

## Academic Programs Committee of Council

### University Course Challenge

Scheduled posting: **June 2025**

Date of circulation: **June 16, 2025**

Date approval is effective if no challenge received: **June 30, 2025**

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Curricular and program changes approved by University Course Challenge include additions and deletions of courses, lower levels of study and program options; straightforward program changes; and curricular changes which affect other colleges.

**Included are submissions for information and approval from the following colleges and schools:**

College of Arts and Science

College of Graduate and Postdoctoral Studies

School of Environment and Sustainability

The next scheduled posting will be **August 15, 2025** with a submission deadline of **August 13, 2025**. Urgent items can be posted on request.

Please direct challenges to both of the following: [seanine.warrington@usask.ca](mailto:seanine.warrington@usask.ca) in the Registrar's Office and [danielle.rudulier@usask.ca](mailto:danielle.rudulier@usask.ca) in the Governance Office.

### **University Course Challenge – June 2025**

The curricular revisions listed below were approved through the Arts & Science College Course and Program Challenge, and by the relevant college-level Academic Programs Committee, and are now submitted to the University Course Challenge for approval.

Contact: Alexis Dahl ([alexis.dahl@usask.ca](mailto:alexis.dahl@usask.ca))

### **Item for Information - Correction**

**HIST 396.3 Digital History** was renumbered to **HIST 496.3** in the February 2025 University Course Challenge. Correction:

Old prerequisite(s): 3 credit units 200-level HIST courses.

New prerequisite(s): 6 credit units of senior-level HIST of which 3 credit units must be 300-level or permission of the department.

Rationale: The prerequisites for the renumbered course should have been updated to match other 400-level HIST courses.

## University Course Challenge – June 2025

The curricular revisions listed below were approved through the Graduate Programs Committee of the College of Graduate and Postdoctoral Studies and are now submitted to the University Course Challenge for approval.

Contact: Chelsea Smith, CGPS Academic Affairs Specialist ([chelsea.smith@usask.ca](mailto:chelsea.smith@usask.ca) or [gradprograms.academicaffairs@usask.ca](mailto:gradprograms.academicaffairs@usask.ca))

### BIOLOGY

#### New courses:

##### **BIOL 818.3 Advanced Comparative Animal Systems Physiology**

**Catalogue Description:** An in-depth examination of cardiovascular, respiratory, osmoregulatory, digestive, and reproductive system physiology in animals and how these systems have evolved in response to challenging environments. Examples are drawn from vertebrate and invertebrate models, with students building on these examples to understand how animals survive in their environments.

**Terms offered:** T2

**Prerequisite(s):** At least one undergraduate or graduate course in Animal Physiology; permission from instructor

**Permission(s):** Instructor approval required

**Notes:** Students with credit for BIO 418 cannot receive credit for this course

**Rationale:** This course will allow graduate students without a strong background in Animal Physiology to increase their knowledge and understanding. Our department currently does not have any graduate student courses focusing on Animal Physiology, which is about 25% of our graduate student population. This course will benefit multiple research labs and their respective graduate students in the department of Biology.

### COMPUTER SCIENCE

#### New Courses:

##### **CMPT 878.3 Computational Agriculture**

**Catalogue Description:** This course is intended to provide cross-disciplinary training at the intersection of computational and agricultural sciences. This course will provide students with a broad-based foundational knowledge across disciplines to augment their within-discipline training obtained as part of their graduate program. The course will cover computational agriculture at three levels: first, the biology and biological data collection; second, the computational and data science behind how to analyze agricultural data; and third, a hands-on opportunity to develop state-of-the-art approaches to utilize agricultural data within a team research project. Students will be exposed to on-going projects on campus and will complete the term project in diverse teams.

**Terms offered:** T1

**Prerequisite(s):** Instructor approval required

**Note:** Students with credit for PLSC 878 will not receive credit for this course.

**Rationale:** This course is being proposed as part of the NSERC CREATE in Computational Agriculture training program. It is a required training component for all trainees in the program. It was offered as a special topics course in 2024-25 Term 1. PLSC 878.3 Computational Agriculture is

being proposed concurrently for students from the College of Agriculture who join the CREATE training program. The course are being proposed separately so as to target the right students in the two different Colleges.

