are rooted in Indigenous pedagogy. Students will also learn how to undertake research in partnership with Indigenous communities and organizations as opposed to doing research "on" Indigenous groups.
Credit hours: 3.0
Lecture hours: 3.0
Prerequisite(s): SOCI 1000U, INDG 1000U, or POSC 1000U
Cross-listed: POSC 3310U

INDG 4300U – Special Topics in Indigenous Studies

The Special Topics course will explore topics in Indigenous studies that are not examined in other INDG courses. The specific topic will change each year. Students in the course will be expected to undertake independent research on the topic of the course and to actively participate in a seminar□style class to build a deeper understanding of Indigenous histories, philosophies and worldviews. Off-campus field trips may be a required part of this course.
Credit hours: 3.0
Lecture hours: 3.0
Note(s): Must have 3rd year standing
Experiential learning: Yes

INDG 4310U – The Politics of Indigenous Rights

This course is intended to provide upper year students with the opportunity to explore the various issues related to Indigenous rights. The focus will be primarily on the Canadian context, but we will include some examples from beyond Canada's borders. The course starts from the premise that protecting and restoring Indigenous rights is important. The course is also based on the fundamental perspective that decolonization and Indigenous methodologies are key to creating a Canadian society that is truly inclusive. Although the primary focus of the course will be on the political issues related to Indigenous rights, the course will also draw on other fields of research. Throughout the course, we will look at contemporary issues within their historical context.
Credit hours: 3.0
Lecture hours: 3.0
Prerequisite(s): 3rd year standing and (INDG 1000U or enrolment in the Faculty of Social Science and Humanities)
Cross-listed: POSC 4310U

INDG 4570U – Indigenous Design and Technology

This course will explore design and technology of Indigenous peoples in Canada and the impacts on technology development. Two-Eyed Seeing (where with one eye we view the subject through Indigenous ways of knowing and with the other eye we view it through Western approaches) will be used to study the evolution of Indigenous design and technology and its influence on modern systems. Indigenous approaches to sustainability and its role in Indigenous design and technology will be investigated with the goal of engineers and designers incorporating this knowledge and methodologies in the development of new sustainable technologies.
Credit hours: 3.0
Lecture hours: 3.0
Cross-listed: ENGR 4570U
Note(s): Must have 3rd year standing
Experiential learning: Yes

INFR 1550U – Law and Ethics of IT

This course provides an overview of topics related to legal, ethical and social issues arising from the use of information technology. It also covers areas such as cybercrime, privacy, intellectual property and equitable access. Topics to be covered include an overview of ethics, ethics for IT professionals and IT users, computers and Internet crimes, privacy, freedom of expression, intellectual property, and the code of ethics and professional conduct.
Credit hours: 3
Lecture hours: 3

LGLS 1000U – Foundations of Legal Studies

The course provides students with knowledge of the basics of the Canadian legal system (structure of government, court system, and the principles, sources, and types of law) as well as critical perspectives on law and its role in society. The creation and functioning of the law and its relationship with society are examined through the lens of core themes such as: breaking the law, applying the law, making the law, resisting the law, defining the law and studying the law.
Credit hours: 3
Lecture hours: 3
Tutorial hours: 1
Note(s): Contact hours may consist of a variety of instructional methods.

LGLS 2120U – International Law

International Law will introduce students to the key topics of public international law, including sources and subjects of public international law, the law of international treaties, state responsibility, use of force, self-determination, international human rights and international criminal law. The course will examine the functioning of the UN and some regional systems of human rights and international criminal law enforcement, such as the European Court of Human Rights, the International Criminal Court, International Criminal Tribunals for Rwanda and former Yugoslavia.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): LGLS 1000U
Credit restriction(s): LGLS 3120U

LGLS 2200U – Legal Theory

This course is a general introduction to legal theory. Some of the topics that may be covered include legal positivism, natural justice, critical legal theory, normative theory, sociological theories of law, feminist legal scholarship, legal pluralism and Marxian theories of law. The intention of this course is to give the student an appreciation for the range and power of theoretical perspectives in legal studies.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): LGLS 1000U

LGLS 2940U – Legal Research Methods

The objective of this course is to have the student gain basic legal research skills that can be applied to any legal problem, as well as acquire a critical understanding of research methods used in the interdisciplinary field of Legal Studies. The student will learn traditional methods of legal research, such as locating and interpreting relevant case law and legislation, as well as research skills for placing legal issues in a broader social context. The students will also be exposed to a variety of social science and humanities research methods that inform the field of Legal Studies.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): LGLS 1000U

LGLS 3230U – Law and Globalization

Law has been traditionally understood as a state-created and state-enforced phenomenon. However, recent developments across the globe challenge this view by drawing our attention to the role played by non-state actors (NGOs, international organizations, corporations, and transnational entities) in generating norms, and implementing international and transnational rules. This evidence suggests that states are 'disaggregating' and that their powers and immunities are being redistributed to these non-state actors, which are increasingly becoming centres of authority in their own right. This course will introduce students to theoretical perspectives on law and globalization and will assist them in developing an appreciation for the complexity of regulatory frameworks and patterns in today's world. Topics may include: state sovereignty and post-conflict reconstruction, economic regulation and international trade, migration, international justice and advocacy, security, and the impact of technological change.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): LGLS 2120U or LGLS 2220U or LGLS 2940U or CRMN 2830U

LGLS 3310U – Indigenous Peoples, Law and the State in Canada

This course is an overview of the evolution of Canadian law as it relates to Aboriginal peoples, including the history of the Indian Act, treaty rights, Aboriginal rights under the Charter, legislative jurisdiction, self-government, and land claims. We will discuss the role of Indigenous traditional jurisprudence in shaping Canadian law, and how law has been and continues to be used as an instrument of oppression against Aboriginal peoples in Canada. International aspects of Indigenous rights and legal claims will be considered.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): LGLS 2940U
Experiential learning: Yes

LGLS 4040U – Law and the Environment

This course will consider aspects of environmental law in the context of studying legal, theoretical and socio-cultural approaches to the ecology, the environment and environmental protection. This course will analyze legal and socio-cultural conceptions of ecology and the environment, asking how these concepts are constructed and how they are mobilized within law by a range of groups, such as social movements, indigenous peoples, governments, natural resource developers and others. Topics may include analysis of legal environmental doctrine such as environmental assessment regimes; environmental regulation and protection; environmental rights and international approaches in environmental protection.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): LGLS 2940U and LGLS 2200U and 4th year standing in FSSH

POSC 2100U – Global Politics

This course explores and examines the key theoretical frameworks in the field of international relations, such as realism, liberalism and constructivism, in order to provide students with the analytical tools to understand and evaluate important events in global politics. In particular, course content focuses on key historical and contemporary processes of global integration and conflict and their impact on the distribution of political power, both within and between nations.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): POSC 1000U
Credit restriction(s): CDEV 2100U, CDPS 2100U

POSC 2200U – Fundamentals of Policy Theory

This course introduces students to the main theoretical approaches utilized in understanding public policy making and outcomes. Throughout the course, particular attention is paid to influences on public policy, varying conceptions of institutions, ideas and interest, and the role of these conceptions in explanations of policy change and stasis.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): POSC 1000U
Credit restriction(s): CDPS 2200U, PUBP 2200U

POSC 2502U – Community Development and Social Change

This course is an introduction to community development policies and practices that support social change. Community has many faces in modern times. Community can refer to both geographically based communities and to chosen communities of advocates who connect remotely because of common concerns about community development. This course expands knowledge about the improvement of communities in ways that can facilitate progressive change. Some of the topics that may be covered include: anti-racism and anti-poverty activism in communities, Indigenous community development and urban planning to increase equity and accessibility.
Formerly: Community Development Policy
Credit hours: 3
Lecture hours: 3
Prerequisite(s): POSC 1000U
Credit restriction(s): CDPS 2502, PUBP 3502U
Recommended: POSC 1100U
Experiential learning: Yes

POSC 3100U – Political Economy of Global Development

Students taking this course will learn to analyze the social, economic, and political facets that underlie the dynamics and policies of international development. Furthermore, students will gain an in-depth knowledge of the historical evolution of development agendas and relations between North and South that encompass contemporary development issues and concerns.
Special attention in the course content will be paid to changes in both political and corporate ideology as well as discussions about the developmental state, poverty and the role of women in development.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): POSC 2100U or enrollment in Sustainability Studies Minor program
Credit restriction(s): CDEV 3100U, CDPS 3100U

POSC 3101U – Inequality, Environment and Development

Students taking this course will learn to analyze development through the lens of difference. The course content seeks to highlight both the inequitable (and unequal) distribution of power and control over development as well as the inequitable distribution of development's impacts and benefits. The role of oppressive political practices such as colonization and globalization will be featured. Particular attention will be paid to environmental issues and how they relate to inequalities of class, ethnicity, and gender.
Formerly: Inequality and Development
Credit hours: 3
Lecture hours: 3
Prerequisite(s): POSC 2000U or POSC 2100U or enrollment in Sustainability Studies Minor program
Credit restriction(s): CDEV 3101U, CDPS 3101U

POSC 3203U – Urban Development

Students taking this course will learn to analyze different urban issues and learn best practices for empowering local grass roots initiatives in urban centres. Furthermore, students will learn best practices for helping create and foster new initiatives for urban development. The course content provides insight into different debates and controversies surrounding urban gentrification projects.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): POSC 2000U or POSC 2100U or enrollment in Sustainability Studies Minor program
Credit restriction(s): CDEV 3203U, CDPS 3203U

