UNIVERSITY OF TORONTO SCARBOROUGH

OFFICE OF THE CAMPUS COUNCIL

FOR APPROVAL **PUBLIC** **OPEN SESSION**

TO:	UTSC Academic Affairs Committee
SPONSOR:	Prof. William Gough, Vice-Principal Academic and Dean
CONTACT INFO:	416-208-7027, vpdean.utsc@utoronto.ca
PRESENTER:	Prof. Katherine Larson: Vice-Dean Teaching, Learning & Undergraduate Programs
CONTACT INFO:	416-208-2978, vdundergrad.utsc@utoronto.ca
DATE:	April 20, 2021 for April 27, 2021
AGENDA ITEM:	6

ITEM IDENTIFICATION:

Minor Modification: New Category 2 Certificate in Sustainability (U of T Sustainability Scholar), UTSC

JURISDICTIONAL INFORMATION:

University of Toronto Scarborough Academic Affairs Committee (AAC) "is concerned with matters affecting the teaching, learning and research functions of the Campus" (*AAC Terms of Reference, Section 4*). Under section 5.6 of its terms of reference, the Committee is responsible for approval of "Major and minor modifications to existing degree programs." The AAC has responsibility for the approval of Major and Minor modifications to existing programs as defined by the University of Toronto Quality Assurance Process (*UTQAP, Section 3.1*).

GOVERNANCE PATH:

1. **UTSC Academic Affairs Committee [For Approval] (April 27, 2021)**

PREVIOUS ACTION TAKEN:

No previous action in governance has been taken on this item.

HIGHLIGHTS:

The Department of Physical and Environmental Sciences at the University of Toronto Scarborough (UTSC) is proposing to introduce a new Category 2 Certificate in Sustainability (U of T Sustainability Scholar). Category 2 Certificates are for-credit and are offered in conjunction with an existing undergraduate degree program(s).

The President's Advisory Committee on the Environment, Climate Change, and Sustainability (CECCS) has developed a Sustainability U Framework, modeled after the Global U Framework. The key goals of this initiative are to:

- Make sustainability a key component of the U of T identity;
- Achieve international leadership in the integration of operational and academic sustainability;
- Coordinate disparate sustainability activities across the three campuses; and
- Provide each undergraduate student with an opportunity to add sustainability learning to their degree no matter what program(s) they are enrolled in.

At the Sustainability Scholar level of the Framework, students complete a sustainability pathways certificate offering. The proposed Certificate fits within, and supports, the Sustainability Scholar level of the Sustainability U Framework by targeting a segment of the student body which would not normally have access to an educational opportunity focused on sustainability. Furthermore, it accomplishes this by effectively accessing resources that already exist on the UTSC campus, as well as by leveraging the teaching of recognized experts within the field.

Students that historically could not accommodate an environmental component within their degree programs, will now have access to a flexible, recognized, educational designation that is consistent with professional trends in the workplace. By exposing this broader, diverse range of students to sustainability, the collective awareness of students, and by extension the campus, is necessarily elevated, thereby responding to the stated commitments of the *UTSC Strategic Plan* (2020-25).

The proposed Certificate examines how theory and data working together can help solve some of the most pressing challenges facing human societies in the 21st Century, and prepares students to take advantage of opportunities as researchers and confront challenges as citizens. The overarching goals of the proposed Certificate are threefold:

- To increase access to sustainability education by giving students the opportunity to easily add sustainability learning to their degree, no matter what program(s) they are enrolled in.
- To develop interdisciplinary interest and competency in sustainability by teaching how disciplines can work together to better understand and act on the global and challenge of sustainability, and enhancing interdisciplinary collaboration among future leaders from UTSC.

- To encourage students to 'think outside the box' by encouraging them to look beyond their program of study, to integrate their knowledge, and engage and collaborate with scholars and practitioners from widely different disciplines who share an interest in sustainability.

The proposed Certificate is consistent with the academic goals of the Department of Physical and Environmental Science, and the discipline of Environmental Studies more specifically. Broadly speaking, Environmental Studies grew out of a directed attempt to enlist formal educational processes to shift society towards a more equitable and sustainable future. This foundational imperative rests at the core of the DPES program in Environmental Studies, and is in direct alignment with the motivating rationale behind the development of the proposed Certificate, as well as the Sustainability U Framework.