## **EDUCATION**

### **New courses:**

#### **ERES 805.3 Data Analysis of Qualitative Methodologies**

**Catalogue Description:** This course covers the designs that are used to collect, analyze, and interpret data for select qualitative and mixed-method methodologies (namely, Grounded Theory, Ethnography, Narrative Research, Phenomenology, Mixed Methods, Action Research, and Indigenous Research Methodologies). Students will receive a specific understanding of these methodologies in educational research through an exploration of their definition, historical development, key characteristics, and the procedures of conducting and evaluating a study. In particular, students will engage in the following cyclical and iterative process of qualitative analysis: preparing and organizing data for analysis; exploring the data through the process of coding; using the codes to develop a general picture of the data; representing the findings through narratives and visuals; interpreting the results through personal reflections on the impact of the findings and on the literature that informs the findings; and conducting strategies to validate the accuracy of the findings.

**Prerequisite(s):** ERES 800

**Restriction(s):** Course open to students in the College of Education

**Rationale:** Students would benefit from looking at the distinctions and overlap of data collection methods and data analysis for different types of qualitative research methodologies. This builds on ERES 800, which introduces them to qualitative research methods. It is important for students to see the variety of options available so that they can make a more informed decision about the methodologies and methods they will use in research they may do. Anecdotal evidence suggests that many students don't have a graduate-level understanding of types of qualitative data that can be collected during research and how data can be analyzed and interpreted. Almost no students have encountered coding software, which is something this course will cover. Students would benefit from learning data-informed decision-making. Anecdotal evidence also suggests that, on the one hand, students also may only be aware of their supervisor's methodology and would benefit from seeing other possibilities, making them well-rounded as potential researchers. On the other hand, course-based students who aren't conducting research may not see the breadth of possibilities without a formal course that exposes them.

#### **ERES 830.3 Research in Mental Health: A Human Curriculum & Explorations in Wellbeing**

**Catalogue Description:** The purpose of this course is to develop a foundational and working knowledge of mental health literacy, strategies, and perspectives that apply to everyday life and interactions with others. Students will explore mental health through a philosophical, theoretical, and psychological lens, developing the foundations for heuristic self-inquiry. Current trends and issues within the discipline will be explored, as well as literature relevant to the historical, cultural, epistemological, and phenomenological foundations of mental health. Transformative inquiry is a methodological lens through which research will be approached in this course. Students will use transformational knowledge beyond the scope of a research project to create a practical resource package that could be used as a personal or professional development tool on the topic of mental

health and wellbeing. A conceptual framework called the Human Curriculum will guide students through relevant perspectives, research, and curiosities around the topic of mental health and wellbeing.

**Prerequisite(s):** Permission of the College of Education Graduate Chair or Associate Dean Research

**Restriction(s):** Course open to students in the College of Education

**Terms offered:** T1 or T2

**Rationale:** This course was offered as ERES 898 in Summer 2023 and Fall 2024 (both by Judy Jaunzems-Fernuk), so we are applying to have this course given a permanent label. Students will learn about the important topics of wellness, mental health, and wellbeing through research that is heuristic and transformational. All students benefit from learning strategies of understanding mental health research and having a resource package that they can use in their personal/professional lives.

### **ERES 876.3 Research Lenses: Epistemologies and Ontologies in Higher Education**

**Catalogue Description:** This course delves into the theoretical foundations of research, exploring different epistemological and ontological perspectives within the context of higher education. Students engage with critical literature, examine research paradigms, and develop a nuanced understanding of how these lenses shape scholarly inquiry. Topics include positivism, constructivism, critical theory, pragmatism, and Indigenous ways of knowing.

**Prerequisite(s):** ERES 800

**Restriction(s):** Course open to PhD students in the College of Education. Thesis-based masters students may request special permission.

**Terms offered:** T2

**Rationale:** Thesis-based students would benefit from looking at the theoretical foundations of research. Anecdotal evidence shows graduate students struggle with a concrete understanding of epistemologies and ontologies in the context of higher education.

### **SOTL 840.3 Advanced Leadership for Health Professions in Higher Education**

**Description:** This course aims to equip health professionals with the knowledge and skills necessary for effective leadership, embracing change, resolving conflicts, evaluating programs, and fostering interprofessional collaboration in higher education. Designed for leaders in higher education, the course promotes inclusivity and diversity by integrating a variety of leadership theories and collaborative strategies to address the evolving needs of modern educational environments.

