

Academic Programs Committee of Council

University Course Challenge

Scheduled posting: December 2022

The following types of curricular and program changes are approved by the University Course Challenge -- additions and deletions of courses, lower levels of study and program options; straightforward program changes; and curricular changes which affect other colleges.

Contents include submissions for information and approval from the following colleges:

College of Agriculture and Bioresources
College of Arts and Science
College of Dentistry
College of Education
College of Engineering
College of Graduate and Postdoctoral Studies
College of Law
College of Medicine
Edwards School of Business

Approval: Date of circulation: December 14, 2022

Date of effective approval if no challenge received: December 31, 2022

Next scheduled posting:

The next scheduled posting will be January 16, 2023, with a submission deadline of **January 11**, **2023.** Urgent items can be posted on request.

Please direct challenges to both of the following: seanine.warrington@usask.ca in Registrarial Services and amanda.storey@usask.ca in the Governance Office.

College of Agriculture and Bioresources, December 2022 University Course Challenge Submission

The following curricular revisions have been approved by the College of Agriculture and Bioresources and are being submitted to University Course Challenge for approval:

Contact: Sarah Bector

Minor Course Revision

PLSC 402.3: Advanced Precision Agriculture

This course is the capstone course in the Precision Agriculture Certificate. It will allow students to integrate knowledge from their specific subdiscipline with real-world precision agriculture solutions to increase the sustainability and production of crops. Students will learn advanced concepts in precision agriculture and how to analyze spatial and temporal variability in crop production. They will utilize a variety of data, ranging from satellite imagery, soil topography and soil properties, to understand and develop variable rate prescriptions for crop inputs. Finally, students will apply this knowledge in diverse teams that utilize discipline-specific knowledge to solve real-world precision agriculture problems.

Weekly hours: 3 Lecture hours and 2 Practicum/Lab hours

Prerequisite(s): PLSC 202 and GEOG 222. One of PLSC 214.3, STAT 245.3 or GE 210.3 is strongly recommended.

Pre or Corequisite(s): GEOG 222.3

Rationale: Students are adequately prepared for PLSC 402 with the prior completion of PLSC 202, as long as they are also registered in GEOG 222 (if GEOG 222 has not been completed prior to this).

Minor Program Revisions

Applied Microbiology Minor

Students enrolled in various B.S.A. degree programs find themselves in occupations where in-depth knowledge of microbiology is expected or highly complementary (e.g., to the agricultural (soils, crops, animals and plants), environmental and engineering sciences). The Applied Microbiology Minor addresses this need.

Requirements (18 credit units)

- FABS 212.3 or BMSC 210.3
- FABS 325.3 or FABS 334.3

Choose 12 credit units from the following:

- ANBI 471.3 Animal Microbiomes and Health
- BIOL 226.3
- BIOL 228.3
- BMSC 220.3
- BMSC 230.3
- FABS 325.3

- FABS 334.3
- FABS 360.3
- FABS 450.3
- FABS 452.3
- BMIS 321.3
- BMIS 390.3
- MCIM 391.3
- MCIM 487.3
- PLSC 335.3
- SLSC 444.3
- VLAC 411.3
- other courses as approved by the Department of Food and Bioproduct Sciences

Please note that students can count 6 credit units from their major toward this minor.

Rationale: By adding in the additional course of ANBI 471.3, students will have a more robust list of courses to choose from which will enhance their options.

Rangeland Resources Minor

Requirements (18 credit units)

The Rangeland Resources minor is an approved minor field of study in the Bachelor of Science in Agriculture (B.S.A.) degree and the Bachelor of Science in Renewable Resource Management [B.Sc.(R.R.M.)] degree.

A minor consists of 18 credit units in a field of study outside the student's major. At least 12 credit units in the minor must be courses that are not specifically listed as required in a student's major.

Requirements (18 credit units)

- ANSC 410.3 Cow Calf Management
- PLSC 213.3 Principles of Plant Ecology or BIOL 228.3 An Introduction to Ecology and Ecosystems (PLSC 213.3 Principles of Plant Ecology is preferred)
- PLSC 422.3 Rangeland Ecology and Management
- RRM 215.3 Identification of Saskatchewan Plants and Soils or BIOL 323.3 Plant Systematics and Evolution or EVSC 380.3 Grassland Soils and Vegetation

Choose 6 credit units from the following:

- BIOL 424.3 Grass and Grasslands
- PLSC 413.3 Advanced Plant Ecology
- PLSC 418.3 Management of Arable Grassland
- PLSC 427.3 Ecology and Management of Invasive Plants
- RRM 215.3 Identification of Saskatchewan Plants and Soils or BIOL 323.3 Plant Systematics and Evolution or EVSC 380.3 Grassland Soils and Vegetation

Rationale: It has been determined the Animal and Poultry Sciences (APS) department that within the Rangeland Resources minor they would prefer to have PLSC 427.3 instead of BIOL 424.3 as an elective course offering. Hence, BIOL 424.3 will be removed from the above listing.

Bachelor of Science in Agriculture (B.S.A.) - Applied Plant Ecology

Year 1 (30 credit units)

Year 2 (30 credit units)

Years 3 & 4 (60 credit units)

- BIOL 323.3 Plant Systematics and Evolution
- BIOL 424.3 Grass and Grasslands
- EVSC 380.3 Grassland Soils and Vegetation
- PLSC 214.3 Statistical Methods or STAT 245.3 Introduction to Statistical Methods
- PLSC 317.3 Plant Metabolism
- 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 427.3 Ecology and Management of Invasive Plants
- PLSC 492.3 Project Thesis in Plant Sciences or PLSC 494.6 Research Thesis in Plant Sciences (3 credit units count as restricted elective)

Choose 18 21 credit units of restricted electives from the following:

Students can choose courses for a minor or choose from the following selection of courses in consultation with an advisor.

- AGRC 445.3 Experiential Learning in the Workplace
- ANBI 375.3 Animals and the Environment
- ANBI 475.3 Field Studies in Arctic Ecosystems and Aboriginal Peoples
- BIOL 331.3 Plant Physiology
- BIOL 342.3 Fungi Environment and People
- BIOL 373.3 Community Ecology
- BIOL 470.3 Conservation Biology
- GEOG 222.3 Introduction to Geomatics
- GEOG 322.3 Introduction to Geographic Information Systems
- GEOG 323.3 Remote Sensing
- GEOG 351.3 Northern Environments
- GEOG 380.3 Environmental Geography of the Circumpolar North
- PLSC 335.3 Field Crop Disease Management
- PLSC 340.3 Weed Biology and Ecology
- PLSC 345.3 Pesticides and Crop Protection

- PLSC 440.3 Climate Smart Agriculture
- PLSC 450.3 Applied Entomology
- PLSC 494.6 Research Thesis in Plant Sciences
- SLSC 232.3 Soil Genesis and Classification
- SLSC 350.3 Terrestrial Restoration
- SLSC 444.3 Soil Ecology
- SLSC 460.3 Forest Soils
- SLSC 480.3 Soils and Boreal Landscapes

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Open Electives

Choose 9 credit units open electives

Rationale: It has been determined the Animal and Poultry Sciences (APS) department that within the Applied Plant Ecology minor they would prefer to have PLSC 427.3 instead of BIOL 424.3 as an elective course offering. Hence, BIOL 424.3 will be removed from the above listing. Similarly, within the restricted electives portion of this minor, there will be a slight increase in the restricted electives credit unit number count, due to the ordering of courses shifting earlier in Years 1 and 2 of this program.

Food and Bioproduct Sciences

New Course Proposal and Minor Program Revision

The college proposes the following new course:

FABS 456.3 Laboratory Techniques and Food and Bioproduct Sciences

This course provides practical experience in analytical techniques associated with food and bioproduct chemistry and compositional analysis. Major topics include compositional analysis, physical properties of foods, and ingredient functionality. The practicum will be supported by theoretical and explanatory information presented in lectures.