POSC 3300U – Building Sustainable Communities

This course will provide students with an in-depth analysis of the strengths and weaknesses associated with building sustainable communities. In this course, sustainable development is introduced as a framework designed to meet current social and economic needs while ensuring adequate resources are available for future generations. An emphasis is placed on the components necessary for creating and fostering local economic development strategies that are sustainable. The course content will offer robust theoretical and practical rationales for alternative approaches to community development as well as asset measurement and management.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): One of: POSC 2000U or POSC 2100U or POSC 2502U or ENVS 1000U
Credit restriction(s): CDEV 3300U, CDPS 3300U
Experiential learning: Yes

POSC 3301U – Eco-Justice

Students taking this course will learn about the history and progression of the environmental justice movement. The course content will challenge students to critically analyze the (dis)placement of marginalized communities in toxic and uninhabitable areas, as well as community resistance to environmental degradation. Emphasis will be placed on identifying the best practices and policies necessary for resolving environmental injustices.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): One of: POSC 2100U or POSC 2502U or ENVS 1000U
Credit restriction(s): CDEV 3301U, CDPS 3301U

POSC 3302U – Environment and Globalization

Students taking this course will learn about the effects of globalization on the environment. Specifically, this course is designed to highlight the effects of transnational corporations, and mass migration on differing ecosystems. The course content provides students with a chance to learn differing perspectives and perspectives on the relationship between globalization and the health of the planet.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): One of: POSC 2100U or POSC 2502U or ENVS 1000U
Credit restriction(s): CDEV 3302U, CDPS 3302U

POSC 3601U – The Politics of Health

This course is an introduction to health related policies in the private and public sectors. Some of the areas that may be covered include: workplace health and safety, public health agencies, public and private health care, alternative medicines, public understanding of health issues, and public support for different approaches to health care.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): POSC 2200U
Credit restriction(s): CDPS 3601U, PUBP 3601U

POSC 3700U – Technology, Politics and Social Theory

This course will explore the interplay between technology and politics in the context of social theory and history. While technology has always impacted politics and society, the integration of complex technologies into every aspect of daily life has made it increasingly important to understand the nuances of technology's impact on how nations and communities are evolving. We will critically examine the role of technology in social and political conflict, the environment, social justice and community development. We will explore the role of technology through the lens of social theories such as feminist theory, paradigm theory, technoscience, evolutionary theories, technical communities, social systems theory, network theory, discourse analysis, the science wars and postmodernism.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): POSC 2000U or POSC 2100U
Credit restriction(s): CDPS 3700U, PUBP 3700U

SSCI 1210U – History of Science and Technology

This course will focus on the history and philosophy of science and engineering with special emphasis on scientific technology and the cultural significance of technology to civilization. The course will include critical analyses and will pay significant attention on the nature and problems of industrial technology, benefits and risks of technological progress, and issues around intellectual property. Throughout, students will examine the history and philosophy within the context of science and engineering as learned professions.
Credit hours: 3
Lecture hours: 3
Credit restriction(s): EDUC 1200U
Experiential learning: Yes

SSCI 1470U – Impact of Science and Technology on Society

In this course, students will engage in analyses of scientific and technological developments from the perspective of broad social impacts. Special attention will be paid to controversial issues currently receiving media attention, but the major emphasis will be on ways of thinking critically about both the remediation of already existing problems (e.g. toxic substance clean-up) and the prevention of future problems (e.g. environmental impact analyses and or economic impact analyses). Canadian examples will be of primary concern, but students will also learn to think about impact globally since large-scale problems do not respect political boundaries.
Credit hours: 3
Lecture hours: 3
Credit restriction(s): EDUC 1470U

SSCI 4010U – Policy Development

This capstone course explores various aspects of policy development, planning and analysis as they relate to social policy and justice policy. It will compare and contrast theories of policy implementation and analyze and evaluate social policies. Students will consider how economic, political, legal, and cultural forces shape the construction of social policy. Students will be expected to demonstrate an advanced level of understanding based on their previous courses, and apply that to the creation of a policy initiative.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): Fourth-year standing in Criminology and Justice, Political Science or Liberal Studies.
Credit restriction(s): POSC 4010U
Cross-listed: POSC 4010U

HEALTH SCIENCES

HLSC 2802U – Introduction to the Canadian Healthcare System

Healthcare in Canada is publicly funded and privately delivered. The purpose of this course is to understand the evolution of Canada's healthcare delivery and financing from a theoretical perspective, which examines the role of ideas, the perspective of key stakeholders and the legislative role of key federal initiatives. Key to the learning experience is the conceptualization of the role of public and private sector, impact of medical dominance and the biomedical model, citizen engagement, primary healthcare reform and the emergence of public health.

This course has multiple sections and delivery modes; please check MyOntarioTech for further details.
Credit hours: 3
Prerequisite(s): HLSC 1300U or HLSC 1701U or HLSC 1702U
Credit restriction(s): HLSC 2801U

HLSC 3631U – Health Policy and Process

This course introduces policy concepts, elements, analytical processes and outcomes of healthy public policy. Knowledge on public policy analysis will be applied to Canadian health policy issues in the context of the World Health Organization's definition of health and well-being. This course will not only assist in the development of critical thinking, application of evidence informed decision-making, and critiquing skills; but will also help to develop knowledge of Canada's evolving health care system in response to economic, cultural, technological, political, ideological, and globalization factors and forces.

This course has multiple sections and delivery modes. Please check MyOntarioTech for further details.
Credit hours: 3
Prerequisite(s): (HLSC 1811U or HLSC 1812U) and (HLSC 2801U or HLSC 2802U) and HLSC 3820U

HLSC 3823U – Health and Indigenous People in Canada

This course offers an introduction to Indigenous Health in Canada. Topics include historic practices of health and epidemiological status across pre-European contact, early European contact and postmodern contact. The health status of Indigenous peoples in Canada will be discussed through the lens of social and political determinants of health. The course will also focus on promising health promotion and research practices with Indigenous communities. The intersection of Indigenous knowledge and Western knowledge will be explored through learning about worldview and cultural practices. This course will also encourage learners to critically appraise colonial practices along with power, privilege and racism. The course will culminate with an examination of the findings from the Truth and Reconciliation Commission of Canada.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): HLSC 1811U or HLSC 1812U and cumulative credits of 60 or more course credits OR NURS 2700U and NURS 2701U

HLSC 4809U – Environmental and Occupational Health

Environmental health is a branch of public health, which examines the influences of various environmental factors on human health to promote and/or preserve health via environmental and occupational influences. Occupational health is a subspecialty of public health, which seeks to preserve, promote and/or restore the health and safety of workers by examining influences of occupational exposures or hazards on health outcomes. This course critically examines how various environments, ecosystems and work-related settings interact to both positively and negatively affect health outcomes in diverse populations in Canada and globally. Topics will be examined using a case-study approach and will include the following: environmental toxicology, the health effects of air and water pollution, food protection, injury prevention, housing and health hazards, effects of global warming and climate change on health, acute and chronic effects of natural and human-induced disasters, and classification and management of environmental and occupational hazards.

This course has multiple sections and delivery modes; please check MyOntarioTech for further details
Credit hours: 3
Lecture hours: 3
Prerequisite(s): HLSC 3820U or NURS 3700U

HLSC 4825U – Population Health Risk and Needs Assessment

This course explores current theories and methodologies employed to identify actual and/or potential environmental, consumer-based products, foods and other consumables, and toxins that negatively affect health across the lifespan. Specifically, this course examines the critical steps required to conduct a health risk and needs assessment from a public health perspective including hazard identification, exposure assessments, dose and toxic-response evaluations, health risk management of vulnerable populations, and health need priority identification. The course uses a case-study approach to emphasize both qualitative and quantitative approaches to hazard identification, characterization, and the control of environmental and other identified hazards.
Credit hours: 3
Lecture hours: 3
Prerequisite(s): HLSC 3820U and HLSC 3910U

Appendix D: Sustainability Core Faculty Information

Name and Faculty Status/Rank	Terminal Degree	Home Faculty/Unit	Areas of Expertise	Role in New Program	Total Undergraduate Teaching (including New Program)
Robert Bailey Professor	PhD	Science	Aquatic Environmental Science	Program management; Core course teaching – Science	15 credit hours/year
Caroline Barakat Assistant Professor	PhD	Health Sciences	Environmental Health / Public Health	Program management; Core course teaching – Health Sciences	12 credit hours / year
Dan Hoornweg Associate Professor	PhD	Engineering & Applied Science	Sustainable Cities	Program management; Core course teaching – Engineering & Applied Science	9 credit hours/year
Timothy MacNeill Senior Teaching Professor	PhD	Social Science & Humanities	Sustainable Development / Indigenous Development	Program management; Core course teaching – Social Science & Humanities	21 credit hours / year
Izabela Alexanderek Sessional Lecturer		Health Sciences		Core course teaching	
Toba Bryant Associate Professor		Health Sciences		Core course teaching	
Adam Cole Assistant Professor		Health Sciences		Core course teaching	
Paula di Cato Associate Teaching Professor		Science		Core course teaching	
Cristin Hucaluk Associate Teaching Professor		Science		Core course teaching	
Andrea Kirkwood Professor		Science		Core course teaching	
Ilona Kletskin Senior Teaching Professor		Science		Core course teaching	
Mary Olaveson Associate Teaching Professor		Science		Core course teaching	
Annette Tavares Associate Teaching Professor		Science		Core course teaching	
Steven Downing Associate Professor		Social Science & Humanities		Core course teaching	
Ruth Felder Assistant Teaching Professor		Social Science & Humanities		Core course teaching	
Thomas McMorrow Associate Professor		Social Science & Humanities		Core course teaching	
Delon Omrow Sessional Lecturer		Social Science & Humanities		Core course teaching	
Jen Rinaldi Associate Professor		Social Science & Humanities		Core course teaching	