**Terms offered:** T1

**Restriction(s):** Restricted to students in the M.Ed. in Health Professions program

**Rationale:** This course represents a consolidation of the ECUR 809 and EADM 816 into a new course. This amalgamation was undertaken to better align course content with the newly developed program outcomes for the M.Ed. HPE program, reduce redundancy, and create a more integrated learning experience that reflect the interdisciplinary and applied nature of health professions education.

## **INDIGENOUS STUDIES**

**New courses:**

## **INDG 851.3 Community-Engaged Indigenous Oral History**

**Catalogue Description:** INDG 851.3 explores the forms, qualities, diversities and cultural foundations of Indigenous oral narratives of the past as well as relevant Indigenous and Western theory and research methods. This course prepares graduate students for community-engaged oral history research and includes an experiential and community service-learning component.

**Terms offered:** T1

**Permission Required:** for non-Indigenous Studies students

**Rationale:** The majority of Indigenous Studies graduate students do qualitative community-engaged research that includes interviewing in the various fields they are focused in whether it is socio-cultural, political, socio-economic or historical. INDG 802.3 Applied Indigenous Studies Research Methods provides a brief introduction to Indigenous oral history research. The proposed INDG 851.3 will build on 802.3 to ensure graduate students are well prepared to develop their oral history research projects and have the skills to work with Indigenous individuals and communities by utilizing best practices in both Western and Indigenous research. Not only will they develop their skills through experiential learning, they will learn how to navigate the sometimes conflicting values, principles and methods of Western and Indigenous ways of learning.

## **PHARMACY AND NUTRITION**

### **New Courses:**

### **PHAR 800.3 Advanced Pharmaceuticals and Nanomedicine**

**Catalogue Description:** This graduate course explores the foundational and advanced principles of pharmaceutical formulations, including powders, solutions, colloids, suspensions, and emulsions. Emphasis is placed on the design and application of nanoparticles for drug delivery, imaging, and medical devices. Students will examine key formulation strategies, nanoparticle preparation methods, routes of administration, cellular targeting, and safety considerations. The course also introduces tools for experimental design, optimization techniques, and evaluation parameters. Instruction is delivered through lectures, assigned readings, and interactive discussions.

**Permission(s):** Permission of the instructor

**Terms offered:** T2

**Rationale:** The college has identified a need for an advanced drug delivery course with focus on nano drug delivery as critical number of our graduate students engage in research that involves in formulation development at the nano-scale. The course will fill a gap between the foundational pharmaceuticals and nanomedicine and allow registered students to gain theoretical and practical knowledge in the subject area, current research and industry demands. By integrating formulation science with experimental design and optimization, the course enhances the graduate curriculum and supports students pursuing careers in academia, biotech, or pharmaceutical industries.

## **PLANT SCIENCES**

### **New Courses:**

### **PLSC 878.3 Computational Agriculture**

**Terms offered:** T1

**Prerequisite(s):** Instructor approval required

**Catalogue Description:** This course is intended to provide cross-disciplinary training at the intersection of computational and agricultural sciences. This course will provide students with a broad-based foundational knowledge across disciplines to augment their within-discipline training obtained as part of their graduate program. The course will cover computational agriculture at three levels: first, the biology and biological data collection; second, the computational and data science behind how to analyze agricultural data; and third, a hands-on opportunity to develop state-of-the-art approaches to utilize agricultural data within a team research project. Students will be exposed to on-going projects on campus and will complete the term project in diverse teams.

**Note:** Students with credit for CMPT 878 will not receive credit for this course.

**Rationale:** This course is being proposed as part of the NSERC CREATE in Computational Agriculture training program. It is a required training component for all trainees in the program. It was offered as a special topics course in 2024-25 Term 1. CMPT 878.3 Computational Agriculture is being proposed concurrently for students from the College of Agriculture who join the CREATE training program. The course are being proposed separately so as to target the right students in the two different Colleges.