Prerequisite(s): FABS 315.3 and FABS 317.3, or permission by instructor

Rationale: This course is being introduced to accommodate the removal of laboratory components from FABS 315 (Food Chemistry) and 317 (Food and Bioproduct Analysis). Our goal is to create an advanced hands-on practicum for FABS and FDSC students that would include writing learning outcomes through the preparation of laboratory reports. Laboratories were removed from FABS 315 and 317 to accommodate a greater number of students who may not all need extensive laboratory training.

Bachelor of Science in Agriculture (B.S.A.) – Food and Bioproduct Sciences

Please note that FABS 110.3 may be taken in year one or two.

Year 1 (30 credit units)

AGRC 110.3

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Year 2 (30 credit units)

- AREC 220.3 or INDG 107.3
- BMSC 200.3
- BMSC 230.3
- FABS 110.3 (Note: Ideally, FABS 110 can be taken in Years 1, 2, or, if needed, during a Spring Term.) Please note that FABS 110.3 can be taken in Year 1 or Year 2.)
- FABS 211.3
- FABS 212.3 or BMSC 210.3
- MATH 104.3 or MATH 110.3 or MATH 125.3
- NUTR 120.3
- PLSC 214.3 or STAT 245.3

Choose 3 credit units from the following:

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Year 3 and 4 (60 credit units)

- BLE 303.3
- COMM 204.3 or AREC 230.3
- FABS 315.3
- FABS 325.3
- FABS 334.3
- FABS 345.3
- FABS 417.3 FABS 317.3(Relabeled April 2021 University Course Challenge)
- FABS 452.3
- FABS 456.3 (new course)
- FABS 492.3 or FABS 494.6 (3 credit units of FABS 494.6 count as restricted electives)

Choose 18 21 credit units of restricted electives from the following:

To fulfill this requirement, students can choose courses for a minor or choose from the following selection of courses in consultation with an advisor:

- BMSC 240.3
- BMSC 320.3
- CHEM 115.3
- CHEM 221.3
- CHEM 231.3
- CHEM 242.3
- CHEM 255.3
- FABS 222.3
- FABS 298.3
- FABS 323.3

- FABS 360.3
- FABS 362.3
- FABS 371.3
- FABS 398.3
- FABS 401.3
- FABS 411.3
- FABS 457.3
- FABS 460.3
- FABS 474.3
- FABS 493.3
- FABS 494.6
- FABS 498.3
- NUTR 310.3
- NUTR 322.3
- PLSC 420.3

Open Electives

Choose 12 credit units of open electives

Food and Nutrition

NUTR 210.3 will replace NUTR 298.3, as follows:

Bachelor of Science in Food and Nutrition [B.Sc.(F&N)]

People are more health-conscious than ever, with the core of healthy living philosophies centering on what foods we put into our bodies and how they function to promote health. The B.Sc. in Food and Nutrition provides interdisciplinary training in both food science and nutrition. This program provides students with a comprehensive scientific understanding of food, its chemistry, how it's processed, produced, preserved, and packaged to produce reliably consistent, stable, and safe products together with an in-depth understanding of how foods nourish the body (including metabolism), the interrelationship between food and culture, how preparation impacts nutritional content, and management of food preparation and service delivery in institutional environments.

Minimum Requirements for Degree (120 credit units)

Year 1 (30 credit units)							

Year 2 (30 credit units)

- BMSC 200.3
- BMSC 230.3
- FABS 212.3 OR BMSC 210.3
- FABS 222.3

- MATH 104.3 or MATH 125.3
- NUTR 221.3
- NUTR 298.3 NUTR 210.3 Food Fundamentals and Preparation
- NUTR 305.3
- PLSC 214.3

Open Electives

Choose 3 credit units of Open Electives

- Years 3 and 4 (60 credit units)
- FABS 315.3
- FABS 325.3
- FABS 345.3
- FABS 362.3
- FABS 417.3 317.3
- FABS 452.3
- FABS 492.3 or FABS 494.6 Research Thesis (3 credit units of FABS 494.6 Research Thesis count as restricted electives)

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Rationale: The Food and Bioproducts (FABS) department has determined that NUTR 210.3 would be a much more appropriate course to include as part of the Year 2 course offerings and as a result, NUTR 298.3 is being removed as part of the listing for the Year 2 required course listing for the Bachelor of Science in Food and Nutrition degree.

Agronomy

The college proposes some adjustments to Years 3 and 4 of the B.S.A. Agronomy program, as well as the addition of GEOG 222.3 to the restricted electives list, as follows:

Bachelor of Science in Agriculture (B.S.A.) - Agronomy

- Year 1 (30 credit units)
- Year 2 (30 credit units)
- Years 3 and 4 (60 credit units)

PLSC 317 or BIOL 331 and SLSC 312 must be taken in Year 3; PLSC 401 and PLSC 417 must be taken in Year 4.

AREC 222.3 Introduction to Farm Business Management

- AREC 343.3 Grain and Livestock Marketing
- PLSC 317.3 Plant Metabolism or BIOL 331.3 Plant Physiology
- PLSC 401.3 Sustainable Crop Production
- PLSC 417.3 Crop Physiology
- PLSC 492.3 Project Thesis in Plant Sciences or PLSC 494.6 Research Thesis in Plant Sciences (3 credit units count as restricted electives)
- SLSC 312.3 Soil Fertility and Fertilizers

Choose 9 credit units from the following Crop Protection courses:

- BIOL 345.3 Introductory Plant Pathology
- PLSC 234.3 Weed Control in Organic Agriculture
- PLSC 335.3 Field Crop Disease Management
- PLSC 340.3 Weed Biology and Ecology
- PLSC 345.3 Pesticides and Crop Protection
- PLSC 427.3 Ecology and Management of Invasive Plants
- PLSC 450.3 Applied Entomology

Choose 6 credit units from the following:

- PLSC 333.3 Tropical Crops of the World
- PLSC 375.3 Current Topics in Agronomy
- PLSC 382.3 Introduction to Field Scouting
- PLSC 418.3 Management of Arable Grassland
- PLSC 420.3 Grain Chemistry and Technology
- PLSC 422.3 Rangeland Ecology and Management
- PLSC 441.3 Fruit Science
- PLSC 451.3 Vegetable Agronomy
- SLSC 232.3 Soil Genesis and Classification
- SLSC 313.3 Environmental Soil Chemistry
- SLSC 322.3 Environmental Soil Physics
- SLSC 444.3 Soil Ecology
- PLSC 202 Introductory Precision Agriculture
- PLSC 402 Advanced Precision Agriculture
- PLSC 440 Climate Smart Agriculture
- PLSC 475 Insect Ecology

Restricted Electives (18 credit units)

Students can choose courses for completion of a minor (not including Field Crop Production) or choose courses selected from the following list: AGRC 211.3 Global Food Security, AGRC 445.3 Experiential Learning in the Workplace, ANBI 375.3 Animals and the Environment, BIOL 365.3 Insect Diversity and Evolution, BLE 205.3 Agricultural Machinery Management, AREC 254.3 Agribusiness Taxation, AREC 346.3 Principles of Selling, AREC 347.3 Agribusiness Marketing Management, FABS 211.3 Introductory Bioproduct Science, GEOG 222.3 Introduction to Geomatics, RCM 200.3 Effective Professional Communication, RRM 215.3 Identification of Saskatchewan Plants and Soils, any 200-level or above course in PLSC, EVSC or SLSC not required for the major, or courses approved by an advisor.