Appendix E: Library Report

New Program Assessment: Bachelor of Arts & Science, Sustainability, BAS

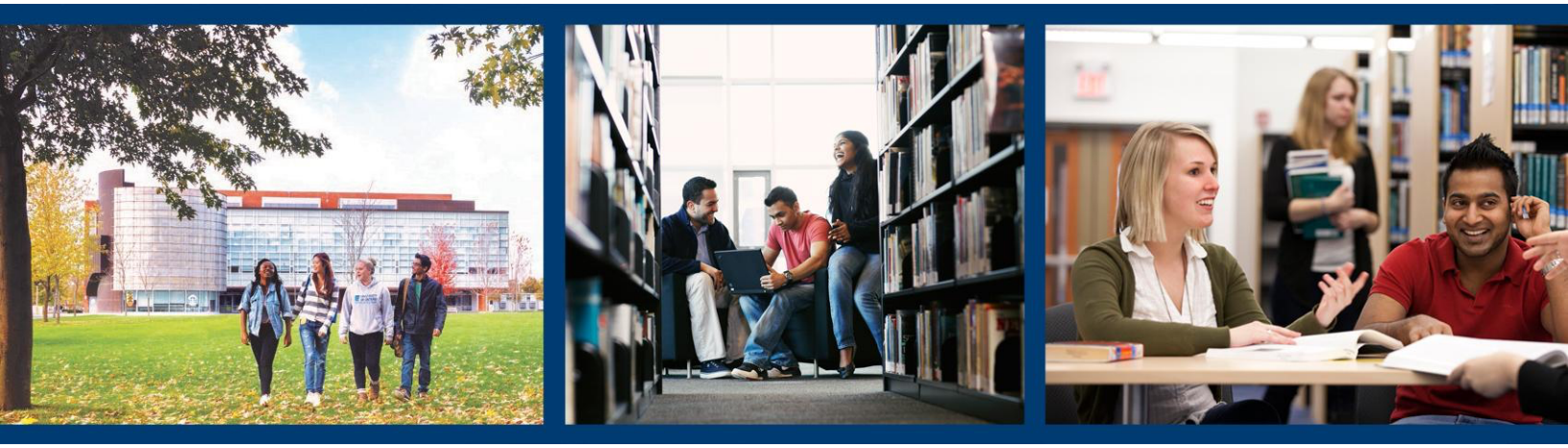
Library Statement of Support Provided to Ontario Tech University

Prepared by:

Chelsie Lalonde, Faculty of Social Science and Humanities Liaison Librarian

Kaelan Caspary, Faculty of Science Liaison Librarian

July 2021



OntarioTech Library

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Summary

Ontario Tech University Library's holdings in the areas of sustainability are strong. Coverage is offered throughout various disciplines and subject areas of our Library collections.

The interdisciplinary BAS Sustainability will draw from existing collections and programs supporting:

- Science; including resources supporting Biological Science and Environmental Biology offerings;
- Social Science and Humanities; including political science, Indigenous studies, legal studies, government, research methods, and resources supporting the Minor in Sustainability Studies program;
- Engineering; where sustainability is incorporated into various courses;
- Energy Systems and Nuclear Science;
- Health Science; which provides community health services, public health and population health perspectives;
- Business and Information Technology; which provides industry, and business resources.

The Library's research holdings, as well as archives and special collections total more than 97,000 print volumes and 195,000 journal subscriptions. In addition, our holdings include more than 177,000 e-books, and primary source materials. Collection strengths support the research and instructional programs at Ontario Tech University.

Resource Requirements

Resource	Rationale	Budget Requirement	OTO or Ongoing
Print & eBook Collections	Gaps in print coverage in various areas of sustainability, and ongoing collection development with a focus on sustainability topics.	$3,500	Ongoing
Total		**$3,500**	**Ongoing**

Introduction

The Library supports the teaching, learning and research missions of Ontario Tech University and Durham College. Ontario Tech students have access to a joint collection of more than 97,000 print books. Additionally, our collections include extensive online resources such as e-books and online databases that are selected to meet curricular needs. Students and faculty are supported by a team of subject specialist Librarians and trained Library Technicians who provide an array of research and teaching support services including information literacy instruction, workshops, research help and reference service.

Library Collections

The BAS Sustainability program will be supported by existing collection resources from programs including political science, legal studies, Indigenous studies, biological science, and environmental biology, as well as sustainability resources which include, but are not limited to, the BA Minor in Sustainability Studies and the BSc Biological Science and Environmental Biology. While this program will benefit from funding for programs throughout a variety of faculties, startup and ongoing funding is necessary to ensure that collection gaps are addressed and collections continue to be developed with a focus on supporting new courses resulting from the proposed BAS Sustainability program.

The Library's collections budget for 2020-2021 totaled $1,931,000. Approximately 95% of this budget is directed to online resources, while the remainder is allocated to acquisition of other formats, including journals, books, multimedia and other specialized material.

With respect to interdisciplinary courses offered within the BAS Sustainability, our collection covers topics in political science, policy, law, Indigenous studies, biological and environmental science, as well as coverage of sustainability in the social sciences, sciences, engineering, health sciences, and business.

Suggestions are welcome and faculty and students are encouraged to contact their subject specialist. All recommended purchases are evaluated according to the Collection Development Guidelines and with consideration to budget constraints.

Consortial Licensing

By virtue of our membership in two key consortia, the Ontario Tech University community benefits from the increased bargaining power of a collective through which we subscribe to a wide array of scholarly content. Canadian Research Knowledge Network (CRKN) members represent 81 institutions across Canada that include world-class academic libraries and research institutions, two national libraries, and Canada's largest public library system.

The Ontario Council of University Libraries (OCUL) is a consortium of Ontario's 21 university libraries which works together to maximize our collective expertise and resources. OCUL enhances information services in Ontario and beyond through collective purchasing and shared digital information infrastructure, collaborative planning, advocacy, assessment, research, partnerships, communications, and professional development.

Journals

Our journal holdings in disciplines related to sustainability are strong, and include coverage related to subjects in Sustainable Development, Sustainable Energy, Environmental Science, Environmental Studies, Public Administration, Political Science and Law. Students and researchers can access nearly complete journal suites, in many cases including archives, from publishers. We provide access, through subscription, to most of the relevant journals with the highest impact factors.

By subject category:

JCR Subject Category	Ontario Tech Access	Select Titles
Sustainable Development (Google Scholar Metrics, June 2021)	20/20	• Sustainability • Journal of Environmental Management • Environmental Science and Policy • Ecology and Society • Current Opinion in Environmental Sustainability • Sustainable Science
Sustainable Energy (Google Scholar Metrics, June 2021)	19/20	• IEEE Transactions on Sustainable Energy
Environmental Science (Clarivate's Journal Citation Reports database, 2019)	46/50	• Energy & Environmental Science • Nature Sustainability • Nature Climate Change
Environmental Studies (Clarivate's Journal Citation Reports database, 2019)	48/50	• Review of Environmental Economics and Policy • Business Strategy and the Environment • Environment and Behavior • Sustainable Production and Consumption
Public Administration (Clarivate's Journal Citation Reports database, 2019)	41/48	• Policy Studies Journal • Policy Sciences • Policy and Society • Journal of Public Policy • Science and Public Policy
Political Science (Clarivate's Journal Citation Reports database, 2019)	45/50	• Political Communication • Policy Studies Journal • Regulation & Governance • Policy and Politics

JCR Subject Category	Ontario Tech Access	Select Titles
Law (Clarivate's Journal Citation Reports database, 2019)	43/50	• Regulation & Governance • Psychology, Public Policy and Law

Books & E-Books

As noted, we provide access to more than 97,000 print books and 177,000 e-books that support teaching, learning and research across all programs and disciplines. Students and faculty have access to collections of books and e-books from major academic publishers.

The following table highlights Library holdings by subject heading for print books and e-books that cover topics in sustainability in the Library's collection. Collections have not been actively developed with a focus on sustainability, and the addition of this new program will further increase demand for resources in this subject area, necessitating some focused collection development to address new courses and emerging topics.

Subject	# Print Books	# E-Books
Sustainability	274	7,888
Sustainable development	276	9,269
Policy sciences	815	31,309
Public policy	808	22,810
Government policy	2,315	37,183

Search Tools

The Library subscribes to many research databases and indexes that provide access to the literature on sustainability. Systematic searching of these resources enables students and faculty to access journals and other academic resources such as conference proceedings, theses and dissertations, trade publications and reports.

Databases: Social Science Focus	Databases: Science and Engineering	Databases: Other Disciplines
• Scholars Portal Journals • JSTOR • Oxford Journals – Social Sciences • Project Muse • Academic Search Premier • Lexis Advance Quicklaw • Lexis Nexis Uni	• Web of Science • Science Direct • SAGE CRKN Collection • Scopus • IEEE Xplore • Engineering Village • Environment Complete • TOXNET	**Health Science:** • Nursing & Allied Health • Health Source • CINAHL • PUBMED **Business:** • Business Source Complete • ABI/INFORM Complete • Conference Board of Canada • Economist Intelligence Unit

Other Library Resources

Data Resources

To support research that requires statistics and datasets, the Library subscribes to three main resources:

- **Data Liberation Initiative (DLI):** Access to datasets from Statistics Canada surveys including public use microdata files (PUMF) and research data centre (RDC) master files.
- **odesi**: A web-based data exploration, extraction and analysis tool that enables researchers to search for variables across thousands of datasets including Statistics Canada datasets and polling data.
- **Interuniversity Consortium for Political and Social Research (ICPSR)**: Access to a data archive of more than 250,000 files of research in the social and behavioral sciences. Includes specialized collections of data in education, aging, criminal justice, substance abuse, terrorism, and other fields. Resources for teaching and learning include classroom exercises and materials to support data literacy in the classroom.

In addition, we provide access to Dataverse, a repository that supports research data management and open access data requirements for Tri-Agency research funding compliance.

Multimedia Resources

The Library acquires DVD and streaming video resources that are relevant to the disciplines in the BAS Sustainability program. Multimedia resources are selected individually or as part of standing subscriptions.