There has been extensive consultation within the Department of Physical and Environmental Sciences. There has also been consultation with the UTSC Departments Anthropology, Biological Sciences, English, Historical and Cultural Studies, Human Geography, Political Science, and Sociology, and the Centre for Critical Development Studies. The proposal has been reviewed by the Dean's Office at UTSC, and by the Office of the Vice-Provost, Academic. Feedback from all stakeholder groups has been incorporated into the proposal.

FINANCIAL IMPLICATIONS:

There are no net implications to the campus operating budget.

RECOMMENDATION:

Be It Resolved,

THAT the proposed Certificate in Sustainability (Category 2), offered by the Department of Physical and Environmental Sciences, and as described in the proposal dated March 29, 2021, be approved, effective for the 2021-2022 academic year.

DOCUMENTATION PROVIDED:

1. New Category 2 Certificate in Sustainability (U of T Sustainability Scholar), dated March 29, 2021.

University of Toronto Proposal to Create a Certificate in Conjunction With an Undergraduate Program

Certificates offered in conjunction with an undergraduate program are for-credit undergraduate certificates governed by the *Policy for Certificates (For-Credit and Not-For-Credit)*.

Creation and closure of these certificates follow the protocols for minor modifications; are reviewed with the relevant undergraduate program; and are reported to the Provost through the Office of the Vice-Dean, Academic Programs. Successful completion of the certificate is recorded on the academic transcript. Students must be enrolled in a specific undergraduate program.

Proposed certificate name:	**Certificate in….. (Faculty name)** Certificate in Sustainability (UofT Sustainability Scholar) [Note: remind Registrar's Office to include the code SST in the Subject POSt code]
Undergraduate degree(s) the certificate will be offered in conjuction with:	• Honours Bachelor of Arts (HBA) • Honours Bachelor of Science (HBSc)
Academic Unit and Division	Department of Physical and Environmental Sciences, University of Toronto Scarborough
Dean's office contact:	Annette Knott: annette.knott@utoronto.ca
Version date:	March 29, 2021

1 Summary

- Please provide a brief summary of the certificate, including:
  - academic rationale for certificate
  - impetus for its development (including interest and demand)
  - how the certificate fits with unit/division's academic plans
  - any important or distinctive elements

This is a proposal to introduce a new Category 2 certificate, called the Certificate in Sustainability, that will be housed in, and administered by, the Department of Physical and Environmental Sciences (DPES), at the University of Toronto Scarborough (UTSC)

The President's Advisory Committee on the Environment, Climate Change, & Sustainability (CECCS) has developed a three-level Sustainability U Framework, modeled after the Global U Framework:

- At the Sustainability Scholar level, students complete a sustainability pathways certificate offering;
- At the Sustainability Citizen level, students complete sustainability-related extracurricular activities, documented in their Co-Curricular Record; and
- At the Sustainability Leader level, students complete the Scholar and Citizen level requirements plus a capstone course or a Community Engaged Learning (CEL) course.

The Sustainability U Framework adopts the idea of regenerative sustainability, which recognizes the interconnectedness of human and environmental wellbeing, seeking to create net positive outcomes across both, rather than simple reductions in harm or damage. The key goals of this initiative are to:

- Make sustainability a key component of the U of T identity;
- Achieve international leadership in the integration of operational and academic sustainability;
- Coordinate disparate sustainability activities across the three campuses; and
- Provide each undergraduate student with an opportunity to add sustainability learning to their degree no matter what program(s) they are enrolled in.

The proposed Certificate fits within, and supports, the Sustainability Scholar level of the Sustainability U Framework by targeting a segment of the student body which would not normally have access to an educational opportunity focused on 'sustainability' (i.e., a non-traditional population of students not usually focused on environmental, or sustainability-oriented programs). Furthermore, it accomplishes this by effectively accessing resources that already exist on the UTSC campus, as well as by leveraging the teaching of recognized experts within the field.