### **For information**

### **BIOCHEMISTRY, MICROBIOLOGY AND IMMUNOLOGY**

#### **Course revision**

#### **BMIS 800.3 Science Communication in Biochemistry Microbiology Immunology**

**Note:** Students may receive credit for only one of BMIS 800, FDSC 808, VTMC 830, VBMS 879

### **EDUCATION**

#### **Course Changes:**

#### **EFDT 824.3: REconsidering Experience Narratives of Time People and Place**

**Current label:** EFDT 824.3

**Proposed label:** ERES 824.3

**Proposed note:** Students with credit for EFDT 824 will not receive credit for this course

#### **ECUR 836.3 Teaching Methodologies Facilitating Learning Through Teaching**

**Current label:** ECUR 836.3

**Proposed label:** SOTL 836.3

**Current title:** Teaching Methodologies Facilitating Learning Through Teaching

**Proposed title:** Teaching Methodologies in Health Professions Education

**Current Description:** Learners will explore, experience and practice a variety of teaching methodologies. Learners will learn to tailor instructional strategies in a variety of settings to enhance student learning.

**Proposed description:** This course is designed for educators in the health professions and explores a range of teaching methods for classroom, clinical, and community settings. Learners will study key learning theories, including behavioral, cognitive, social, and experiential, and apply them to instructional design. The course focuses on developing learning outcomes, lesson planning, and using strategies such as direct, interactive, experiential, and problem-based learning. Participants will also engage in reflective practice and build communities of practice to support collaboration and professional growth.

**Current Restriction(s):** Restricted to students in the M.Ed. in Health Professions program or students in the Certificate in Quality Teaching in Health Professions Education

**Proposed Restriction(s):** Restricted to students in the M.Ed. in Health Professions program or students in the Certificate in Teaching and Learning in Health Professions Education

### **ECUR 837.3 Technology and Simulation in Teaching and Learning**

**Current label:** ECUR 837.3

**Proposed label:** SOTL 837.3

**Current Description:** The learners will draw on foundational theories and pedagogy to apply technology and simulation in courses and programs. The focus will be on the effective use of technology in a variety of settings (individual, small group, classroom teaching, clinical teaching, and other work-based environments) and educational levels to enhance learning and team-based skills. The benefits and challenges in the use of a variety of technological a variety of technological tools will be examined (e.g., tools for collaboration, presentation, course management, lecture capture, student response systems, portfolios, assessment, experiential learning, among others). Participants will learn to develop, implement and assess with, and evaluate simulation scenarios as a teaching and learning tool that facilitates practice learning in health professions education.

**Proposed Description:** This course explores the purposeful integration of technology and simulation in health professions education to enhance teaching, learning, and assessment. Learners will discuss collaborative simulation scenarios to support experiential learning and clinical skill development. Emphasis is placed on applying educational technologies and digital tools to improve learner engagement, knowledge retention, and skill acquisition. Students will also evaluate emerging technologies and simulation innovations, considering their pedagogical value, feasibility, and ethical implications.

**Current Restriction(s):** Restricted to students in the M.Ed. in Health Professions program or students in the Certificate in Quality Teaching in Health Professions Education

**Proposed Restriction(s):** Restricted to students in the M.Ed. in Health Professions program or students in the Certificate in Teaching and Learning in Health Professions Education

### **ECUR 838.3 Learner Assessment**

**Current label:** ECUR 838.3

**Proposed label:** SOTL 838.3

**Current title:** Learning Assessment

**Proposed title:** Learner Assessment and Evaluation in Health Professions Education

**Current Description:** Learners will explore the principles of learner feedback and assessment, in addition to challenges of assessment practices. Assessment tools will be developed, practiced, and critiqued. Assessment of professional competencies and strategies in a variety of settings will be addressed

**Proposed description:** Educators in the health professions will examine effective learner assessment practices across a variety of educational settings. The course emphasizes evidence-informed assessment design, backward design principles, and strategies for evaluating professional competencies. Participants will develop and analyze both formative and summative assessments, including written, performance-based, and clinical formats. Additional topics include standard setting, interpreting assessment data.