Our collection includes DVDs and 87,541 Streaming Video titles. Of these multimedia resources, the following are particularly relevant to the course offerings in the BAS Sustainability program.

Relevant Streaming Video Collections

Streaming Video Collection	Relevant Titles
Kanopy Streaming	• Sustainability: 254 videos
CBC Curio	• Sustainability: 53 videos
NFB Campus	• Sustainability: 23 videos

Library Services

A range of library services support teaching, learning and research at the University. Students and faculty in the BAS Sustainability program have access to services in-person, online and via email or telephone.

Research Support

The Library plays a vital role in supporting student and faculty research at Ontario Tech.

Reference Service & Research Consultations

Students and faculty have access to research support in-person and online, via telephone, email and through online chat help. In the 2020-2021 academic year, library staff answered 2,334 research questions from the Ontario Tech community.

Librarians provide individualized research consultations with students and faculty, in person or online. These consultations are tailored to meet the needs of individual researchers and can cover a range of topics from basic introductions to more advanced search techniques and support for literature reviews. In the 2020-2021 academic year, Librarians participated in a total of 106 research consultations across all disciplines.

Open Access & Research Data Management

We provide support to faculty and students in complying with the Tri-Agency Open Access Policy (SSHRC, NSERC, CIHR). Faculty and students can make their work open by publishing in an open access or hybrid journal, by depositing their work in a subject repository, or by depositing their work in Ontario Tech's institutional repository, E-Scholar (https://ir.library.dc-uoit.ca).

We also provide direct support to Faculties through dedicated subject specialist/liaison librarians and online guidance with the Library's Open Access Guide (http://guides.library.uoit.ca/openaccess). The Library has a Research Data Management guide (http://guides.library.uoit.ca/rdm) to support faculty and students in creating data management plans and sharing research data.

During the 2020-2021 academic year, these guides were viewed 905 times.

Research Metrics & Impact

The Library supports various departments on campus by fielding requests for reports on author, article, journal and institutional metrics. Subscribed tools include: Web of Science, Scopus and Journal Citation Reports (JCR).

Our Research Metrics guide (http://guides.library.uoit.ca/researchmetrics) provides background information and support for these tools.

Theses & Dissertations

To ensure that the Ontario Tech community has access to national and international thesis and dissertation databases, we provide access to PQDT (ProQuest Dissertations and Theses) and the Theses Canada Portal. The Library plays a key role in the dissemination and preservation of Ontario Tech theses, managing copies in the institutional open-access digital repository, E-Scholar, as well as maintaining print copies in the Library archives.

Teaching & Learning Support

As partners in teaching and learning at Ontario Tech, we provide a range of instructional and curriculum supports, both in person and online.

Information Literacy Instruction

In collaboration with teaching faculty, Librarians deliver customized information literacy instruction that support the development of students' 21st century skills to successfully search, evaluate and ethically use scholarly resources in their course requirements. These library services are aligned with the Association of College and Research Libraries (ACRL) Framework for Information Literacy for Higher Education. Information literacy sessions are tailored to the specific requirements of the course or assignment. Information literacy may be delivered synchronously or asynchronously to classes, in person or online. Library information literacy modules are available in the Canvas Learning Management System and can be adapted and added directly into courses, or instructors can opt for asynchronous recordings.

In the 2020-2021 academic year, 2,020 students at Ontario Tech received instructional support from a Librarian. Ideally, Information Literacy instruction is scaffolded across the required curriculum, enabling students to build increasingly sophisticated research skills throughout their program of study.

Information Literacy Integration: Recommendations

The following courses have been identified as potential Information Literacy touchpoints, due to information and data literacy, and research skills outcomes built into the curriculum in these required courses:

- SUST 1000 - Foundations of Sustainability
- POSC 1000 - Introduction to Political Science
- SSCI 1000 - Introduction to Sociology
- ENVS 2010 - Introductory Environmental Science
- ENVS 4010 - GIS and Spatial Analysis

Students may also receive Information Literacy instruction from a Librarian from preexisting elective courses where information literacy is already incorporated into the course, such as:

- HLSC 1701 - Information Literacy and Written Communications for the Health Sciences (approved elective)
- COMM 1100 - Introduction to Communication Studies (approved elective)

Co-curricular Workshops

In addition to Information Literacy instruction that is integrated into the curriculum, the library offers a number of co-curricular workshops that help develop student and faculty skills. Some examples of workshops offered to Ontario Tech students in the past include:

- 3D Printing
- Managing Your Research Identity
- Citation Management
- Finding and Using Open Educational Resources

Workshop offerings are regularly updated in response to the changing needs of the community.

Online Research Guides

Subject specialist librarians create custom Research Guides for each subject area that are available from the Library website. Research Guides include program and course guides that are directly related to the program and course curriculum, as well as topic guides that have cross-disciplinary relevance. Research Guides of particular importance to students in the BAS Sustainability program include:

- Faculty of Social Science and Humanities Guides:
  - Political Science - https://guides.library.uoit.ca/politicalscience
  - Legal Resources - https://guides.library.uoit.ca/law
  - Indigenous Studies - https://guides.library.uoit.ca/indigenousstudies
- Faculty of Science Guides:
  - Biological Science - https://guides.library.uoit.ca/biosci
- Citation Guide - https://guides.library.uoit.ca/citation
- Data Guide - https://guides.library.uoit.ca/data

During the 2020-2021 academic year, these guides were viewed a combined 10,883 times.

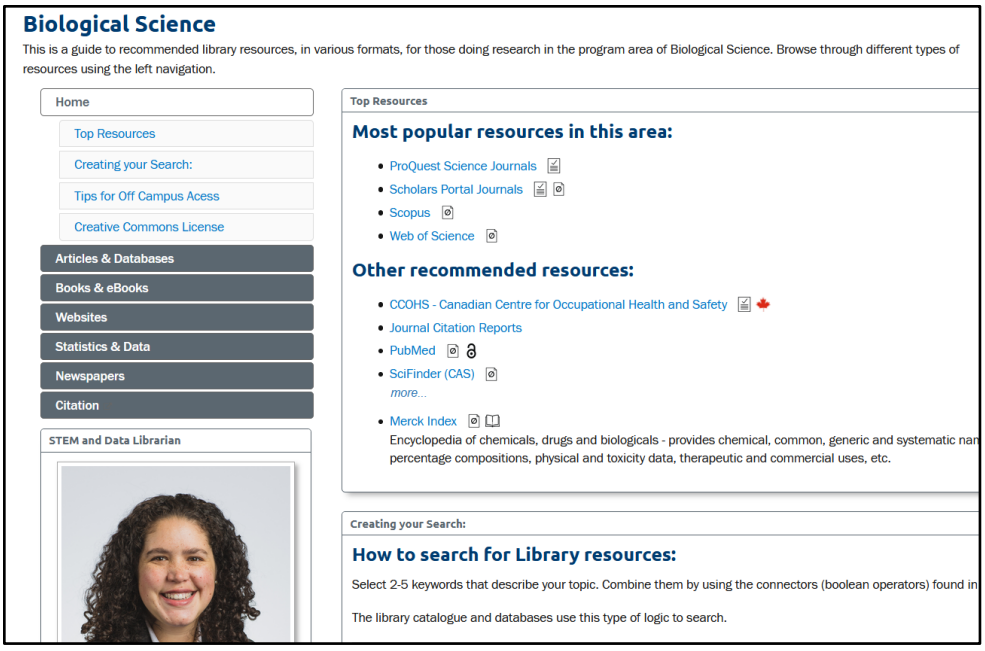

Figure 1 Biological Science Research Guide

Copyright & Academic Integrity

The Library provides copyright guidance for faculty and students. Library staff advise on license terms and the integration of content into the Learning Management System (LMS). We also help faculty find, evaluate and integrate Open Educational Resources into their courses.

Our research support services including our citation guides help students avoid plagiarism and comply with the University's Academic Conduct policy.

Course Reserves

Instructors can place materials on course reserve in the library, or make course materials available online through our electronic course reserves system. The Library's online course reserves include Leganto Course Readings, accessible directly in courses within the Canvas LMS. Online course reserves can include the library's print holdings, as well as digitized chapters, and links to journals, e-book chapters, videos and more. We are dedicated to providing equitable access to resources, and our online reserves are subject to copyright compliance and licensing restrictions.

3D Printing & Equipment Loans

Students have access to 3D printers and 3D printing workshops and can borrow equipment such as laptops and device chargers.

Library Staffing

The anticipated intake for students in the BAS Sustainability program for years 1-5 is as follows:

Academic Year	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029*
Level of Study						
1st year	15	20	30	30	30	**30**
2nd year	5	17	21	29	29	**29**
3rd year	10	10	20	24	31	**31**
4th year	0	10	9	20	24	**31**
5th year	0	0	1	1	2	**2**
Total Enrolment	**30**	**56**	**82**	**104**	**116**	**123**

We anticipate that there will be additional staffing requirements associated with growth in graduate and undergraduate degree programs across the University. These requests will be part of the regular budget planning process, following a fulsome and strategic analysis of our staffing needs.

Conclusion

The Library is well-positioned to support the BAS Sustainability. Ongoing funding to support the acquisition of books and ebooks focused on sustainability topics across multiple disciplines will ensure the currency and relevance of our collection.

We look forward to working in collaboration with students and faculty in this new program.

Appendix F – BAS Sustainability Letters of Support

Ontario Tech

Dean of Science
Dean of Social Science & Humanities
Dean of Engineering & Applied Science
Dean of Health Sciences
Registrar

External Supporters

Ontario Shores Centre for Mental Health Sciences
Durham Region
Evergreen https://www.evergreen.ca

January 6, 2023

RE: BAS Sustainability Proposal

I would like to express my support for the proposed Bachelor of Arts & Science in Sustainability, in my role as Dean of the Faculty of Science.