Pragmatically, students that historically could not accommodate an environmental component within their degree programs, will now have access to a flexible, recognized, educational designation that is consistent with professional trends in the workplace. By exposing this broader, diverse range of students to 'sustainability', the collective awareness of students, and by extension the campus, is necessarily elevated, thereby responding to the stated commitments of the UTSC Strategic Plan (2020).

2 Effective Date

September 2021, for the 2021-22 academic year.

3 Academic Rationale

- What are the academic reasons for the certificate, and how does it fit with the unit/division's academic plans?

Background

Environment and Sustainability is a transdisciplinary field of teaching, learning and research that addresses the concerns that are shared across many disciplines spanning the full breadth of the natural and social sciences and the humanities. The Environment and Sustainability field is distinctive in its integrative approach to the study of environmental problems through three lenses: environmental, economy, society (culture has more recently been suggested as a fourth lens). Phelan et al. (2015, p. 11) describe three main axes of inquiry within Environment and Sustainability education:

1. First, the field gives attention to relationships between human societies and environments. Education in this field involves: (a) learning fundamental aspects of society–nature interactions and interdependencies in relation to their present and future conditions; and b) supports learners to develop the skills required to influence the transformation of human societies towards a more sustainable future. The field addresses interconnections between social, environmental and ecological dimensions of social justice, sustainability and resilience.

2. Second, the field values transdisciplinarity. Transdisciplinarity encourages a shift in perspective that includes, and extends beyond, single traditional disciplines: this approach recognises that effective responses to 'wicked' sustainability challenges (challenges that are difficult to clearly define, constantly evolving, and have no clear resolution) lie beyond individual disciplines. The field thus encompasses and synthesises the contributions of many disciplines and seeks to draw academic knowledge into dialogue with other forms of knowledge. Contemporary environment and sustainability thinking engages with complexity, uncertainty and cross- scale interdependencies, is creative, and searches for new, more integrative ways of understanding the world.

3. Third, the field is characterised by its focus on futures. A key concern and intention of sustainability is ensuring the viability of human societies and ecological systems into the future. Decision-making for sustainability therefore makes links between our actions in the present and their impact in the future. It orientates the actions of those in the field to one of envisioning and negotiating more positive futures.

UNESCO states:

> Education for Sustainable Development (ESD) empowers everyone to make informed decisions for environmental integrity, economic viability and a just society for present and future generations, while respecting cultural diversity (UNESCO, 2014, p. 20).

The proposed Certificate in Sustainability supports holistic learning across three overlapping dimensions (UNESCO, 2019):

- The cognitive dimension comprises knowledge and critical thinking skills necessary to better understand the world and its complexities (UNESCO 2015, 2017).
- The social and emotional dimension includes skills, attitudes and values that enable learners to collaborate, negotiate, create and communicate in a diverse and globalized world, as well as cope with the challenges of life and work in the 21st century. This dimension also provides opportunities for developing self-reflection, as well as values, attitudes and motivations that enable learners to lead fulfilled and productive lives, respectfully and peacefully with others.
- The behavioural dimension nurtures the ability of learners to act in compassionate, respectful and nonviolent ways, building constructive relationships. It also refers to action competencies, such as participating constructively in community (local or global) projects that promote sustainable development in their immediate environment and beyond. Finally, the behavioural dimension helps learners apply learning according to local community norms or broader societal standards.

Academic Goals of the Proposed Certificate

UTSC is deeply committed to sustainability education, and the overarching goals of the proposed Certificate in Sustainability are threefold:

- To increase access to sustainability education by giving students the opportunity to easily add sustainability learning to their degree, no matter what program(s) they are enrolled in.
- To develop interdisciplinary interest and competency in sustainability by teaching how disciplines can work together to better understand and act on the global and challenge of sustainability, and enhancing interdisciplinary collaboration among future leaders from UTSC.

- To encourage students to 'think outside the box' by encouraging them to look beyond their program of study, to integrate their knowledge, and engage and collaborate with scholars and practitioners from widely different disciplines who share an interest in sustainability.