Open Electives

Choose 6 credit units of open electives

Crop Science

The college proposes the addition of GEOG 222.3 to the restricted electives list in the B.S.A. Crop Science program, as follows:

Bachelor of Science in Agriculture (B.S.A.) – Crop Science

- Year 1 (30 credit units)
- Year 2 (30 credit units)

Years 3 & 4 (60 credit units)

- BIOL 331.3 Plant Physiology
- PLSC 317.3 Plant Metabolism
- PLSC 405.3 Genetics of Plant Populations
- PLSC 411.3 Plant Breeding
- PLSC 417.3 Crop Physiology
- PLSC 492.3 Project Thesis in Plant Sciences or PLSC 494.6 Research Thesis in Plant Sciences (3 credit units count as restricted elective)

Choose 21 credit units from the following:

- PLSC 333.3 Tropical Crops of the World
- PLSC 335.3 Field Crop Disease Management
- PLSC 340.3 Weed Biology and Ecology
- PLSC 345.3 Pesticides and Crop Protection
- PLSC 401.3 Sustainable Crop Production
- PLSC 408.3 Global Plant Genetic Resources
- PLSC 416.3 Applied Plant Biotechnology
- PLSC 418.3 Management of Arable Grassland
- PLSC 420.3 Grain Chemistry and Technology
- PLSC 427.3 Ecology and Management of Invasive Plants
- PLSC 441.3 Fruit Science
- PLSC 450.3 Applied Entomology
- PLSC 451.3 Vegetable Agronomy
- PLSC 470.3 Plant Propagation

Choose 18 credit units of restricted electives:

Students can choose courses for completion of a minor in an unrelated subject or choose courses selected from the following list: AGRC 211.3 Global Food Security, AGRC 445.3 Experiential Learning in the Workplace, ANBI 375.3 Animals and the Environment, BINF 151.3 Computing in the Biological Sciences, BIOL 302.3 Evolutionary Processes, BIOL 345.3 Introductory Plant Pathology, BIOL 365.3 Insect Diversity and Evolution, BLE 205.3 Agricultural Machinery Management, BMSC 200.3 Biomolecules, AREC 254.3 Agribusiness Taxation, AREC 346.3 Principles of Selling, AREC 347.3 Agribusiness Marketing Management, FABS 211.3 Introductory Bioproduct Science, GEOG 222.3 Introduction to Geomatics RCM 200.3 Effective Professional Communication, RRM 215.3 Identification of Saskatchewan Plants and Soils, any 200-level or above course in PLSC, EVSC or SLSC not required for the major, or courses approved by an advisor.

Open Electives

Choose 3 credit units open electives

Rationale: The Plant Sciences (PLSC) department has requested that the above changes – namely that the Agronomy major's listing of "choose 6 credit units" courses be updated, as well as that the restricted elective listing for both Agronomy and Crop Science now include GEOG 222 – be approved. Many of the previous SLSC courses can be taken in other pathways and instead, a preference for PLSC courses to be listed has been expressed by the department.

Kanawayihetaytan Askiy Diplomas (60 credit units)

Changes to these programs were approved through the November 2022 University Course Challenge, as outlined here again in red and blue. Several further revisions have been added since that time. They have been added here in yellow.

Kanawayihetaytan Askiy

Diploma in Indigenous Lands Governance, Dip.(K.A.I.L.G.)

- Kanawayihetaytan Askiy Diploma in Indigenous Lands Governance (60 credit units)
- Required Certificate Courses (21 credit units)
- Core Requirements (21 33 credit units)
- Restricted Electives (15 12 credit units)
- Open Electives (3 9 credit units)

Kanawayihetaytan Askiy Diploma in Indigenous Lands Governance (60 credit units)

The Diploma in Indigenous Lands Governance provides students with a broad background in governance, management, administration and political science as they relate to Indigenous communities. The diploma prepares them for roles in governance in their communities and leadership in local, provincial and national settings. The program has a strong focus on experiential learning. It teaches students the skills required for future employment as land managers as well as the scientific and traditional knowledge required for research and decision-making. The diploma is entirely offered through a combination of on-line and condensed (i.e., one week) delivery courses, although student may also opt to take face to face courses. Students enrolling in the diploma would normally complete the Kanawayihetaytan Askiy Certificate before enrolling in the diploma. The diploma consists of a combination of in-person and online courses to allow students flexibility in their scheduling. Students who have completed the Kanawayihetaytan Askiy Certificate can ladder into the program and complete the Diploma in Indigenous Lands Governance with the completion of 39 credit units.

Required Certificate Courses (21 credit units)

- Completion of the Kanawayihetaytan Askiy Certificate (21 credit units). This would mean completion of the following courses:
- ASKI 101.3 Field Studies in the Environment
- ASKI 102.3 Introduction to Legal Concepts in Resource Management
- ASKI 103.3 Legal Process and Instruments in Resource Management
- ASKI 104.3 Introduction to Management Issues
- ASKI 105.3 Economics and Planning
- ASKI 201.3 Resource Management Project Assessment

- INDG 107.3 Introduction to Canadian Indigenous Studies
- Or, completion of the Indigenous Peoples' Resource Management Certificate plus <u>INDG</u>
 107.3 Introduction to Canadian Indigenous Studies

Core Requirements (21 33 credit units)

- AGRC 110.3 Scientific Literacy and Communication for the Agricultural Sciences
- ASKI 202.1 Introduction to Land Management Frameworks OR RRM 201.1 Geographical Information Systems
- ASKI 204.2 Introduction to the Duty to Consult
- **EVSC 110.3** Renewable Resources and Environment **or** ASKI 101.3 Field Studies in the Environment
- INDG 107.3 Introduction to Canadian Indigenous Studies
- AREC 220.3 History of Indigenous Agriculture in Canada
- AREC 228.3 238.3 Natural Resource Economics
- ASKI 105.3 Economics and Planning or AGRC 113.3 Agri Food Issues and Institutions
- ASKI 104.3 Introduction to Management Issues or COMM 101.3 Introduction to Business
- POLS 222.3 Indigenous Governance and Politics
- POLS 322.3 First Nations Management and Administrative Systems POLS 323.3 First
 Nations Policies and Programs OR POLS 324.3 Métis otehpayimusuak and apihtawikosisanak
 Governance
- RRM 114.3 Introductory Resource Economics and Policy
- INDG 264.3 Aboriginal People and Canadian Politics
- POLS 111.3 Democratic Citizenship in Canada
- POLS 112.3 Justice and Injustice in Politics and Law
- POLS 222.3 Indigenous Governance and Politics
- POLS 322.3 First Nations Management and Administrative Systems
- POLS 323.3 First Nations Policies and Programs

Governance and Ethics (Choose 6 CU)

- **PHIL 121.3** Introduction to World Philosophies
- PHIL 133.3 Introduction to Ethics and Values
- PHIL 233.3 Ethical Theory
- POLS 323.3 First Nations Policies and Programs
- **POLS 328.3** Public Policy Analysis
- POLS 422.3 First Nations Governance
- INDG 264.3 Aboriginal People and Canadian Politics

Restricted Electives (15 credit units Choose 12 credit units from any of the following subgroups of courses. Note: While students can opt to take several courses from one subgroup, they may also select courses from across the subgroups. These subgroups are intended to identify for students the specializations embedded into the diploma but also to provide maximum flexibility.)

Management and Economics

- AREC 230.3 Innovation and Entrepreneurship
- COMM 105.3 Introduction to Organizational Behaviour
- COMM 201.3 Introduction to Financial Accounting
- COMM 204.3 Introduction to Marketing
- **COMM 211.3** Human Resource Management
- RRM 312.3 Natural Resource Management and Indigenous Peoples
- AREC 222.3 Introduction to Farm Business Management
- AREC 432.3 Rural Development Theory and Applications
- GEOG 385.3 Analysis of Environmental Management and Policy Making

Environmental Studies

- ASKI 102.3 Introduction to Legal Concepts in Resource Management
- ASKI 103.3 Legal Process and Instruments in Resource Management
- ASKI 201.3 Resource Management Project Assessment
- ENVS 201.3 Foundations of Sustainability
- **GEOG 204.3** Geography of the Prairie Region
- **GEOG 280.3** Environmental Geography
- GEOG 385.3 Analysis of Environmental Management and Policy Making

Preparation for Articulation to B.Sc. Renewable Resource Management (Resource Economics and Policy major); BSA (Agricultural Economics major); B.Sc. Agribusiness.