We have recognized for some time now the need (and opportunity) to create a program in sustainability that provides a balance of breadth and depth across multiple disciplinary areas. The proposed program meets this goal head on, building upon the strengths in individual Faculties as well as current cross-Faculty collaborations (including the minor in Sustainability). As the program is largely built on existing courses, the net new investment for a new program is quite low, while the return on investment seems high in terms of the value to our students, the local and regional communities, and to Canada. There is plenty of flexibility in the program as well. All four relevant Deans have discussed this and, to my knowledge, are all supportive of the proposal.

Sincerely,

Greg Crawford, Dean

Faculty of Science

May 2, 2022

Re: Support for the BAS Sustainability Proposed by Ontario Tech University

As Dean of the Faculty of Social Science and Humanities, I write to express my support for the proposed Bachelor of Arts & Science in Sustainability.

Building sustainability expertise and experience in the natural, social, and health sciences will produce graduates ready to contribute and lead in communities, industry, and government agencies. This program will create a strong, pan-disciplinary foundation for every student with the flexibility to let each define their own, unique path based on their passion and career aspirations.

We look forward to working in partnership with the Faculty of Science, the Faculty of Health Sciences and the Faculty of Engineering & Applied Science to insure the successful launch and continuing strength of this program at Ontario Tech.

We need to begin training young people to contribute to solutions to the profound sustainability challenges of our time. This program is an important step in that direction.

Sincerely,

Dr. Peter Stoett, Dean
Faculty of Social Science and Humanities
Peter.Stoett@ontariotechu.ca

December 23, 2022

RE: Proposed new Bachelor of Arts & Science in Sustainability program

As Dean of the Faculty of Engineering and Applied Science, I write to express my support for the proposed Bachelor of Arts & Science in Sustainability.

Building sustainability expertise and experience in the natural, social, and health sciences and application within these areas, will produce sought-after graduates ready to contribute to society. Creating strong students, with an pan-disciplinary foundation, will enable them to define and follow their own unique career path.

We look forward to working with all Faculties at Ontario Tech in delivering this program, and appreciate the support of the Faculty of Science, the Faculty of Health Sciences and the Faculty of Social Science and Humanities in developing the program.

The sustainability challenges of our time are pressing. We urgently need to educate young people to be part of the solutions. This program is a helpful step in that direction.

Regards,

H. A. Kishawy

Hossam Kishawy, PhD, PEng
Dean and Professor

January 5, 2023

RE: Proposed new Bachelor of Arts & Science in Sustainability program

As Dean of the Faculty of Health Sciences, I am pleased to write to you in support of the proposed Bachelor of Arts & Science in Sustainability.

This program will not only build expertise in the area of sustainability, but will do so in manner that brings a multi-disciplinary perspective to the issue, thereby enabling a more comprehensive approach to an important societal path forward. Within the context of this interdisciplinary perspective impactful young leaders will emerge.

We look forward to working with our colleagues in the Faculties of Science, Engineering and Applied Science and Social Science and Humanities in both developing and executing this program. By working together, we will not only offer a unique program, but also one that enables us to address pressing societal issues and importantly, educate the next generation in becoming an active part of developing requisite solutions.

I trust you will contact me should you have any further questions.

Regards,

Professor and Dean

Faculty of Health Sciences

September 9, 2022

To: Academic Resource Committee

This letter is to support the enrolment assumptions outlined in the proposal for the Bachelor of Applied Science in Sustainability. After conducting an environmental scan for competing programs, and consultation with Ontario Tech's off-shore recruitment networks, I believe an annual enrolment target of 25 students to be reasonable. In particular, the program has the potential to be an international student pipeline in several key markets, which may over time allow it to surpass the 10% international student target forecast in the proposal.

Sincerely

Dr. Joseph M. Stokes
University Registrar

Ontario Shores
Centre for Mental Health Sciences

Caroline Barakat, PhD
Associate Professor, Environmental Health
Ontario Tech University

April 14, 2022

Dear Dr. Barakat

Re: Support for the BAS Sustainability Proposed by Ontario Tech University

On behalf of Ontario Shores Centre for Mental Health Sciences ("Ontario Shores"), it is my pleasure to provide a Letter of Support for Ontario Tech's proposed program of study, Bachelor of Arts & Science in Sustainability.

Ontario Shores Centre for Mental Health Sciences (Ontario Shores) is a public teaching hospital providing a range of specialized assessment and treatment services to those living with complex and serious mental illness. Exemplary patient care is delivered through safe and evidence-based approaches where successful outcomes are achieved using best clinical practices and the latest advances in research. Patients benefit from a recovery-oriented environment of care built on compassion, inspiration and hope. At Ontario Shores, we also embrace our responsibility to advance the mental health care system and expand our research, teaching and education expertise. As a community teaching hospital, we host over 500 students every year in various disciplines, from undergraduate, through graduate and post-graduate programs.

Specifically, our Research & Academics department actively engage in the planning and co-development of curricula, initiatives and research with our academic partners including Ontario Tech University, University of Toronto Scarborough, Trent University and Durham College. Most recently, we co-hosted with Ontario Tech's Faculty of Health Sciences, the 5th Annual "New Year, New Ideas" conference entitled "Resilience and Innovation in the Face of a Global Pandemic". We also collaborated with Trent University's Department of Psychology in designing and offering an undergraduate course entitled "Applied Psychological Research Placement in Aging". The "Living Lab in Aging" based at Ontario Shores gives students the opportunity to be immersed in experiential learning while working with an inter-professional team to provide support to older adults living with mental and neurodegenerative conditions, including dementia. This successful collaboration has strengthened and broadened our partnership with Trent University, as they plan for Durham campus expansion, as well as establishing graduate curricula in aging and mental health to be co-delivered with Ontario Shores. We would very much welcome the opportunity to share this same expertise and experience with Ontario Tech University in the establishment of the Bachelor of Arts & Science in Sustainability program.

We value our long-standing partnership with Ontario Tech University, and fully support the proposed Bachelor of Arts & Science in Sustainability. The future of work offers plenty of diverse opportunities to create impact and to address sustainability challenges of our time. Ontario Shores is committed to partake in the advancement of academic curriculum that prepare students for these opportunities.

Please do not hesitate to contact me for further information.

Sincerely,

D Barbieri

Dawne Barbieri
Interim Vice President of Practice, Academics and Chief Nursing Executive

Sent by Email

April 6, 2022

The Regional Municipality of Durham

Office of the Regional Chair

605 Rossland Rd. E.
Level 5
PO Box 623
Whitby, ON L1N 6A3
Canada

905-668-7711
1-800-372-1102
john.henry@durham.ca

durham.ca

John Henry
Regional Chair and CEO

Re: Support for the Bachelor of Arts and Science in Sustainability Proposed by Ontario Tech University

To Whom it May Concern:

On behalf of the Regional Municipality of Durham, I am pleased to support Ontario Tech University's proposed Bachelor of Arts & Science in Sustainability program. Located on the eastern side of the Greater Toronto Area, Durham Region has a rich history of industry-leading transformation, energy innovation, and a diverse business ecosystem and talent pipeline.

We are the proud hosts of a dynamic energy, environment and engineering cluster, a thriving agriculture sector, and have developed nationally award-winning strategies to address climate change and environmental sustainability.

We support the proposed program's objectives to build experience and expertise in the natural, social, and health sciences to produce graduates that are ready to contribute to the sustainability challenges facing every organization, including regional and local governments. Through our CityStudio experiential learning program and other valuable partnerships, we look forward to the prospect of hosting senior capstone project groups that will assist us in enhancing our sustainability policies and practices.

Local and global needs for sustainability and pragmatic solutions are of the utmost importance. We need to train young people for the jobs of the future. This program is a significant step in that direction.

Please do not hesitate to contact Sandra Austin at the following email address: sandra.austin.durham.ca for further information.

Yours truly,

John Henry
Regional Chair and CEO

EVERGREEN

April 14th, 2022

Re: Support for the BAS Sustainability Proposed by Ontario Tech University

To Ontario Tech University,

I am pleased to support Ontario Tech's proposed Bachelor of Arts & Science in Sustainability. Building expertise and experience in the natural, social, and health sciences will produce graduates ready to contribute to the sustainability challenges facing every organization, including ours. We also look forward to the prospect of hosting senior capstone groups who will assist us in enhancing our sustainability policies and practices.

Local and global needs for sustainability and pragmatic solutions are intense. We need to train young people for the jobs of the future. This program is an important step in that direction. Do not hesitate to contact me for further information.

Evergreen is a national not-for-profit dedicated to making Canada's cities flourish. We're driven by the need to make our urban communities places that are livable, green, and prosperous. Places that are great to live, work, play, move, and grow. Changing cities means changing systems, and that means finding many points of leverage. From placemaking, to education, to housing, to public markets, we implement urban development solutions for the good of our cities. Evergreen rallies communities to restore vibrancy to their public spaces. We build city-wide partnerships of academics, businesses, governments, and community groups to plan for better transit. And we mobilize national networks to secure better housing while protecting the environment.

Sincerely,

Geoff Cape
Founder & CEO - Evergreen

evergreen.ca
info@evergreen.ca 1.888.426.3138

National Office 550 Bayview Ave, Suite 300, Toronto, ON M4W 3X8 T 416.596.1495
Charitable Registration Number: BN 1Z41722E2072034542

Appendix G: Proposed Governance of BAS Sustainability Program

The Bachelor of Arts & Science (BAS) Sustainability degree at Ontario Tech University is hosted by the Faculty of Science, but represents a true academic partnership of four Faculties: Science, Health Sciences, Engineering & Applied Science, and Social Science & Humanities. Efficient and effective governance of such an inter-disciplinary program is critical to its success.