The proposed Certificate is consistent with the academic goals of the Department of Physical and Environmental Science, and the discipline of Environmental Studies more specifically.

Broadly speaking, Environmental Studies grew out of a directed attempt to enlist formal educational processes to shift society towards a more equitable and sustainable future as recognized by the Belgrade (1975) and Tbilisi (1977) Conferences, the Rio Summit (United Nations Conference on Environment and Development (1992), Agenda 21 Chapter 36) as well as the UNEP Decade of Education for Sustainable Development. This foundational imperative rests at the core of the DPES program in Environmental Studies, and is in direct alignment with the motivating rationale behind the development of the proposed Certificate in Sustainability, as well as the Sustainability U Framework.

An emphasis on real-work environmental application has anchored the development and evolution of the DPES Environmental Studies program. This pedagogical orientation explicitly acknowledges the unique role universities play in addressing environmental issues as (co)producers of scientific and applied knowledge, as well as teachers of future professionals. The DPES's integrative educational platform provides a flexible framework that can account for the diverse skills and knowledge that are available across the entire campus; the proposed Certificate in Sustainability is a natural extension of these pedagogical principles.

4 Need and Demand

- Provide a brief description of the projected interest in and demand for the proposed certificate.
- Provide details regarding the anticipated yearly in-take.

There is a strong interest among students at UTSC in sustainability issues, as is demonstrated by the growth in enrolments in the Major in Environmental Studies (from 5 students in 2013 to 153 students in 2019), as well as the popularity of courses in Environmental Studies and Environmental Science.

The courses that students might use to complete the proposed Certificate were mapped to establish a baseline for the performance of the Certificate. From this exercise, it is estimated that approximately 60 students per year could have received the Certificate if they were to add ESTB03H3 to their transcript. This number increases to 190 for students that require only one extra sustainability course in addition to ESTB03. In other words, there is a substantial population of students that are within reach of the proposed Certificate.

5 Admission Requirements

- Provide the admission requirements for the certificate.

The proposed Certificate will be open to all students in all Honours Bachelor of Arts (HBA) and Honours Bachelor of Science (HBSc) degree programs.

The Certificate will be supplementary and concurrent; it cannot be taken on its own and cannot replace any degree-required program (i.e., one Specialist; two Majors; or one Major and two Minors).

6 Program Requirements

- This certificate will consist of a coherent sequence of for-credit undergraduate courses related to an identified topic or theme that may complement the degree program.
- Describe the academic requirements of the certificate and mechanism for the assessment of student performance.
- Clarify the certificate program length.
- Is this certificate linked to a particular undergraduate program or degree? Please explain the relationship.

Students will complete the Certificate within four years, as part of their undergraduate degree and are not required to be enrolled in any specific program or degree. The courses taken to complete the Certificate are not subject to the 12.0 distinct credits rule that applies to credits within programs; students can count the courses towards the completion of the Certificate and their program(s) of study (POSt). Courses **for which students have selected the CR/NCR option**, cannot be used towards the completion of the Certificate; however, courses **that are graded as CR/NCR courses for all students**, can be used towards the completion of the Certificate.

UNESCO (2006) recommends that curricula should be developed across "learning themes" as enumerated below (source: Egana del Sol, 2019):

Social	**Environmental**	**Economic**
Peace and human security	Biological diversity	Consumerism and ethical trade
Conflict resolution	Ecological principles, ecosystems	Corporate Social Responsibility
Citizenship, democracy, governance	Natural resource management	Rural and urban development
Participatory decision-making	Climate change	Combatting poverty
Gender equality	Disaster prevention	Understanding costs and supply chains
Cultural diversity	Energy	Living standards
Intercultural understanding	Waste	Valuing sustainable livelihoods

Bearing the UNESCO learning themes in mind, students will complete a minimum of 2.0 credits as follows:

1. 0.5 credit in required courses (ESTB03H3 Land). This course has been specifically designed to anchor the diverse range of eligible courses that students can take to complete the Certificate, within the fundamentals of 'sustainable development' by providing theoretical and applied 'context' across course offerings.