- **ECON 111.3** Introductory Microeconomics
- MATH 104.3 Elementary Calculus
- AREC 272.3 Introduction to Agricultural Economics
- ANBI 475.3 Field Studies in Arctic Ecosystems and Aboriginal Peoples
- GEOG 120.3 Introduction to Global Environmental Systems
- GEOG 150.3 Introduction to the Circumpolar World
- GEOG 280.3 Environmental Geography
- GEOG 352.3

- GEOG 381.3 Development in the Canadian North Issues and Challenges or GEOG 302.3 Quantitative Methods in Geography offered by Athabasca University
- <u>GEOG 385.3</u> Analysis of Environmental Management and Policy Making
- <u>GEOG 386.3</u> Environmental Impact Assessment or ENVS 305.3 offered by Athabasca University
- INDG 210.3 Indigenous Ways of Knowing
- PLAN 329.3 Integrated Water Resource Planning
- POLS 225.3 Canadian Public Administration and Administrative Law
- POLS 226.3 Canadian Public Policy
- POLS 422.3 Indigenous Governance and Self Determined Sustainable Development

Open Electives (3 9 credit units)

Please choose 3 9 credit units of open electives.

Kanawayihetaytan Askiy

Diploma in Indigenous Resource Management, Dip.(K.A.I.R.M.)

- Kanawayihetaytan Askiy Diploma in Indigenous Resource Management (60 credit units)
- Required Certificate Courses (21 credit units)
- Core Requirements (21 credit units)
- Restricted Electives (45 27 credit units)
- Open Electives (3 6 credit units)

Kanawayihetaytan Askiy Diploma in Indigenous Resource Management (60 credit units)

The Diploma in Indigenous Resource Management provides students with a broad background in resource management for Indigenous communities. The diploma builds on the Kanawayihetaytan Askiy Certificate and prepares students to become land managers in their communities and to provide leadership in local, provincial, and national settings. The program teaches students the skills required for future employment as land managers as well as the scientific and traditional knowledge required for research and decision-making. The diploma is entirely offered through a combination of on-line and condensed (i.e., one-week) delivery courses, although students may also opt to take face-to-face courses. Students enrolling in the diploma would normally complete the Kanawayihetaytan Askiy Certificate before enrolling in the diploma. The diploma consists of a combination of in-person and online courses to allow students flexibility in their scheduling. Students who have completed the Kanawayihetaytan Askiy Certificate can ladder into the program and complete the Diploma in Indigenous Resource Management with the completion of 39 credit units.

Required Certificate Courses (21 credit units)

- Completion of the Kanawayihetaytan Askiy Certificate (21 credit units). This would mean completion of the following courses:
- ASKI 101.3 Field Studies in the Environment
- ASKI 102.3 Introduction to Legal Concepts in Resource Management
- ASKI 103.3 Legal Process and Instruments in Resource Management
- ASKI 104.3 Introduction to Management Issues
- ASKI 105.3 Economics and Planning
- ASKI 201.3 Resource Management Project Assessment
- INDG 107.3 Introduction to Canadian Indigenous Studies
- Or, completion of the Indigenous Peoples' Resource Management Certificate plus <u>INDG</u>
 107.3 Introduction to Canadian Indigenous Studies

Core Requirements (21 credit units)

- GEOG 120.3 Introduction to Global Environmental Systems
- GEOG 150.3 Introduction to the Circumpolar World
- GEOG 280.3 Environmental Geography
- GEOG 386.3 Environmental Impact Assessment
- PLAN 329.3 Integrated Water Resource Planning
- SLSC 232.3 Soil Genesis and Classification

Choose 3 of the following one credit unit courses:

- EVSC 204.1 Soil Sampling Design and Implementation
- RRM 201.1 Geographical Information Systems
- SLSC 205.1 Introduction to Field Description of Soils
- AGRC 110.3 Scientific Literary and Communication for the Agricultural Sciences
- ASKI 202.1 Introduction to Land Management Frameworks
- ASKI 204.2 Introduction to Duty to Consult
- EVSC 110.3 Renewable Resources and Environment
- INDG 107.3 Introduction to Canadian Indigenous Studies
- GEOG 120.3 Introduction to Global Environmental Systems
- AGRC 111.3 Discovery in Plant and Soil Sciences or ASKI 101.3 Field Studies in the Environment
- RRM 114.3 Introductory Resource Economics and Policy or ASKI 105.3 Economics and Planning

Indigenous Studies (Choose 6 CU)

- AREC 220.3 History of Indigenous Agriculture in Canada
- INDG 210.3 Indigenous Ways of Knowing
- INDG 241.3 Weaving Indigenous Science and Western Science
- INDG 264.3 Aboriginal People and Canadian Politics
- INDG 265.3 Aboriginal People and Development
- POLS 222.3 Indigenous Governance and Politics
- POLS 322.3 First Nations Management and Administrative Systems POLS 323.3 First Nations Policies and Programs
- POLS 324.3 Métis otehpayimusuak and apihtawikosisanak Governance (New course; approved, University Course Challenge October 2022)
- POLS 323.3 First Nations Policies and Programs
- RRM 312.3 Natural Resource Management and Indigenous Peoples

Restricted Electives (45-Choose 27 credit units from any of the following subgroups of courses. Note: While students can opt to take several courses from one subgroup, they may also select courses from across the subgroups. These subgroups are intended to identify for students the specializations embedded into the diploma but also to provide maximum flexibility.)

Please note that BIOL 204 and 207 are recommended for students who intend to ladder into the [B.Sc.(RRM)] programs. The following courses are not available on line: INDG 210.3 Indigenous Ways of Knowing, EVSC 380.3, ANBI 375.3 Animals and the Environment, ANBI 475.3 Field Studies in Arctic Ecosystems and Aboriginal Peoples, RRM 301.9 Field Course in Renewable Resource Management, INDG 221.3 Indigenous Food Sovereignty and INDG 241.3 Weaving Indigenous Science and Western Science.

- AGRC 111.3 Discovery in Plant and Soil Sciences
- AGRC 112.3 Animal Agriculture and Food Science
- ANBI 375.3 Animals and the Environment
- ANBI 475.3 Field Studies in Arctic Ecosystems and Aboriginal Peoples
- EVSC 380.3 Grassland Soils and Vegetation
- GEOG 352.3
- GEOG 381.3 Development in the Canadian North Issues and Challenges
- GEOG 385.3 Analysis of Environmental Management and Policy Making
- INDG 210.3 Indigenous Ways of Knowing
- <u>INDG 221.3</u> Indigenous Food Sovereignty
- INDG 241.3 Weaving Indigenous Science and Western Science
- INDG 264.3 Aboriginal People and Canadian Politics
- PLSC 234.3 Weed Control in Organic Agriculture
- POLS 323.3 First Nations Policies and Programs
- RRM 301.9 Field Course in Renewable Resource Management

Tools and Techniques

- EVSC 204.1 Soil Sampling Design and Implementation
- GEOG 222.3 Geomatics
- GEOG 322.3 Geographic information systems or RRM 323.2 Resource Data and Environmental Modeling and RRM 201.1 Geographical Information Systems
- RRM 215.3 Identification of Saskatchewan Plants and Soils
- SLSC 205.1 Introduction to Field Description of Soils
- PLSC 202.3 Introduction to Precision Agriculture

Land-based Field Studies

- RRM 301.9 Field Course in Renewable Resource Management
- SLSC 350.3 Terrestrial Restoration
- SLSC 498.3 Practical and Applied Restoration
- EVSC 380.3 Grassland Soils and Vegetation
- SLSC 480.3 Soils and Boreal Landscapes
- ANBI 475.3 Field Studies in Arctic Ecosystems and Aboriginal Peoples

Soils and Landscapes

- EVSC 380.3 Grassland Soils and Vegetation
- GEOG 150.3 Introduction to the Circumpolar World
- GEOG 204.3 Geography of the Prairie Region
- GEOG 280.3 Environmental Geography
- SLSC 240.3 Agricultural Soil Science or EVSC 220.3 Environmental Soil Science
- SLSC 232.3 Soil Genesis and Classification
- SLSC 312.3 Soil Fertility and Fertilizers

Plants and Biology

- BIOL 120.3 The Nature of Life
- BIOL 121.3 The Diversity of Life
- PLSC 201.3 Field Crops of Western Canada
- PLSC 213.3 Principles of Plant Ecology
- PLSC 220.3 Fundamentals of Horticulture
- PLSC 222.3 Introduction to Field Crops
- PLSC 234.3 Weed Control in Organic Agriculture
- PLSC 235.3 Urban Agriculture

Policy, Planning, and Law

- ASKI 102.3 Introduction to Legal Concepts in Resource Management
- ASKI 103.3 Legal Process and Instruments in Resource Management
- ASKI 104.3 Introduction to Management Issues or COMM 101.3 Introduction to Business
- ASKI 201.3 Resource Management Project Assessment
- GEOG 381.3 Development in the Canadian North Issues and Challenges
- GEOG 385.3 Analysis of Environmental Management and Policy Making
- GEOG 386.3 Environmental Impact Assessment
- PLAN 329.3 Integrated Water Resource Planning

Food Security and Sovereignty

- AGRC 211.3 Global Food Security
- INDG 221.3 Indigenous Food Sovereignty

Animal Science

- AGRC 112.3 Animal Agriculture and Food Science
- AGRC 113.3 Agri Food Issues and Institutions
- ANSC 212.3 Livestock and Poultry Production
- ANBI 375.3 Animals and the Environment

Open Electives (3 6 credit units)

Please choose 3 credit units of open electives.