The BAS Sustainability Program Committee (SPC) will consist of one representative from each of the partner Faculties, appointed by their respective Deans. Membership on the SPC will be considered as part of the Service workload of each Faculty representative, in consultation with their Dean. Appointments to the SPC will normally be for 2 to 3 years.

The SPC responsibilities will include:

- program management, including oversight of admissions, annual interview with students in the program, capstone courses, and degree audit analyses for graduation
- program development, including recommended minor revisions in core and elective courses and major revisions of curriculum
- coordination of marketing and recruitment activities

The SPC, through the program's Undergraduate Program Director (UPD), will report to the four Deans through the Dean of the Faculty of Science (i.e., the Dean of the Home Faculty). The program UPD will act as their Faculty's representative on the SPC.

The SPC and the Deans will endeavour to have at least one meeting per year to review the status of the program.

Program and program-specific course changes will be introduced via the Undergraduate Studies Committee in the Faculty of Science. Minor Program Adjustments will be presented to all partner Faculty Councils for information. Any Major Program Modifications will require approval by the Undergraduate Studies Committee and Faculty Councils in all partner Faculties. Changes to individual SUST courses are processed through the Faculty of Science and reported to participating Faculty Councils for information or, in cases where the change will affect one or more of the participating Faculties (e.g. prerequisites in another course) must also be approved by those Faculty Councils. Changes to additional courses contained within the program will be shared for information with the SPC if they are substantive.

For the period 1 July 2024 to 30 June 2027, the UPD for the BAS Sustainability program (and Chair of the SPC) will be Dr. Robert Bailey, who will carry out the duties of the Sustainability UPD as part of his duties as UPD for the Biological Sciences undergraduate programs. The Deans of the four partner Faculties, with final approval from the Provost, will subsequently determine who shall be appointed UPD for the Sustainability program for July 1, 2027 and beyond.

REVIEWERS' REPORT FOR NEW PROGRAMS

Reviewers' Report on the Proposed **Bachelor of Arts and Science in Sustainability** at

Dr Susan J. Elliott
University of Waterloo

Dr K. Bruce Newbold
McMaster University

1. OUTLINE OF THE REVIEW

Please indicate whether this review was conducted by desk audit or site visit. For those reviews that included a site visit, please indicate the following:

The review of the proposed BAS in Sustainability was conducted virtually over April 28 and May 1, 2023. Please see the Agenda in Appendix A.

2. EVALUATION CRITERIA

NOTE: Reviewers are asked to provide feedback on each of the following Evaluation Criteria (Quality Assurance Framework 2021, Section 2.1.2).

2.1 Program Objectives

Clarity of the program's objectives
Appropriateness of degree nomenclature given the program's objectives
Consistency of the program's objectives with the institution's mission and academic plans

The proposed BAS in Sustainability notes the following objectives:

- Provide core courses that give every graduate a pan-disciplinary foundation in the breadth of sustainability including the natural sciences and engineering as well as social, and health sciences.
- Provide elective courses that give every graduate an opportunity to pursue the area of sustainability that aligns with their passion and career goals.
- Provide core and elective courses chosen to deliver experiential learning with application to the challenges of sustainability locally, regionally, nationally, and globally.
- Provide graduates with a credible approach to define and measure sustainability.

The objectives of the proposed program are clear and achievable. Given the breadth of sustainability, a program must be interdisciplinary, or in the language of the proposal, 'pan-disciplinary'. The BAS in Sustainability easily meets these requirements given its inclusion of courses in engineering, natural sciences, health sciences, and social sciences. In addition, Indigenous-based courses are woven into the curriculum. Support for the proposed program was noted from across all four faculties involved in the proposal, along with external groups such as Durham Region and Evergreen. The pan-disciplinary nature of the program makes it unique among other Ontario university programs that tend to consider sustainability through either a science *or* a social science lens.

Review participants noted that the program's title was carefully chosen to highlight the interdisciplinarity and breadth of the program and its roots in the health sciences, natural

sciences, and social sciences. Its roots in the sciences and social sciences will provide students with the theory, policy, management, and science tools needed to engage in fully engage in the sustainability-based employment.

All four Ontario Tech strategic academic priorities are identifiable within the proposed program, including *Tech with a conscience* (i.e., courses focused on skills and methods), *Learning re-imagined* (i.e., using mixed teaching modalities), *Creating a sticky campus* (i.e., using the campus as a learning and teaching environment), and *Partnerships* (i.e., working with agencies and groups external to the campus for experiential learning opportunities and capstone courses). Ultimately, there are clear employment opportunities for graduates from the program.

2.2 Program requirements

- Appropriateness of the program's structure and the requirements to meet its objectives and program-level learning outcomes
- Appropriateness of the program's structure, requirements and program-level learning outcomes in meeting the undergraduate or graduate Degree Level Expectations
- Appropriateness of the proposed mode(s) of delivery to facilitate students' successful completion of the program-level learning outcomes
- Ways in which the curriculum addresses the current state of the discipline or area of study

There is no question that the program as designed is innovative and seeks to address a societal need. The core and elective courses, along with the experiential component and links to external partners, will go a long way to achieving the objectives as well as program-level learning outcomes. The experiential component could be significantly strengthened; that is, the core component of that is the sustainability journal, described as follows: "*The unique "Sustainability Journal" will track the student's experience and development inside and outside the classroom, providing discussion points in an annual review with their Sustainability faculty advisor. …Every student maintains a Sustainability Journal throughout the four years of the program that documents opportunities we provide outside the classroom to build their experience and knowledge of sustainability…Each student has a Sustainability Journal maintained throughout the program with reflections on readings and field trips and the student's individual sustainability journey both inside and outside.* This journal will be evaluated at the program level and not as part of an individual course. What would be useful would be to explicate how the student will complete the journal – yes, reflections – will they be taught how to undertake critical reflections of courses, field trips, opportunities, experiences? Furthermore, this piece is evaluated ANNUALLY; perhaps more often?

In addition, the other key experiential piece is a capstone experience:

The senior capstone project will enable a pan-disciplinary team to confront a significant sustainability challenge in the "real world"

Both of these ideas are solid contributors to experiential education (which a lot of the 'how' missing) but the reviewers felt additional pieces could be added that are more frequent and linked to course offerings (e.g., community service learning; working with community partners on course projects).

With respect to the proposed modes of delivery, there is some pedagogical tension, in the view of the reviewers, in the core introductory courses. That is, the students accepted into this program (a small number of around 20 – 25 annually) will indeed be exceptional as they will be students who are by their very nature interdisciplinary, and problem focused. Such students require a high level of engagement and need to be challenged in the classroom. And yet they will be taking part in existing large undergraduate courses along with a number of their peers who are not included in the BAS. It is unclear how these tensions will be resolved by the instructors of these core courses. Furthermore, there was concern expressed by the reviewers about the potential for conflicts in course offerings required to complete the program in a timely fashion due to the pandisciplinary nature of the courses required.

With respect to the *ways in which the curriculum addresses the current state of the discipline or area of study*, the reviewers are impressed with the calibre of both the material to be addressed as well as the strength of the instruction team.

2.3 Program requirements for graduate programs only

NA

2.4 Assessment of teaching and learning

- Appropriateness of the methods for assessing student achievement of the program-level learning outcomes and degree level expectations
- Appropriateness of the plans to monitor and assess:
  i. The overall quality of the program
  ii. Whether the program is achieving in practice its proposed objectives
  iii. Whether its students are achieving the program-level learning outcomes
  iv. How the resulting information will be documented and subsequently used to inform continuous program improvement

The curriculum of the proposed program is creative and innovative, with an emphasis placed on the undergraduate experience. New foundational courses (i.e., SUST1001U, SUST1002U) focus on the breadth of sustainability, while students also receive instruction in courses including environmental sciences/studies, biology, health sciences, methods, and Indigenous studies. Elective courses in the natural sciences, social sciences and health sciences give students the opportunity to specialize and pursue personal interests as they progress through the program. Capstone group projects occur in year 4 (SUST4001U, SUST4002U), which students working with external industry, government agencies, or NGOS.

Beyond the new sustainability courses in both the first and fourth year (SUST1001U, SUST1002U, SUST4001U, and SUST4002U), students will select from a variety of existing core or elective courses. Core courses provide students with the necessary tools and background in sustainability, including Indigenous perspectives, while elective courses allow them to pursue their own interests. In reviewing the provided material, the curriculum is well structured to support student success in meeting the program outcomes. Learning outcomes were clear. Further, the existing courses have well established learning objectives and degree level expectations.

The program also incorporates experiential opportunities, with students having the opportunity to engage in these from first year onward. These experiential opportunities

will be a core piece of the journal that program students are expected to keep throughout their studies.

Students are required to maintain a 'Sustainability Journal' throughout their four years of study. Within the journal, students document and reflect on their learning opportunities, including those that occur outside of the classroom. Journals will be reviewed on an on-going basis by program faculty. In part, the journal is meant to provide some of the 'glue' that bonds students in the program and creates a cohort or identity among students in the program (discussed further below).

Program governance will be the responsibility of the Sustainability Program Committee (SPC). Reporting to the university's Undergraduate Studies Committee, the SPC will include representatives from each of the four faculties involved in the program. The SPC is expected to meet regularly to monitor program quality, student progress, challenges, and any potential refinements to the program. These meetings and reviews will be particularly critical in the early years of the program.

There are two critical pieces that are related to student learning that require further consideration. First, how is cohort identity among students in the program created? The program needs to find ways beyond the journal that students in the program will engage and work together from the day they walk onto campus. Second, how will the students in the BAS in Sustainability program be engaged and occupied from Day 1 of their studies? More than likely, they will want (and expect) more out of their day-to-day learning than other students at Ontario Tech given the selective nature of the program. They will likely need additional challenges that engage them. Addressing both cohorting and learning opportunities will help support the success of the program and we offer some suggestions in Section 4 of this report.