**Current Restriction(s):** Restricted to students in the M.Ed. in Health Professions program or students in the Certificate in Quality Teaching in Health Professions Education

**Proposed Restriction(s):** Restricted to students in the M.Ed. in Health Professions program or students in the Certificate in Teaching and Learning in Health Professions Education



### **ECUR 839.3 Program Curriculum, and Course Design Development**

**Current label:** ECUR 839.3

**Proposed label:** SOTL 839.3

**Current title:** Program Curriculum, and Course Design Development

**Proposed title:** *Program, Curriculum, and Course Development in Health Professions Education*

**Current Description:** Curriculum design and development is a labour-intensive process that requires lost of preplanning and development prior to coming anywhere near implementation. Variables and consideration include understanding the needs of your learners, developing program level learning objectives aligned to course level and session level learning objectives, optimizing learning strategies, alignment and design based on assessment needs, implementation, and evaluation of the effectiveness of the curriculum. Throughout this course we will learn about all these aspects (and more) and work to model what we are learning to develop and implement a curricular step and plan and develop a curriculum of your choosing.

**Proposed Description:** This course guides educators through the systematic design of programs, curricula, and courses in health professions education. Participants will explore curriculum theory, foundational principles, and essential technical components to ensure alignment with healthcare standards and stakeholder needs. Emphasis is placed on integrating theory with practical frameworks to create cohesive, learner-centered educational experiences. The course also addresses current trends and innovations, including technology integration, inclusive practices, and data-informed decision-making to enhance instructional design.

**Current Restriction(s):** Restricted to students in the M.Ed. in Health Professions program or students in the Certificate in Quality Teaching in Health Professions Education

**Proposed Restriction(s):** Restricted to students in the M.Ed. in Health Professions program

### **ECUR 991.3 Scholarship in Teaching**

**Current label:** ECUR 991.3

**Proposed label:** SOTL 991.3

# Certificate in Sustainability: Minor program changes

This submission to University Course Challenge includes two proposed revisions to the SENS Undergraduate Certificate in Sustainability:

## 1. Addition of Three Courses to Restricted Electives

On 4 April 2025, the School of Environment and Sustainability (SENS) Faculty Council approved the addition of ANTH 331.3 (*The Archaeology of Human Environmental Impact*), BIOL 324 (*Plants and Human Affairs*), and PSY 411.3 (*Environmental Psychology: Humans and Nature*) to the 300- and 400-level restricted electives requirement in the Undergraduate Certificate in Sustainability.

Rationale: To increase accessibility and flexibility for USask students to complete the certificate, SENS wants to include these three courses that have sustainability themes in Undergraduate Certificate in Sustainability.

## 2. Change the “Open Electives” to 6 cu of restricted electives at the 200-level

On 6 June 2025, the School of Environment and Sustainability (SENS) Faculty Council approved the structure change to include a second set restricted electives made up of 200-level courses containing sustainability themes.

Rationale: Having an “open elective” option (that still needs to be approved by the Undergraduate Program Coordinator) does not work with the new Concurrent Curricula Project in Banner. Previously, the Coordinator could approve “open electives” to ensure that they had a sustainability component. However, now that the program is automated in Banner, we cannot ensure this requirement. Therefore, SENS proposes a second set of restricted electives (that have already been vetted for sustainability content) from which students must choose 6 credit units at the 200-level.

Text in red indicates the proposed revisions and new courses.

Contact: Carolyn Pytlyk ([carolyn.pytlyk@usask.ca](mailto:carolyn.pytlyk@usask.ca))

The Certificate in Sustainability is intended to give students theoretical, methodological, strategic, and substantive exposure to sustainability-related concepts and practice. The certificate will allow students to engage in problem-based, experiential learning across a broad range of sustainability topics. The program should begin in the student’s second year with ENVS 201.

# Certificate in Sustainability (21 credit units)

## Required Courses (6 credit units):

- [ENVS 201.3](#) Foundations of Sustainability
- [ENVS 401.3](#) Sustainability in Action or [EVSC 485.3](#) Environmental Science Capstone Course

## Indigenous Learning for Sustainability (3 credit units):

Choose at least 3 credit units from the following elective course options:

- [ANTH 202.3](#) Anthropology and Indigenous Peoples in Canada
- [ANTH 350.3](#) Introduction to Boreal Forest Archaeology
- [AREC 220.3](#) History of Indigenous Agriculture in Canada
- [COMM 347.3](#) Indigenous Business in Canada
- [DRAM 111.3](#) Practicum I Indigenous Performance Methods
- [ENG 242.3](#) Indigenous Storytelling of the Prairies
- [ENG 243.3](#) Introduction to Indigenous Literatures
- [ENG 335.3](#) The Emergence of Indigenous Literatures in Canada
- [ENG 338.3](#) Contemporary North American Indigenous Literatures
- [GEOG 465.3](#) Environment and Health in Indigenous Communities
- [HIST 195.3](#) History Matters Indigenous Perspectives on Canadian History
- [HIST 257.3](#) The Canadian Prairie to 1905
- [HIST 266.3](#) Historical Issues in Indigenous Settler Relations in North America
- [HIST 315.3](#) Indigenous Health History
- [HIST 316.3](#) History of the Metis in Twentieth Century Prairie Canada
- [INDG 107.3](#) Introduction to Canadian Indigenous Studies
- [INDG 210.3](#) Indigenous Ways of Knowing
- [KIN 306.3](#) Introduction to Indigenous Wellness
- [LING 114.3](#) Indigenous Languages and Stories Introduction to the Structure of Language
- [LING 253.3](#) Indigenous Languages of Canada
- [PLAN 445.3](#) Planning with Indigenous Communities\*
- [POLS 222.3](#) Indigenous Governance and Politics
- INDG 200-Level, 300-Level, 400-level\*

\*These courses may not be used to count as credit for both Indigenous Learning and restricted electives ~~or open electives~~.

## ~~Open Electives (6 credit units)~~

## 200-level Restricted Electives (6 credit units):

~~Students must choose at least 6 credit units of open-200-level electives from the list of electives below. to be approved by the certificate coordinator or Undergraduate Programs Committee Chair. These electives can be either junior (100 and 200 level) or senior (300 and 400) level courses. It must be demonstrated to the certificate coordinator that the course has a focus on sustainability.~~

Choose at least 6 credit units from the following elective course options:

- AGRC 211.3 Global Food Security
- ANTH 240.3 Cultural Landscapes and Environments
- ANTH 244.3 Political Ecology Anthropology and Global Environmental Issues
- AREC 238.3 Natural Resource Economics
- AREC 251.3 Introduction to Agricultural Policy
- BIOL 228.3 Ecology in a Changing World
- CPSJ 203.3 Cultivating Humanity
- ECON 275.3 Economics of Natural Resources

- ECON 277.3 Economics of the Environment
- ENVE 201.3 Principles of Environmental Engineering
- ENVE 212.3 Physical Principles of Plant Biosystems
- EVSC 210.3 Environmental Physics
- EVSC 220.3 Environmental Soil Science
- GEOG 208.3 World Regional Development
- GEOG 240.3 Sustainable Cities and Regions
- GEOG 280.3 Environmental Geography
- HIST 243.3 The Reverberations of the Industrial Revolution, 1750 to today
- HIST 257.3 The Canadian Prairie to 1905
- HIST 258.3 The Canadian Prairies since 1905
- HIST 292.3 The Menace of Progress I: Enlightenment, Colonialism, Dispossession
- HIST 293.3 The Menace of Progress II: The Promise and Failure of Development
- PHIL 226.3 Environmental Philosophy
- PHIL 231.3 Moral Problems
- PHIL 236.3 Ethics and Technology
- PLSC 213.3 Principles of Plant Ecology
- PLSC 235.3 Urban Agriculture
- POLS 226.3 Canadian Public Policy
- RLST 210 Religion and Ecology (St. Thomas Moore)
- SOC 202.3 Environmental Sociology
- SOC 204.3 Rural Sociology and Rural Development
- SOC 206.3 Sociology of Communities and Community Development
- SOC 227.6 Critical Issues in Canadian Society
- WGST 210.3 Gendered Perspectives on Current Events

### 300- and 400-level Restricted Electives (6 credit units):

Students must choose at least 6 credit units of 300- or 400- level courses from the list of electives below.

Choose at least 6 credit units from the following elective course options:

- [ANBI 375.3](#) Animals and the Environment
- [ANBI 475.3](#) Field Studies in Arctic Ecosystems with Indigenous Peoples
- [ANSC 301.3](#) Animal Production Tour
- [ANTH 329.3](#) Environmental Anthropology
- [ANTH 331.3](#) The Archaeology of Human Environmental Impact
- [ANTH 401.3](#) Independent Research in Anthropology
- [AREC 348.3](#) Food Economics and Consumer Behaviour
- [AREC 428.3](#) Case Studies in Agribusiness Management
- [AREC 430.3](#) Advanced Natural Resource Economics
- [AREC 432.3](#) Rural Development Theory and Applications
- [AREC 451.3](#) Agricultural Policy Analysis
- [BIOL 324.3](#) Plants and Human Affairs
- [BIOL 373.3](#) Community Ecology
- [BIOL 410.3](#) Current Perspectives in Environmental Biology
- [BIOL 412.3](#) Limnology
- [BIOL 470.3](#) Conservation Biology