Rationale: Revisions to the Kanawayihetaytan Askiy diplomas (Indigenous Resource Management Diploma and the Indigenous Lands Governance Diploma) were made to create new direct entry pathways for students who wish to enroll directly into these diplomas without first completing the Kanawayihetaytan Askiy certificate. The revisions give students the option of either laddering in to either diploma from the KA certificate or choosing a direct entry pathway.

University Course Challenge – December 2022

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)

Archaeology and Anthropology

New course(s):

ANTH 390.3 Birth and Sex and Death Anthropological Life Course Perspectives

2 Lecture hours and 1 Seminar hour

This course takes an anthropological life course approach to examine cultural and historical dynamics of birth, sex, and death cross-culturally. These three universal facts of human life are experienced, valued, and undertaken in in vastly different ways across cultural contexts and throughout time. Major topics include fertility, political and cultural determinants of birth and infant survival, emergent sexualities, sexual citizenships, sexual agency, aging, documenting death, and funerary rites.

Prerequisite(s): ANTH 111.3; and 30 credit units of university-level courses or permission of the instructor. Note: Students who have taken ANTH 311: Selected Topics - Birth and Sex and Death may not take this course for credit.

Instructor(s): Pamela Downe

Rationale: This course will complement the offerings in the Department of Anthropology. There is currently no course offered in the Department that takes a life course approach to understanding culture and cultural diversity. This course will fill this gap. The course will provide an excellent connection between the courses that focus on culture in a general sense (e.g. ANTH 310: Anthropology of Gender, ANTH 230: Cultural Dynamics) with those that focus on medical anthropology (e.g. ANTH 231: Cross-Cultural Health Systems, ANTH 332: Anthropology of Infectious Disease). This course also falls within one of Dr. Downe's areas of research expertise.

Biochemistry, Microbiology and Immunology

Minor program revisions

Bachelor of Science (Biomedical Sciences) Honours and Four-year in Biochemistry, Microbiology and Immunology

Add CPPS 304 into the M5 Major Requirement as shown below.

<u>Bachelor of Science (Biomedical Science) Honours [B.Sc. (BMSC) Honours] - Biochemistry,</u> Microbiology and Immunology

M5 Major Requirement (42 credit units)

- BMIS 340.3 Introductory Molecular Biology
- BMIS 400.0 Seminar in Biochemistry Microbiology and Immunology
- BMSC 320.3 Nucleic Acids From Central Dogma to Human Disease

Choose 3 credit units from the following:

- BMIS 310.3 Proteins and Enzymes
- <u>BMIS 390.3</u> Experimental Microbiology and Immunology

Choose 3 credit units from the following , as follows:

- BINF 151.3 Computing in the Biological Sciences
- BINF 351.3 Introduction to Bioinformatics

Choose 15 credit units from the following including at least 9 credit units at the 400-level:

- BMIS 308.3 An Introduction to Microbial Pathogens
- BMIS 321.3 Principles of Immunology
- BMIS 380.3 Team Based Experimental Microbiology
- BMIS 405.3 Structure and Function of Biomolecules
- BMIS 412.3 Protein Structure Function and Engineering
- BMIS 417.3 Molecular Virology
- BMIS 423.3 Immunopathogenesis
- BMIS 425.3 Molecular Basis of Microbial Pathogenesis
- BMIS 430.3 Biochemistry of Cancer
- BMIS 435.3 Human Metabolism and Disease
- BMIS 436.3 Advanced Molecular Biology
- BMIS 487.3 Microbial Genetic Systems
- BMIS 489.6 Research Project in Biochemistry Microbiology and Immunology

Choose 15 credit units from the following:

- BIOL 226.3 Genes to Genomics
- BIOL 316.3 Molecular Genetics of Eukaryotes
- BIOL 331.3 Plant Physiology
- BIOL 420.3 Molecular Biology of Plants
- BIOL 436.3 Animal Parasitology
- CHEM 456.3 Natural Products
- CHEP 350.3 Introduction to Epidemiology
- CMPT 451.3 Modelling and Algorithms for Biological Systems
- CPPS 302.3 Human Physiology Transport Systems
- CPPS 303.3 Human Physiology Reproduction Growth and Energy Homeostasis
- CPPS 304.3 Introduction to Pharmacology
- CPPS 325.3 Advanced Cell Biology
- FABS 325.3 Food Microbiology and Safety
- FABS 334.3 Industrial Microbiology
- FABS 430.3
- FABS 450.3
- NEUR 301.3 Fundamental Neuroscience Intercellular Communication
- Any BMSC, BMIS, BIOC or MCIM course at the 300 or 400 level

<u>Bachelor of Science (Biomedical Science) Four-year [B.Sc. (BMSC) Four-year] - Biochemistry, Microbiology and Immunology</u>

M5 Major Requirement (36 credit units)

- BMIS 340.3 Introductory Molecular Biology
- BMIS 400.0 Seminar in Biochemistry Microbiology and Immunology
- BMSC 320.3 Nucleic Acids From Central Dogma to Human Disease

Choose 3 credit units from the following:

- BMIS 310.3 Proteins and Enzymes
- BMIS 390.3 Experimental Microbiology and Immunology

Choose 3 credit units from the following, as follows:

• <u>BINF 151.3</u> Computing in the Biological Sciences

• BINF 351.3 Introduction to Bioinformatics

Choose 15 credit units from the following including at least 9 credit units at the 400-level:

- BMIS 308.3 An Introduction to Microbial Pathogens
- BMIS 321.3 Principles of Immunology
- BMIS 380.3 Team Based Experimental Microbiology
- BMIS 405.3 Structure and Function of Biomolecules
- BMIS 412.3 Protein Structure Function and Engineering
- BMIS 417.3 Molecular Virology
- BMIS 423.3 Immunopathogenesis
- BMIS 425.3 Molecular Basis of Microbial Pathogenesis
- BMIS 430.3 Biochemistry of Cancer
- BMIS 435.3 Human Metabolism and Disease
- BMIS 436.3 Advanced Molecular Biology
- BMIS 487.3 Microbial Genetic Systems
- BMIS 489.6 Research Project in Biochemistry Microbiology and Immunology

Choose 9 credit units from the following:

- BIOL 226.3 Genes to Genomics
- BIOL 316.3 Molecular Genetics of Eukaryotes
- BIOL 331.3 Plant Physiology
- BIOL 420.3 Molecular Biology of Plants
- BIOL 436.3 Animal Parasitology
- CHEM 456.3 Natural Products
- CHEP 350.3 Introduction to Epidemiology
- CMPT 451.3 Modelling and Algorithms for Biological Systems
- CPPS 302.3 Human Physiology Transport Systems
- CPPS 303.3 Human Physiology Reproduction Growth and Energy Homeostasis
- CPPS 304.3 Introduction to Pharmacology
- CPPS 325.3 Advanced Cell Biology
- FABS 325.3 Food Microbiology and Safety
- FABS 334.3 Industrial Microbiology
- FABS 430.3
- FABS 450.3
- NEUR 301.3 Fundamental Neuroscience Intercellular Communication
- Any BMSC, BMIS, BIOC or MCIM course at the 300 or 400 level

Rationale: CPPS 304.3 is a course for which BMI students will take the prerequisites, and from which our students can benefit from taking. When the program was developed this course was still part of a 2-course sequence (PHPY 304/305), but now that it is a standalone course it is more accessible for BMI students.