2.5 Admission requirements

- Appropriateness of the program's admission requirements given the program's objectives and program-level learning outcomes
- Sufficient explanation of alternative requirements, if applicable, for admission into a graduate, second-entry or undergraduate program, e.g., minimum grade point average, additional languages or portfolios, and how the program recognizes prior work or learning experience

There was some discussion with the reviewers about the admission requirements for the program. Admission requirements are as follows:

The requirements for entry in the Sustainability program reflect the appropriate, diverse preparation needed for the rigour of a combined Arts and Science degree. We also include a short essay so that the prospective student can articulate why they are pursuing a Sustainability degree. "Admission is competitive, and the specific average or standing required for admission varies from year to year. Students are selected by taking into consideration a wide range of criteria including school marks, distribution of subjects taken, and performance in subjects relevant to the academic program. All applicants must also submit a brief statement of why they want to enroll in the BAS Sustainability program. There was strong agreement that the inclusion of an introductory essay was an essential and useful part of the admissions process.

Possession of the minimum requirements does not guarantee acceptance; preference will be given to applicants with the best qualifications.

The above was unclear to the reviewers and requires further operationalization.

Current Ontario secondary school students must complete the Ontario Secondary School Diploma (OSSD) with six 4U or 4M credits, including English (ENG4U). It is recommended that Biology (SBI4U) and one of Advanced Functions (MHF4U or Mathematics of Data Management (MDM4U) is taken. All other applicants should refer to admissions for the requirements for their specific category of admission." *W3*

This program intends to accept exceptional well-rounded students into an innovative, pan disciplinary program. These admission requirements are a solid beginning to that type of cohort.

2.6 Resources for all programs

Given the program's planned /anticipated class sizes and cohorts as well as its program-level learning outcomes:

- Participation of a sufficient number and quality of core faculty who are competent to teach and/or supervise in and achieve the goals of the program and foster the appropriate academic environment
- If applicable, discussion/explanation of the role and approximate percentage of adjunct and part-time faculty/limited term appointments used in the delivery of the program and the associated plans to ensure the sustainability of the program and quality of the student experience
- If required, provision of supervision of experiential learning opportunities
- Adequacy of the administrative unit's planned utilization of existing human, physical and financial resources, including implications for the impact on other existing programs at the university
- Evidence that there are adequate resources to sustain the quality of scholarship and research activities produced by students, including library support, information technology support, and laboratory access
- If necessary, additional institutional resource commitments to support the program in step with its ongoing implementation

The proposed program has an annual intake of 25 students, with a steady-state total enrollment (all years) of 100. The SUST1001U/1002U courses that are critical to the program are not intended just for the intake cohort, but will be open to students from across Ontario Tech. It is our understanding that core faculty members will be assigned to teaching the new Sustainability courses, with their current/existing teaching obligations backfilled by sessional instructors. As noted in the proposal, it is expected that this will require 16 sessional instructors. Over the longer-term and as the program finds its footing, it is recommended that new faculty that can contribute teaching expertise to the program are hired across the faculties. Within the broader list of course options, the program draws from a strong and dedicated faculty at Ontario Tech, with core and elective courses taught by current faculty. In most cases, the addition of new program students into the existing courses will not require a shift of resources.

Core BAS Sustainability faculty will be responsible for supervision of student journals, experiential opportunities, student mentoring, coordination of field trips, identifying and coordinating experiential learning opportunities and capstone courses with external partners. As the program reaches full enrolment, coordination of these different activities

will likely represent a significant time commitment on the part of the faculty members involved in the program. Consequently, the appointment of a Program Director with an appropriate teaching release, will help to facilitate these components.

All four Deans (Social Science, Science, Engineering and Health Sciences) and senior university leadership have noted their support for the program. It would be beneficial for senior leadership to clearly state the terms and expectations for confirming and supporting a program Director along with a commitment to hire additional faculty.

The program draws upon other institutional resources that are supportive of the program, including computing and learning management systems. The program is also supported by the library, strong academic advising, and other campus resources (i.e., health services, career services, accessibility support services, etc.) that will support undergraduate learning and success within the program. There are no concerns noted in terms of their ability to support the program and new courses.

2.7 Resources for graduate programs only

NA

2.8 Quality and other indicators

- Evidence of quality of the faculty (*e.g.*, qualifications, funding, honours, awards, research, innovation and scholarly record; appropriateness of collective faculty expertise to contribute substantively to the program and commitment to student mentoring)
- Any other evidence that the program and faculty will ensure the intellectual quality of the student experience

NOTE: Reviewers are urged to avoid using references to individuals. Rather, they are asked to assess the ability of the faculty as a whole to deliver the program and to comment on the appropriateness of each of the areas of the program (fields) that the university has chosen to emphasize, in view of the expertise and scholarly productivity of the faculty.

The faculty who will support this program will come from all four Faculties at Ontario Tech. The reviewers were impressed with the faculty that will represent this program. They are experienced teachers and researchers. They also have a range of experience with external agencies like the World Bank, Indigenous communities, and local municipal agencies. There is no question they are experienced enough to offer this program. The concern is about the University's commitment to new faculty, beyond money for sessionals.

With respect to other evidence, it must be noted that the student advisors the reviewers met with were exceptional – committed, enthusiastic, and very student centred. They will be a major factor in this program's success.

3. EQUITY, DIVERSITY, INCLUSION, AND DECOLONIZATION

Please comment on any consideration of the principles of equity, diversity, inclusion, and decolonization in the new program.

At its core and reflecting its pan-disciplinary learning, the program incorporates multiple ways of knowing as a core principle. As the program was developed, lead faculty worked to incorporate Equity, Diversity, Inclusion, and Decolonization (EDID) into the program,

with discussions including members of the Sustainability Program Committee, the Indigenous Education Advisory Circle (IEAC), and individuals/groups beyond the Ontario Tech campus. The program also looks to develop and leverage partnerships with Indigenous groups external to the Ontario Tech campus.

Our impression is that the program committee have worked hard to ensure EDID in the development of the BAS Sustainability program. In particular, there is a strong representation of Indigenous perspectives, content, and knowledge in core and elective course options. Core courses include INDG2000U (Introduction to Indigenous Studies), INDG2500U/SCIE2500U (Two-eyed Seeing in the Natural Sciences). Students can also draw upon a number of elective courses that are found in the different faculties and focus on Indigenous issues, including LGLS3310U (Indigenous Peoples, Law and the State in Canada), HLSC3823U (Health & Indigenous People in Canada), INDG2100U (Endaayaang – Storying Home in Michi Saagiig Territory), INDG2200U (Indigenous Digital & Visual Media), INDG/POSC3310U (Indigenous Peoples, Sustainability, and Development: A Global Perspective), INDG4300U (Special Topics in Indigenous Studies), INDG4310U (The Politics of Indigenous Rights), and INDG4507U (Indigenous Design and Technology). Given the breadth of Indigenous courses, students can complete a Minor in Indigenous Studies. Beyond these specific courses, themes of equity, diversity, inclusion, and decolonization are represented in the curricula of other core or elective courses.

4. OTHER ISSUES

- Please highlight any unique curriculum or program innovation, creative components, or significant high-impact practices
- Please identify any other issues that may not be covered above

- *Opportunity for credentialism*: Program coordinators may wish to explore opportunities for students to gain credentials through Eco Canada (https://eco.ca/). Eco Canada certification can help to ensure the robustness and recognition of the sustainability program while also working to increase the likelihood that students will find employment in their field when they graduate. Micro-credentials based on sustainability courses may be another option to consider in the future.
- *Cohorting*: The Sustainability Journal was noted as a way to bring the students together and create cohort of students within the program. However, this may be insufficient to create a sense of community among students within the program given that beyond the core courses, they will be scattered among larger enrollment courses. The program faculty are encouraged to find alternate ways to build a cohort of students within the program that will help foster student success, collaboration, and belonging among students. Potential ideas include a common book, journal club, and peer-mentoring programs, with program students expected to participate in these common elements. It is recognized that the program will be challenged at first to provide peer mentoring. One option is to recruit senior students in the current sustainability minor to provide this support in the initial years of the program. As the initial intake of students advances through to their senior years, they should be directly involved in the mentoring process.
- *Scheduling*: Academic advisors noted the potential for scheduling conflicts as students move between the downtown and north campuses of Ontario Tech. Scheduling of classes will need to be carefully considered and monitored.

5. SUMMARY AND RECOMMENDATIONS

Please provide a summary of your conclusions and include a numbered list of each of your recommendations.

Following our review, we are excited about the opportunities for this program. Its pan-disciplinarity will produce students that are employable and in demand across a number of different sectors. We are convinced that the basic structure of the BAS Sustainability is sound. It will produce employment-ready graduates that can tackle sustainability problems from a range of disciplinary perspectives rather than relying on just one. It draws upon the experiences and expertise of multiple faculty members and is a true pan-disciplinary program that spans four different faculties. The program is consistent with the strategic plan of the university and it builds upon the existing Sustainability Minor. It uses established courses in the sciences and social sciences while introducing new sustainability focused theme courses that bookend the program. We offer four final recommendations:

1. *Resourcing the Program*: As noted above, faculty resourcing will be critical with the need to move beyond a spirit of university support to one of real, tangible support. Even in the immediate short term, faculty involved in the program need to know that there is the full commitment of the university to appropriately resource the program. This includes the commitment to have a Program Director that is responsible for the multiple tasks that will make the program successful.
2. *Meeting admission targets:* Achieving admission targets in this innovative, new program in such a competitive environment will depend on several factors including recruitment and communication strategies.
3. *Expand the experiential component:* As discussed above this could and should be more than the sustainability journal and the final year capstone experience.
4. *Commitment to new faculty lines:* It would be reassuring to see these commitments in writing; this program cannot survive or be sustainable on the basis of sessional instruction.