2. 0.5 credit in courses at the A- or B-level selected from a list of elective options. These courses have been determined to offer a core introduction to fundamentals of 'sustainable development.' They form the basis for the upper-level C and D courses that students can take to complete the Certificate.

3. 1.0 credit in courses at the C- or D-level, selected from a list of elective options. In combination with ESTB03H3 these courses dive deeper into topics that are of direct relevance to 'sustainable development.'

Calendar Copy

CERTIFICATE IN SUSTAINABILITY (UofT Sustainability Scholar)

The 'sustainable' utilization of our natural, social, economic and cultural resources is one of the most important cross-cutting themes within academia today. The

Certificate in Sustainability builds on UTSC's longstanding academic strengths to provide an opportunity for a broad range of students to incorporate 'sustainability' into their undergraduate studies.

Certificate Requirements

Students must complete a minimum of 2.0 credits as follows:

1. **ESTB03H3** Land
2. At least 0.5 credit at the A- or B-level, from the list of electives in Table 1 below
3. At least 1.0 credit at the C- or D-level from the list of electives in Table 1 below

Note: Courses **for which students have selected the CR/NCR option**, cannot be used towards the completion of this Certificate; however, courses **that are graded as CR/NCR courses for all students**, can be used towards the completion of this Certificate.

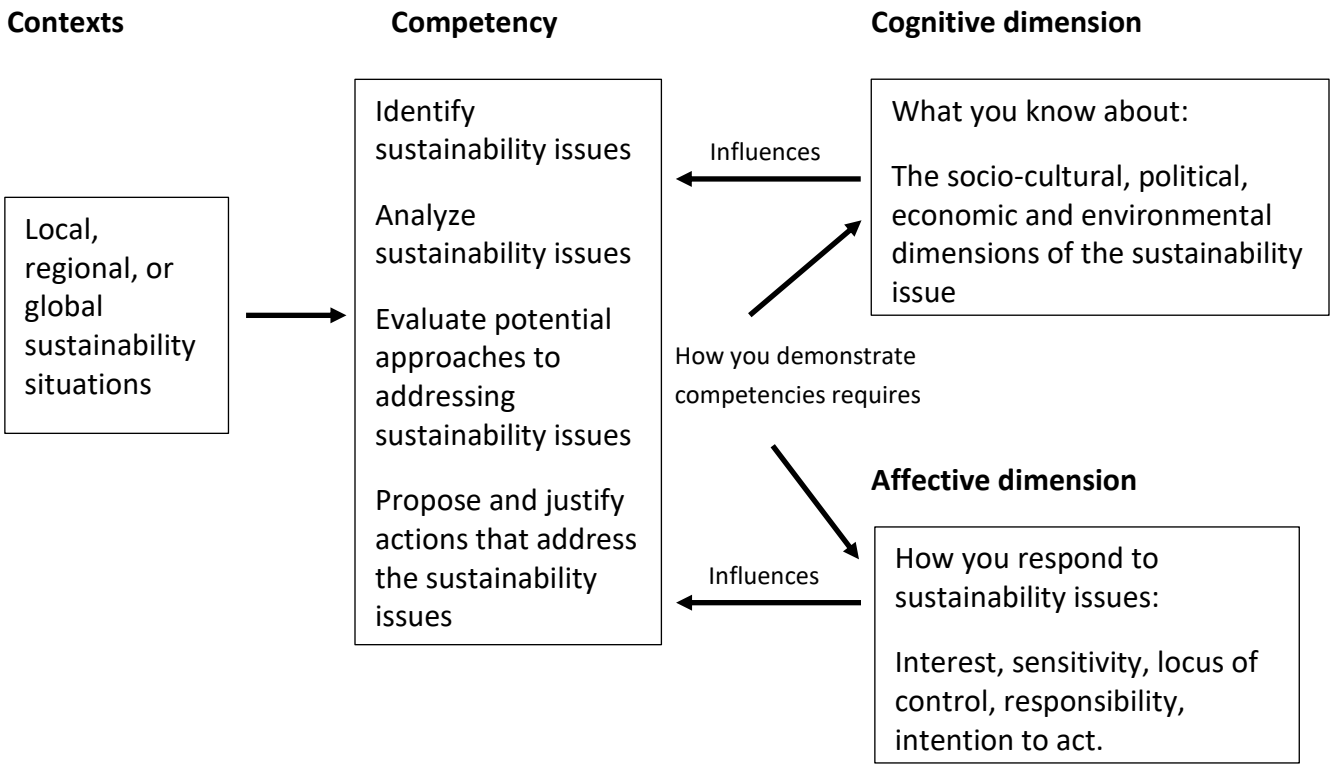
Table 1: Electives

A-level	EESA07H3 Water EESA11H3 Environmental Pollution GGRA03H3 Cities and Environments
B-level	ANTB01H3 Political Ecology ANTB64H3 Are You What You Eat?: The Anthropology of Food BIOB38H3 Plants and Society EESB17H3 Hydro Politics and Transboundary Water Resources Management ESTB01H3 Introduction to Environmental Studies GASB05H3/MDSB05H3 Media and Globalization GGRB21H3 Political Ecology: Nature, Society and Environmental Change HISB14H3 Edible History: History of Global Foodways IDSB02H3 Development and Environment WSTB20H3 Women, the Environment, and Change
C-level	CITC14H3 Environmental Planning ENGC59H3 Literature and the Environment ESTC34H3/EESC34H3 Sustainability in Practice ESTC35H3 Environmental Science and Technology in Society ESTC36H3 Knowledge, Ethics and Environmental Decision-Making GGRC21H3 Current Topics in Environmental Geography GGRC26H3 Geographies of Environmental Governance GGRC44H3 Environmental Conservation and Sustainable Development

		HISC29H3 Global Commodities: Nature, Culture, History IDSC02H3 Environment Science and Evidence-Based Policy POLC53H3 Canadian Environmental Policy SOCC37H3 Environment and Society