Biology

Minor program revisions

Bachelor of Science Honours, Double Honours, Four-year and Three-year in Biology

Add GEOL 247.3 and PLSC 475.3 to the list of restricted elective in the C4 Major Requirement.

Bachelor of Science Honours (B.Sc. Honours) - Biology

C4 Major Requirement (60 credit units)

- BIOL 120.3 The Nature of Life
- BIOL 121.3 The Diversity of Life
- BIOL 222.3 The Living Plant
- BIOL 224.3 Animal Body Systems
- BIOL 226.3 Genes to Genomics
- BIOL 228.3 An Introduction to Ecology and Ecosystems
- BIOL 301.3 Critical Issues in Biology
- BIOL 302.3 Evolutionary Processes
- BIOL 350.3 Field Course

Choose 33 credit units from the following, of which 9 credit units must be at the 300-level or higher:

BIOL 312.3 may not be used to fulfill this requirement.

- ANBI 470.3 Applied Animal Biotechnology
- ANSC 313.3 Animal Breeding and Genetics
- ARCH 270.3 Human Evolution
- BINF 351.3 Introduction to Bioinformatics
- BIOL 200-Level, 300-Level, 400-Level
- BMIS 487.3 Microbial Genetic Systems
- BMSC 210.3 Microbiology
- BMSC 220.3 Cell Biology
- CPPS 406.3 Comparative Vertebrate Histology
- FABS 212.3 Agrifood and Resources Microbiology
- GEOL 247.3 Palaeontology
- GEOL 343.3 Sedimentary Environments
- PBIO 230.3 On the Origin and Life of Animals
- PLSC 311.3 General Apiculture
- PLSC 405.3 Genetics of Plant Populations
- PLSC 411.3 Plant Breeding
- PLSC 416.3 Applied Plant Biotechnology
- PLSC 422.3 Rangeland Ecology and Management
- PLSC 425.3 Forest Ecology
- PLSC 475.3 Insect Ecology
- TOX 300.3 General Principles of Toxicology
- TOX 301.3 Environmental Toxicology

Bachelor of Science Four-year (B.Sc. Four-year) - Biology

C4 Major Requirement (42 credit units)

- BIOL 120.3 The Nature of Life
- BIOL 121.3 The Diversity of Life

- BIOL 222.3 The Living Plant
- BIOL 224.3 Animal Body Systems
- BIOL 226.3 Genes to Genomics
- BIOL 228.3 An Introduction to Ecology and Ecosystems
- BIOL 301.3 Critical Issues in Biology
- BIOL 302.3 Evolutionary Processes

Choose 18 credit units from the following, of which 3 credit units must be at the 300-level or higher:

BIOL 312.3 may not be used to fulfill this requirement.

- ANBI 470.3 Applied Animal Biotechnology
- ANSC 313.3 Animal Breeding and Genetics
- ARCH 270.3 Human Evolution
- BINF 351.3 Introduction to Bioinformatics
- BIOL 200-Level, 300-Level, 400-Level
- BMIS 487.3 Microbial Genetic Systems
- BMSC 210.3 Microbiology
- BMSC 220.3 Cell Biology
- CPPS 406.3 Comparative Vertebrate Histology
- FABS 212.3 Agrifood and Resources Microbiology
- GEOL 247.3 Palaeontology
- **GEOL 343.3** Sedimentary Environments
- PBIO 230.3 On the Origin and Life of Animals
- PLSC 311.3 General Apiculture
- PLSC 405.3 Genetics of Plant Populations
- PLSC 411.3 Plant Breeding
- PLSC 416.3 Applied Plant Biotechnology
- PLSC 422.3 Rangeland Ecology and Management
- PLSC 425.3 Forest Ecology
- PLSC 475.3 Insect Ecology
- <u>TOX 300.3</u> General Principles of Toxicology
- TOX 301.3 Environmental Toxicology

Bachelor of Science Three-year (B.Sc. Three-year) - Biology

C4 Major Requirement (30 credit units)

- BIOL 120.3 The Nature of Life
- BIOL 121.3 The Diversity of Life
- BIOL 222.3 The Living Plant
- BIOL 224.3 Animal Body Systems
- BIOL 226.3 Genes to Genomics
- **BIOL 228.3** An Introduction to Ecology and Ecosystems
- BIOL 302.3 Evolutionary Processes

Choose 9 credit units from the following:

BIOL 312.3 may not be used to fulfill this requirement.

- ANBI 470.3 Applied Animal Biotechnology
- ANSC 313.3 Animal Breeding and Genetics

- ARCH 270.3 Human Evolution
- BINF 351.3 Introduction to Bioinformatics
- BIOL 200-Level, 300-Level, 400-Level
- BMIS 487.3 Microbial Genetic Systems
- BMSC 210.3 Microbiology
- BMSC 220.3 Cell Biology
- CPPS 406.3 Comparative Vertebrate Histology
- FABS 212.3 Agrifood and Resources Microbiology
- GEOL 247.3 Palaeontology
- GEOL 343.3 Sedimentary Environments
- PBIO 230.3 On the Origin and Life of Animals
- PLSC 311.3 General Apiculture
- PLSC 405.3 Genetics of Plant Populations
- PLSC 411.3 Plant Breeding
- PLSC 416.3 Applied Plant Biotechnology
- PLSC 422.3 Rangeland Ecology and Management
- PLSC 425.3 Forest Ecology
- PLSC 475.3 Insect Ecology
- TOX 300.3 General Principles of Toxicology
- <u>TOX 301.3</u> Environmental Toxicology

Bachelor of Science Double Honours - Biology - Major 1

C4 Major Requirement (42 credit units)

- BIOL 120.3 The Nature of Life
- BIOL 121.3 The Diversity of Life
- BIOL 222.3 The Living Plant
- BIOL 224.3 Animal Body Systems
- BIOL 226.3 Genes to Genomics
- BIOL 228.3 An Introduction to Ecology and Ecosystems
- BIOL 301.3 Critical Issues in Biology
- BIOL 302.3 Evolutionary Processes
- BIOL 350.3 Field Course
- BMSC 200.3 Biomolecules

Choose 9 credit units from the following:

BIOL 312.3 may not be used to fulfill this requirement.

- ANBI 470.3 Applied Animal Biotechnology
- ANSC 313.3 Animal Breeding and Genetics
- ARCH 270.3 Human Evolution
- BINF 351.3 Introduction to Bioinformatics
- BIOL 200-Level, 300-Level, 400-Level
- BMIS 487.3 Microbial Genetic Systems
- BMSC 210.3 Microbiology
- BMSC 220.3 Cell Biology
- CPPS 406.3 Comparative Vertebrate Histology
- FABS 212.3 Agrifood and Resources Microbiology
- GEOL 247.3 Palaeontology

- GEOL 343.3 Sedimentary Environments
- GEOL 435.3
- PBIO 230.3 On the Origin and Life of Animals
- PLSC 311.3 General Apiculture
- PLSC 405.3 Genetics of Plant Populations
- PLSC 411.3 Plant Breeding
- PLSC 412.3
- PLSC 416.3 Applied Plant Biotechnology
- PLSC 422.3 Rangeland Ecology and Management
- PLSC 425.3 Forest Ecology
- PLSC 475.3 Insect Ecology
- TOX 300.3 General Principles of Toxicology
- TOX 301.3 Environmental Toxicology

Choose 3 credit units from the following:

- BMIS 310.3 Proteins and Enzymes
- BMIS 340.3 Introductory Molecular Biology
- BMIS 405.3 Structure and Function of Biomolecules
- BMIS 412.3 Protein Structure Function and Engineering
- BMIS 430.3 Biochemistry of Cancer
- BMIS 435.3 Human Metabolism and Disease
- BMIS 436.3 Advanced Molecular Biology
- BMIS 489.6 Research Project in Biochemistry Microbiology and Immunology
- BMSC 230.3 Metabolism
- BMSC 320.3 Nucleic Acids From Central Dogma to Human Disease
- PLSC 317.3 Plant Metabolism
- CHEM 200-Level, 300-Level, 400-Level

Rationale: Both courses are in allied subject areas and will provide students additional choice within their major. Instructors of each course are Associate members of the Department of Biology and are supportive of these changes.