NOTE: The responsibility for arriving at a recommendation on the final classification of the program belongs to the Appraisal Committee. Individual reviewers are asked to refrain from making recommendations in this respect.

Signature:

Date: June 22, 2023

Signature:

Date: June 13, 2023

APPENDIX A

Undergraduate New Program Site Visit
Bachelor of Arts & Science in Sustainability

Undergraduate New Program Site Visit
Bachelor of Arts & Science in Sustainability
Faculty of Science, Engineering and Applied Science, Health Science and Social Science and Humanities
Friday April 28th and Monday May 1s

Reviewer(s): Dr. Susan Elliott (University of Waterloo) and Dr. Bruce Newbold (McMaster University)
All meetings take place using the following Google meet link:
Meeting ID: https://meet.google.com/ywp-biiq-bxb
Phone Numbers: +1 226-214-6698 PIN: 589 726 414#

Day 1 – Friday April 28th, 2023

Time	Location	Details	People
8:50-9:00 a.m. (EST)	Google meet	Checking of tech requirements	**Shelly Windsor**, Centre for Quality Institutional Enhancement **Patricia MacMillan**, Academic Planning Specialist Science
9:00-9:30 a.m. (EST)	Google meet	Welcome Review of Agenda	**Dr. Langis Roy**, Deputy Provost **Dr. Greg Crawford**, Dean of Science **Dr. Hossam Kishawy**, Dean of Engineering and Applied Science **Dr. Carol Rodgers**, Dean of Health Science **Dr. Peter Stoett**, Dean of Social Science and Humanities **Dr. Bob Bailey**, Chair of Internal Review team **Patricia MacMillan**, Academic Planning Specialist Science **Shelly Windsor**, Centre for Quality Institutional Enhancement
9:30-10:30am (EST)	Google meet	Overview of the program	**Dr. Greg Crawford**, Dean of Science **Dr. Bob Bailey**, Chair of Internal Review team **Dr. Caroline Barakat,** Health Science **Dr. Daniel Hoornweg**, Engineering and Applied Science **Dr. Timothy MacNeill,** Social Science and Humanities
10:30am- 11:00am		**Break**	
11:00-12:00 p.m. (EST)	Google Meet	Meeting with the Deans	**Dr. Greg Crawford**, Dean of Science **Dr. Hossam Kishawy**, Dean of Engineering and Applied Science **Dr. Carol Rodgers**, Dean of Health Science **Dr. Peter Stoett**, Dean of Social Science and Humanities
12:00m- 1:00pm		**Lunch Break**	
1:00-2:00 p.m. (EST)	Google meet	Meeting with Faculty Members	**Dr. Toba Bryant**, Faculty of Health Science **Dr. Caroline Barakat**, Faculty of Health Science

			Dr. Daniel Hoornweg, Engineering and Applied Science **Dr. Timothy MacNeill,** Social Science and Humanities
2:00 - 2:30pm	Google Meet	Conclusion and summary of Day 1	**Dr. Greg Crawford**, Dean of Science **Dr. Bob Bailey**, Chair of Internal Review team **Dr. Caroline Barakat,** Health Science **Dr. Daniel Hoornweg**, Engineering and Applied Science **Dr. Timothy MacNeill,** Social Science and Humanities **Patricia MacMillan**, Academic Planning Specialist Science **Shelly Windsor**, Centre for Quality Institutional Enhancement

Faculty Response to the External Review for the

Bachelor of Arts & Science in Sustainability

Submitted By:

Sustainability Program Committee

Robert Bailey (Science) - Chair

Caroline Barakat (Health Sciences)

Dan Hoornweg (Engineering & Applied Science)

Timothy MacNeill (Social Science & Humanities)

26 July 2023

Faculty Deans

Dr. Greg Crawford (Dean of Science)

Dr. Hossam Kishawy (Dean of Engineering & Applied Science)

Dr. Carol Rodgers (Dean of Health Sciences)

Dr. Peter Stoett (Dean of Social Science & Humanities)

[TBA]

Introduction

Brief comments on the external reviewers report and the program review process in general.

Dr. Elliott and Dr. Newbold provided a very cogent review with several very good suggestions regarding strengthening the program's delivery and sustainability. The felth the objectives of the program are "clear and achievable" and that "the pan-disciplinary nature of the program makes it unique among other Ontario university programs".

Summary of Recommendations and Faculty Responses

- *Restate the recommendations summarized in the external reviewers' report and provide the Program's comments and responses*
- *The Dean should then provide summative comments/responses from an overarching Faculty perspective for each recommendation and program response*

Recommendation 1
Strengthen the experiential component and enhance cohort identity

Program's Response
We agree with these related recommendations, and propose two ways this could be achieved:

- Students in the program will be in a separate, face-to-face section of both SUST1001U and SUST1002U; these will be distinct from the online only sections of each of these courses
- Beginning in their first year of the program, students will be enrolled in **SUST0001U, Sustainability Reflection Journal,** until the final evaluation of their journal in their last term. Field trips and other experiences will augment regular course work and participation will be confirmed in the journal. The journal will be reviewed annually by the Sustainability Program Committee

Deans' response

The Deans understand the desirability for Sustainability students to connect with each other early in the program. That is an important consideration for retention and student success in the program.

The Deans, however, are not yet prepared to support offering separate sections of SUST1001U and SUST1002U to majors and non-majors at this point. Sufficient demand for the program has not been shown. Alternative suggestions that were offered in a subsequent discussion with the current Sustainability Program Committee (which assembled the curriculum proposal and which is providing the faculty-based feedback here) were: (1) to offer these two courses in an in-person/streaming mode, but to establish an expectation that majors attend in person; (2) to offer opportunities outside courses (e.g., events geared specifically towards Sustainability majors) to build engagement and social networks. We believe these two suggestions should be tested first.

We also do not see the need for a separate course to help manage a reflection journal, nor that the Sustainability Program Committee be tasked with reviewing the journals. As these are reflections, detailed feedback is not seen to be necessary. We believe the UPD, when

assigned, can manage an annual review of reflection journals at this point. If the workload becomes too demanding, or managing the expectation for students to maintain a reflection journal becomes problematic, the approach(es) taken can be revisited.

Recommendation 2
Clarify admission criteria

Program's Response
We will make it clear that applicants who meet the minimum admission standards will be judged according to the following criteria which have been ranked from highest to lowest weighting:

1. Introductory essay or video
2. Marks achieved in required courses
3. Marks achieved in other courses

Deans' response

As noted earlier, there is a sense from the faculty response that this program will be seen to be highly competitive right away. The Deans are hopeful, but remain unconvinced at this stage. We would rather see proof of the demand for the program before developing a sophisticated and nuanced approach to admissions.

To recap the admissions requirements outlined in the original Sustainability program proposal (Appendix B),

> "Admission is competitive, and the specific average or standing required for admission varies from year to year. Students are selected by taking into consideration a wide range of criteria including school marks, distribution of subjects taken, and performance in subjects relevant to the academic program. All applicants must also submit a brief statement of why they want to enroll in the BAS Sustainability program. Possession of the minimum requirements does not guarantee acceptance; preference will be given to applicants with the best qualifications. Current Ontario secondary school students must complete the Ontario Secondary School Diploma (OSSD) with six 4U or 4M credits, including English (ENG4U). It is recommended that Biology (SBI4U) and one of Advanced Functions (MHF4U) or Mathematics of Data Management (MDM4U) is taken."

The Deans remain unconvinced that requiring an essay or video is appropriate or useful at this early stage of the program offering. While there ultimately may be value in requiring potential students to add this requirement (i.e., to actually engage in thinking about why they want to enter the program), the fundamental level of interest in the program has not yet been proven. Furthermore, institutional resources have not been identified to help acquire and manage videos as a part of the application process.

At this early stage, we recommend dropping the expectation of an essay or video as a part of the application process. Admission to the program should be based on GPA in the required courses (i.e., grades in ENG4U and the best of five other RU or RM credits). However, some additional discussion/negotiation with the Registrar's Office may be of value.

The Admissions criteria can be modified as appropriate and necessary, as the program rolls out across the first few years.

Recommendation 3
Commit to future new faculty hires in support of long-term sustainability of the program

Program's Response
The program committee supports this statement so that the program can itself achieve high quality sustainability once it is at steady state within 4-5 years of initial offering.

Deans' response

The Deans appreciate the desirability of a commitment to future faculty hires, once the program is seen to be successful. We would be supportive as well. We would also likely look for hires that would be multi-disciplinary (perhaps with cross-Faculty appointments if appropriate), to help address needs and opportunities across different programs, research strengths, etc. However, an institutional commitment to future hires at this time is unlikely. That said, we want to see the program succeed and expect to support the request for additional hires once the program has proven its potential.

Suggested Revisions for the Proposal following External Review

1. Additional face-to-face section for SUST1001U and SUST1002U.
   - *The Deans are not supportive of this at present. We recommend instead offering the courses in an in-person/streaming format, while setting the expectation that majors show up in person. The Deans also recommend developing a few extra-curricular events, primarily for majors and focusing on both issues of program interest and socialization opportunities.*

2. Additional course, **SUST0001U – Sustainability Reflection Journal**, with final term evaluation by Sustainability Program Committee and resources for field trips and other experiences throughout the program.
   - *The Deans see the Reflection Journal as being another helpful way for students to remain connected to the program and their learning. However, they do not support a separate course offering. They recommend establishing the expectation of Sustainability majors to maintain a reflection journal and that the UPD annually review, in brief, those journals. We would not expect a lot of feedback to be required for those journals.*

3. Minor editing of admission criteria and evaluation of applicants.
   - *The Deans recommend a more streamlined approach to admissions assessment in the early stages of this program offering, focussing on the GPA across required courses.*