	D-level	AFSD07H3/IDSD07H3 Extractive Industries in Africa BIOD30H3 Plant Research and Biotechnology: Addressing Global Problems EESD09H3 Research Project in Environmental Science ESTD19H3 Risk POLD89H3 Global Environmental Politics

Framework for assessing sustainability learning

The following assessment framework is adapted from the North American Association for Environmental Education (http://www.naaee.net/framework). The selection of courses in proposed Certificate in Sustainability ensures that students who complete the Certificate will have been taught the following competencies, knowledge and affective dispositions toward sustainability issues.



7 Consultation

- Outline any consultation undertaken with the Dean and chair/director of the relevant academic units and relevant programs.

The proposal has been widely discussed in the Department of Physical and Environmental Sciences, and there is strong support for its development and approval.

The proposal has been shared with the Departments of Anthropology, Biological Sciences, English, Historical and Cultural Studies, Human Geography, Political Science, and Sociology, and the Centre for Critical Development Studies. The proposal has been revised in response to received feedback, and Chairs and Directors have signalled enthusiastic support of the proposal. The proposal has been reviewed by the Provost's Office and revisions have been made to respond to their feedback.

8 Resources

- Describe any resource requirements including, but not limited to, faculty complement, space, libraries and enrolment/admissions.
- Indicate if the certificate will affect any existing agreements with other institutions, or will require the creation of a new agreement to facilitate the certificate (e.g., Memorandum of Understanding, Memorandum of Agreement, etc). Please consult with the Provost's office (vp.academicprograms@utoronto.ca) regarding any implications to existing or new agreements.

The proposed Certificate utilizes existing UTSC courses. Any additional teaching resources required to support the Certificate, including stipendiary instructors and TA support, will be covered by the Department of Physical and Environmental Sciences' existing budgets.

The discipline representative for Environmental Studies in the DPES will take responsibility for advising students, and for making decisions about the structure of the Certificate going forward.

9 Oversight and Accountability: Review

- Category 2 certificates are subject to periodic reviews with the relevant undergraduate program. Please provide details. This will be tracked by the VPAP office.