Biomedical Neuroscience

Minor program revisions

Bachelor of Science (Biomedical Sciences) Honours and Four-year in Biomedical Neuroscience Adjust the credit unit requirements from two sections within the M5 Major requirements so that 400-level requirements are increased by 3 credit units and PSY course requirements are decreased by 3 credit units.

<u>Bachelor of Science (Biomedical Science) Honours [B.Sc. (BMSC) Honours] - Biomedical Neuroscience</u>

M5 Major Requirement (42 credit units)

- CPPS 325.3 Advanced Cell Biology
- BIOL 226.3 Genes to Genomics
- CPPS 304.3 Introduction to Pharmacology
- <u>CPPS 306.3</u> Systems Pharmacology I Cardiorespiratory Renal Gastrointestinal and Neuropharmacology
- NEUR 301.3 Fundamental Neuroscience Intercellular Communication

- NEUR 334.3 Introductory Neuroanatomy
- NEUR 350.3 Fundamental Neuroscience
- **NEUR 405.3** Current Topics in Neuroscience
- NEUR 432.6 Undergraduate Research Project in Neuroscience

Choose 3 credit units from the following:

- CPPS 331.3 Methods in Cell and Developmental Biology
- CPPS 308.3 Experimental Basis of Physiology and Pharmacology

Choose **3 6 credit units** from the following:

- BIOL 430.3 Neurobiology of Behaviour
- KIN 422.3 Motor Control of Neurological Conditions
- NEUR 404.3 Neurophysiology and Neuropharmacology
- NEUR 420.3 Drugs and Behaviour
- NEUR 480.3 Neurobiology of Learning and Memory
- PSY 448.3 Advanced Seminar in Neuroscience

Choose 6 3 credit units from the following:

- PSY 242.3 Physiological Psychology
- PSY 246.3 Introduction to Human Neuropsychology
- PSY 252.3 Perceptual Processes

Bachelor of Science (BMSC) Four-year [B.Sc. (BMSC) Four-year] - Biomedical Neuroscience M5 Major Requirement (36 credit units)

- CPPS 325.3 Advanced Cell Biology
- BIOL 226.3 Genes to Genomics
- CPPS 304.3 Introduction to Pharmacology
- <u>CPPS 306.3</u> Systems Pharmacology I Cardiorespiratory Renal Gastrointestinal and Neuropharmacology
- NEUR 301.3 Fundamental Neuroscience Intercellular Communication
- NEUR 334.3 Introductory Neuroanatomy
- NEUR 350.3 Fundamental Neuroscience
- **NEUR 405.3** Current Topics in Neuroscience

Choose 3 credit units from the following:

- CPPS 331.3 Methods in Cell and Developmental Biology
- CPPS 308.3 Experimental Basis of Physiology and Pharmacology

Choose **3 6 credit units** from the following:

- BIOL 430.3 Neurobiology of Behaviour
- KIN 422.3 Motor Control of Neurological Conditions
- NEUR 404.3 Neurophysiology and Neuropharmacology
- NEUR 420.3 Drugs and Behaviour
- **NEUR 480.3** Neurobiology of Learning and Memory
- PSY 448.3 Advanced Seminar in Neuroscience

Choose **6 3 credit units** from the following:

- PSY 242.3 Physiological Psychology
- PSY 246.3 Introduction to Human Neuropsychology
- PSY 252.3 Perceptual Processes

Rationale: With the recent addition of two new 400-level NEUR courses the department feels that it would be of greater benefit to students to increase the requirements from the 400-level neuroscience course list. This will increase rigor in the program and allow for a greater depth of knowledge in a more specific area of neuroscience. The BMNS students have also found it very difficult to fit two of these psychology courses into their schedules since they are only offered in one term and conflict with some of the core courses in our program.

Cellular, Physiological, and Pharmacological Sciences

Minor program revisions

Bachelor of Science (Biomedical Sciences) Honours and Four-year in Cellular, Physiological and Pharmacological Sciences

Add NEUR 480.3 as an option in the 400-level list of restricted elective courses in the M5 Major Requirement.

<u>Bachelor of Science (Biomedical Science) Honours [B.Sc. (BMSC) Honours] - Cellular, Physiological and Pharmacological Sciences</u>

Honours M5 Major Requirement (42 credit units)

- BIOL 226.3 Genes to Genomics
- CPPS 302.3 Human Physiology Transport Systems
- CPPS 303.3 Human Physiology Reproduction Growth and Energy Homeostasis
- CPPS 304.3 Introduction to Pharmacology
- CPPS 310.3 Basic Human Anatomy
- CPPS 325.3 Advanced Cell Biology
- CPPS 432.6 Undergraduate Research Project in Cellular Physiological and Pharmacological Sciences

Choose 3 credit units from the following:

- <u>CPPS 306.3</u> Systems Pharmacology I Cardiorespiratory Renal Gastrointestinal and Neuropharmacology
- CPPS 307.3 Systems Pharmacology II Chemotherapy Immune and Endocrine Pharmacology

Choose 3 credit units from the following:

- CPPS 308.3 Experimental Basis of Physiology and Pharmacology
- CPPS 331.3 Methods in Cell and Developmental Biology

Choose 3 credit units from the following:

- <u>CPPS 330.3</u> The Principles of Developmental Biology
- NEUR 301.3 Fundamental Neuroscience Intercellular Communication
- NEUR 350.3 Fundamental Neuroscience

Choose 9 credit units from the following:

- CPPS 337.3 Experimental Design and the Health Care System
- CPPS 400.3 Clinical and Biomedical Imaging
- CPPS 402.3 Immunometabolism in Health and Disease
- CPPS 403.3 Physiological Genomics and Pharmacogenetics
- CPPS 405.3 Current Topics in Cellular Physiological and Pharmacological Sciences
- CPPS 406.3 Comparative Vertebrate Histology
- CPPS 407.3 Advances in Anatomy and Histology
- CPPS 415.3 Advances in Cardiovascular Physiology and Pharmacology
- CPPS 417.3 The Business of Health Care
- NEUR 404.3 Neurophysiology and Neuropharmacology
- NEUR 480.3 Neurobiology of Learning and Memory

Bachelor of Science (Biomedical Science) Four-year [B.Sc. (BMSC) Four-Year] - Cellular, Physiological and Pharmacological Sciences

4 year M5 Major Requirement (36 credit units)

- BIOL 226.3 Genes to Genomics
- CPPS 302.3 Human Physiology Transport Systems
- CPPS 303.3 Human Physiology Reproduction Growth and Energy Homeostasis
- CPPS 304.3 Introduction to Pharmacology
- CPPS 310.3 Basic Human Anatomy
- CPPS 325.3 Advanced Cell Biology

Choose 3 credit units from the following:

- <u>CPPS 306.3</u> Systems Pharmacology I Cardiorespiratory Renal Gastrointestinal and Neuropharmacology
- CPPS 307.3 Systems Pharmacology II Chemotherapy Immune and Endocrine Pharmacology

Choose 3 credit units from the following:

- CPPS 308.3 Experimental Basis of Physiology and Pharmacology
- CPPS 331.3 Methods in Cell and Developmental Biology

Choose 3 credit units from the following:

- CPPS 330.3 The Principles of Developmental Biology
- NEUR 301.3 Fundamental Neuroscience Intercellular Communication
- NEUR 350.3 Fundamental Neuroscience

Choose 9 credit units from the following:

- CPPS 337.3 Experimental Design and the Health Care System
- CPPS 400.3 Clinical and Biomedical Imaging
- CPPS 402.3 Immunometabolism in Health and Disease
- CPPS 403.3 Physiological Genomics and Pharmacogenetics
- CPPS 405.3 Current Topics in Cellular Physiological and Pharmacological Sciences
- CPPS 406.3 Comparative Vertebrate Histology
- CPPS 407.3 Advances in Anatomy and Histology
- CPPS 415.3 Advances in Cardiovascular Physiology and Pharmacology
- CPPS 417.3 The Business of Health Care
- NEUR 404.3 Neurophysiology and Neuropharmacology
- NEUR 480.3 Neurobiology of Learning and Memory

Rationale: CPPS students can complete the prerequisites required to enroll in NEUR 480 and NEUR 480 will provide CPPS students an opportunity to take a more advanced neuroscience course on a specific topic if this is something that interests them. Preferential enrolment will be given to biomedical neuroscience students but open seats will be made available to CPPS students.