- [BIOL 475.3](#) Ecological Toxicology
- [CHEM 375.3](#) Environmental Chemistry
- [CHEP 402.3](#) Global Health Certificate Decolonizing Health
- [CPSJ 400.3](#) Critical Perspectives on Social Justice and the Common Good
- [ECON 376.3](#) Energy Economics
- [ENVE 381.3](#) Sustainability and Environmental Assessment
- [ENVE 432.3](#) Land Management and Reclamation
- [EVSC 380.3](#) Grassland Soils and Vegetation
- [EVSC 421.3](#) Contaminated Site Management and Remediation
- [EVSC 492.3](#) Research and Term Paper
- [EVSC 494.3](#) Research and Thesis
- [FABS 371.3](#) Food Biotechnology
- [FABS 401.3](#) Dairy Science and Technology
- [FABS 492.3](#) Literature Thesis
- [FABS 494.3](#) Research Thesis
- [GEOG 333.3](#) Global Climate Change
- [GEOG 351.3](#) Northern Environments
- [GEOG 364.3](#) Geography of Environment and Health
- [GEOG 380.3](#) Environmental Geography of the Circumpolar North
- [GEOG 381.3](#)
- [GEOG 385.3](#) Analysis of Environmental Management and Policy Making
- [GEOG 386.3](#) Environmental Impact Assessment
- [GEOG 490.3](#) Honours Thesis in Hydrology or Geomatics
- [GEOG 491.3](#) Honours Thesis in Environment and Society
- [HIST 365.3](#) Recipes for a Nation Food History in Canada
- [HIST 371.3](#) Power and Change: The History of Energy
- [LAW 444.3](#) Environmental Law
- [PLAN 341.3](#) Urban Planning
- [PLAN 346.3](#) Introduction to Urban Design
- [PLAN 350.3](#) Transportation Planning and Geography
- [PLAN 429.3](#) Integrated Water Resource Planning
- [PLAN 441.3](#) Challenges in Urban Development
- [PLAN 445.3](#) Planning with Indigenous Communities
- [PLAN 446.3](#) Advanced Urban Design Studio
- [PLSC 345.3](#) Pesticides and Crop Protection
- [PLSC 401.3](#) Advanced Crop Agronomy
- [PLSC 413.3](#) Advanced Plant Ecology
- [PLSC 418.3](#) Management of Arable Grassland
- [PLSC 422.3](#) Rangeland Ecology and Management
- [PLSC 425.3](#) Forest Ecology
- [PLSC 492.3](#) Project Thesis in Plant Sciences
- [PLSC 494.6](#) Research Thesis in Plant Sciences
- [PSY 411.3](#) Environmental Psychology: Humans and Nature
- [POLS 326.3](#) Comparative Public Policy
- [POLS 328.3](#) Public Policy Analysis
- [POLS 403.3](#) Advanced Topics in Public Law and Public Policy
- [POLS 422.3](#) Indigenous Governance and Self Determined Sustainable Development
- [RRM 312.3](#) Natural Resource Management and Indigenous Peoples
- [RRM 321.3](#) Resource Data and Environmental Modeling
- [SLSC 313.3](#) Environmental Soil Chemistry

- [SLSC 342.3](#) Soil Microbiology
- [SLSC 350.3](#) Terrestrial Restoration
- [SLSC 444.3](#) Soil Ecology
- [SLSC 492.3](#) Research and Term Paper
- [SLSC 494.6](#) Research and Thesis
- [SOC 309.3](#) Theories of Social Change
- [SOC 360.3](#) Globalization and Social Justice
- [SOC 402.3](#) Sociology of Agriculture and Food
- [TOX 301.3](#) Environmental Toxicology
- [WGST 411.3](#) Situated Transnational Feminisms

Note: If a student chooses to use a thesis and/or research course towards the completion of the certificate, it must be demonstrated to the certificate coordinator that the thesis **or research project pursued** has a focus on sustainability.