An annual review of the course inventory will be conducted to identify and resolve enrolment pressures, and to refresh the inventory as new courses become available. Furthermore, automated methods will also be used to map\track the broader impact of the program on the campus as a whole, allowing for a tailored process of adjustment. This broad base of information will be utilized in the cyclical review of the Department of Physical and Environmental Science. The Certificate in Sustainability will be reviewed, in accordance with the requirements of the UTQAP, as part of the cyclical review of the Department of Physical and Environmental Sciences and its programs. The next UTQAP review of the DPES is scheduled to take place in 2023-24.

10 Process Steps and Approvals

UTSC Administrative Steps

Administrative Steps Required	Date
Departmental Curriculum Committee	November 14, 2019

UTQAP/Formal Governance Process

Levels of Approval Required	Date
Decanal Sign-Off	March 30, 2021
UTSC Academic Affairs Committee	April 27, 2021
Submission to Provost's Office	
AP&P – reported annually	

11 References cited

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Appendix A: Proposed Learning Outcomes

The following learning outcomes have been designed using several publicly available frameworks, including UE4SD 2015, UNESCO 2019, Phelan et al. 2015, as well as the learning outcomes of the University of Toronto Masters in Environment and Sustainability.

Degree Level Expectations	**Program Learning Outcomes – e.g. what students will know or be able to do at the completion of the program** [Clearly describe how the Program Learning Outcomes will support the degree level expectations]	**How the program design / structure supports the degree level expectations** [Clearly describe how the program design/structure will support the degree level expectations]
1. Depth and Breadth of Knowledge Depth of Knowledge: is attained through a progression of introductory, core and specialized courses. Specialized courses will normally be at the C and D levels. Breadth of Knowledge: students will gain an appreciation of the variety of modes of thinking, methods of inquiry and analysis, and ways of understanding the world that underpin different intellectual fields.	The main focus of the Certificate is on providing a highly flexible, programming alternative that interprets *knowledge breadth* as a distinct advantage. The Certificate learning outcomes provide for *knowledge depth*, building student awareness of, and skill development associated with, the following theoretical, technical, and applied concepts: 1. conceptions of 'environment' across various scales, including a consideration of the interdependencies that exist between socio-political, economic, cultural and bio-physical environments; 2. key sociocultural concepts (*e.g. cultural diversity, positionality, and Indigeneity*) that form the basis of an environmentally-oriented, and forward-looking, '*cultural competency (Ladson-Billings 1995)*' as a basis for the understanding\critique of the existing social\economic norms. 3. critical sustainability challenges and their explanatory	These learning outcomes are partially achieved through the completion of the core course ESTB03. This course is intended to pull together (i.e. synthesize and extend) the various components of 'sustainable development' as contextualized by the structure\content of the certificate. Supporting both breadth and depth of knowledge are discipline-focused courses in Biology, Geography, City Studies, Environmental Science, Environmental Studies, English, Political Science, History, Woman's Studies, International Development Studies, Sociology, Anthropology, Global Asian Studies and African Studies that students can apply towards the completion of the Certificate, including: BIOC63H3, CITC14H3, ENGC59H3, ESTC34H3, ESTC35H3, ESTC36H3, GGRC21H3, GGRC26H3, GGRC44H3,

	socio-economic and scientific framings; and 4. action-oriented framings and\or perspectives that consider holistic and integrative perspectives of complex environmental systems.	HISC29H3, IDSC02H3, POLC53H3, SOCC37H3, AFSD07H3/IDSD07H3, BIOD30H3, EESD09H3, ESTD19H3 and POLD89H3.
2. Knowledge of Methodologies Students have a working knowledge of different methodologies and approaches relevant to their area of study. They are able to evaluate the efficacy of different methodologies in addressing questions that arise in their area of study.	N/A	N/A
3. Application of Knowledge Students are able to frame relevant questions for further inquiry. They are familiar with, or will be able to seek the tools with which, they can address such questions effectively.	Students will be able to contextualize and prioritize relevant environmental issues\questions for further inquiry. They will become familiar with, and\or be able to seek\identify data, tools and methods to address questions of 'sustainability' effectively. Students will demonstrate an understanding of, and skill within, a diverse set of methodological approaches that are designed to facilitate the *attainment* of environmental 'sustainability', including: 1. disciplinary and transdisciplinary approaches for identifying and conceptualizing sustainability challenges; 2. the concepts of cultural diversity, positionality, Indigeneity, and extensions thereof, as entry points for environmental decision-making and application; and 3. a basic awareness of the theoretical underpinnings of systems analysis in support of decision making.	The fundamental principles of knowledge application are introduced in ESTB03. This will include an overview of topics dealing with the *language* of sustainability (e.g. Sustainable Development Goals) as a means of providing a platform\framework for the systematic consideration of sustainability. Many discipline-focused courses support these learning outcomes, however, BIOC63H3, CITC14H3, EESD09H3, ESTD19H3, and ANTB64H3 are particularly relevant.
1. 4. Awareness of Limits of Knowledge 2.	N/A	N/A

3. Students demonstrate an awareness of the 4. limits of their own knowledge and their appreciation of the uncertainty, ambiguity, and limits to our collective knowledge and how these might influence analyses and interpretations.		
5. Communication Skills Students are able to communicate information, arguments, and analyses accurately and reliably, both orally and in writing. They learn to read and to listen critically.	N/A	N/A
6. Autonomy and Professional Capacity The education students receive achieves the following broad goals: It gives students the skills and knowledge they need to become informed, independent and creative thinkers It instils the awareness that knowledge and its applications are influenced by, and contribute to, society It lays the foundation for learning as a life-long endeavour	N/A	N/A

Appendix B: Course Prerequisites

Existing course prerequisites will require students to be careful in their selection of electives, however, there is sufficient flexibility in the prerequisites to allow students to complete the Certificate.

Course	Prerequisites
EESA07H3	None
EESA11H3	None
GGRA03H3	None
ANTB01H3	ANTA02H3
ANTB64H3	ANTA02H3 or [any 4.0 credits in ANT, HLT, IDS, CIT, GGR, POL, SOC or HCS courses]
BIOB38H3	BIOA01H3 and BIOA02H3
EESB17H3	EESA01H3 or EESA07H3
ESTB01H3	none
GASB05H3	none
GGRB21H3	none
HISB14H3	none
IDSB02H3	IDSA01H3 or EESA01H3
WSTB20H3	Any 4.0 credits
BIOC63H3	BIOB50H3 and BIOB51H3
CITC14H3	At least 1.5 credits at the B-level in ONE of the following: City Studies or Human Geography or Environmental Studies or Political Science or Sociology
ENGC59H3	Any 6.0 credits or [SOCB58H3; and an additional 4.0 credits; and registration in the Minor in Culture, Creativity, and Cities]
ESTC34H3	EESA06H3 and an additional 9.5 credits
ESTC35H3	ESTB01H3
ESTC36H3	ESTB01H3
GGRC21H3	Any 8.0 credits
GGRC26H3	Any 8.0 credits
GGRC44H3	Any 8.0 credits
HISC29H3	Any 4.0 credits, including 0.5 credit at the A- or B-level in HIS courses

IDSC02H3	8.0 credits including EESA01H3
POLC53H3	[POLB50Y3 or equivalent] or ESTB01H3 or [1.5 credits at the B-level in CIT courses]
SOCC37H3	[[SOCB05H3 or SOCB35H3] and [0.5 credit from the following: SOCB30H3, SOCB42H3, SOCB43H3, SOCB47H3]] or [any 8.0 credits and enrolment in the Major/Major Co-op in Public Policy]
AFSD07H3/IDSD07H3	8.0 credits including [AFSA01H3 or IDSA01H3] and [AFSA03H3/ IDSA02H3] and [1.0 credit at the B-level in AFS or IDS courses]
BIOD30H3	BIOB38H3 and [one of BIOC15H3, BIOC31H3, BIOC37H3 or BIOC40H3]
EESD09H3	At least 1.0 credit at the C-level in EES courses and 0.5 credit at the C-level in CHM, or PHY courses.
ESTD19H3	14.5 credits and STAB22H3 (or equivalent)
POLD89H3	[[POLB80H3 and POLB81H3] or ESTB01H3]] and [2.0 credits at the C-level in any courses]