College

Minor program revisions

Bachelor of Arts & Science, Bachelor of Science, and Bachelor of Science (Biomedical Sciences) programs

Add ASTR 213.3 as an option in the Physics & Astronomy option that appears in the Science lists in the C3 Cognate Requirement, J2 Science Distribution Requirement, and M3 Cognate Requirement lists.

The following courses are the standard list of eligible courses to be used in the C3 Cognate Requirement, the J2 Science Distribution Requirement, and the M3 Cognate Requirement:

Biology

- BIOL 120.3 The Nature of Life
- BIOL 121.3 The Diversity of Life

Chemistry

- CHEM 112.3 General Chemistry I Structure Bonding and Properties of Materials
- CHEM 115.3 General Chemistry II Chemical Processes
- CHEM 250.3 Introduction to Organic Chemistry

Computer Science

- CMPT 140.3 Introduction to Creative Computing
- CMPT 141.3 Introduction to Computer Science
- CMPT 145.3 Principles of Computer Science

Earth Science

- GEOG 120.3 Introduction to Global Environmental Systems
- **GEOL 121.3** Earth Processes
- GEOL 122.3 Earth History

Physics & Astronomy

- ASTR 113.3 Introduction to Stellar Astronomy
- ASTR 213.3 Astronomical Photometry
- PHYS 115.3 Physics and the Universe
- PHYS 117.3 Physics for the Life Sciences or PHYS 125.3 Physics and Technology

Rationale: A maximum of 2 courses from any area may be taken towards the C3 requirement in the BSc programs, and only 6 credit units from a single subject can be taken in J2 (BA&Sc programs) and M3 (BSc (BMSC) programs). Following a revision to ASTR 113 which removed PHYS 115 as prerequisite, ASTR 113 can now be taken by students as their first course from Physics and Engineering Physics towards this requirement, but currently no second ASTR course is listed as an option. ASTR 213 is the natural course to be taken in this sequence, and could be taken by students who have previously taken

either ASTR 113 or PHYS 115 as their second C3 elective from Physics and Engineering Physics. Based on conversations with students, this option is expected to be popular in particular with students from computer science. The inclusion of CHEM 250 in the current C3 course list provides precedent to inclusion of other 200-level courses that could serve as a second C3 course from a particular department.

Students in non-Science programs can already use ASTR 213 in their Distribution Requirements, as the area lists include "any senior-level [area] course for which the prerequisites have been met."

A number of majors for which this course will become eligible will not see any revision, as all of the courses in the affected requirement are specifically prescribed. The majors which will be affected are Applied Computing, Applied Mathematics, Biology, Computer Science, Environment and Society, Environmental Biology, Mathematics, and Statistics.

Computer Science

Minor program revisions

Bachelor of Science Honours, Four-year and Three-year in Computer Science

- 1. Add MATH 163 to the C1 Requirement.
- 2. Move MATH 110/176 and MATH 116/177 from the C1 to the C4 Requirement and add MATH 133 and 134 as an option to each set, respectively.
- 3. Move MATH 164 from the C3 to the C1 Requirement, and remove mention of MATH 266 entirely.
- 4. Move STAT 241 from the C3 to the C4 Requirement.
- 5. Move PHIL 232 from the C4 to the C3 Requirement.
- 6. Remove CMPT 451 as an explicitly listed course in the C4 requirement.
- 7. Remove the ENT courses from the Business Science list.

Bachelor of Science Honours (B.Sc. Honours) - Computer Science

C1 College Requirement (15 credit units)

English Language Writing

- No change
 Indigenous Learning
 - No change

Quantitative Reasoning

- MATH 163.3 Introduction to Mathematical Reasoning
- MATH 164.3 Introduction to Linear Algebra

Choose 3 credit units from the following:

- MATH 110.3 Calculus I
- MATH 176.3 Advanced Calculus I

Choose 3 credit units from the following:

- MATH 116.3 Calculus II
- MATH 177.3 Advanced Calculus II

C3 Cognate Requirement (18 - 21 12 - 15 credit units)

Junior course requirements:

Choose **9 credit units** from the following areas, such that no more than 6 credit units are from any one area:

. . .

Senior course requirements:

- PHIL 232.3 Ethics and Professional Responsibility in Computer Science
- MATH 164.3 Introduction to Linear Algebra or MATH 266.3 Linear Algebra II (MATH 266.3 Linear Algebra II recommended)
- STAT 241.3 Probability Theory

Choose 3 credit units from the following:

- STAT 242.3 Statistical Theory and Methodology
- STAT 245.3 Introduction to Statistical Methods
- <u>EE 216.3</u> Probability Statistics and Numerical Methods (<u>EE 216.3</u> Probability Statistics and Numerical Methods is only for students in the College of Engineering)

Business Science

If a course in Economics was chosen in C2 above, then choose 3 additional credit units of Electives in C5. If a course in Economics was **not** chosen in C2 above, then 3 credit units are required from:

Choose 0 - 3 credit units from the following:

- AREC 230.3 Innovation and Entrepreneurship
- COMM 102.3 Introduction to Business Management
- COMM 105.3 Introduction to Organizational Behaviour
- COMM 201.3 Introduction to Financial Accounting
- COMM 203.3 Introduction to Finance
- COMM 204.3 Introduction to Marketing
- COMM 205.3 Introduction to Operations Management
- COMM 210.3 Introduction to Management Accounting
- COMM 304.3 Introduction to Business Law
- ECON 111.3 Introductory Microeconomics
- ECON 114.3 Introductory Macroeconomics
- ENT 210.3
- ENT 220.3
- ENT 230.3

C4 Major Requirement (54 63 credit units)

- CMPT 116.3 or CMPT 141.3 Introduction to Computer Science
- CMPT 117.3 or CMPT 145.3 Principles of Computer Science
- CMPT 214.3 Programming Principles and Practice

- CMPT 215.3 Introduction to Computer Organization and Architecture or CME
 331.3 Microprocessor Based Embedded Systems
- CMPT 260.3 Mathematical Logic and Computing
- <u>CMPT 270.3</u> Developing Object-Oriented Systems
- CMPT 280.3 Intermediate Data Structures and Algorithms
- CMPT 360.3 Machines and Algorithms
- CMPT 364.3 Automata and Formal Languages
- CMPT 400.3 Research Topics in Computer Science
- PHIL 232.3 Ethics and Professional Responsibility in Computer Science
- STAT 241.3 Probability Theory

Choose 15 credit units from the following:

- CMPT 317.3 Introduction to Artificial Intelligence
- CMPT 332.3 Operating Systems Concepts
- CMPT 340.3 Programming Language Paradigms
- CMPT 353.3 Full Stack Web Programming
- CMPT 370.3 Intermediate Software Engineering
- CMPT 381.3 Implementation of Graphical User Interfaces

Choose 6 credit units of CMPT courses with number 410 or higher:

Note: Courses numbered 400 - 409 may not be used to fulfill this requirement

- **CME 433.3** Digital Systems Architecture
- CME 435.3 Verification of Digital Systems
- CME 451.3
- CMP<u>T 400-Level</u>

Choose **3 credit units** from the following:

- MATH 110.3 Calculus I
- MATH 176.3 Advanced Calculus I

Choose 3 credit units from the following:

- MATH 116.3 Calculus II
- MATH 177.3 Advanced Calculus II

Choose 3 credit units from the following:

- **STAT 242.3** Statistical Theory and Methodology
- STAT 245.3 Introduction to Statistical Methods
- <u>EE 216.3</u> Probability Statistics and Numerical Methods (only open to students in the College of Engineering)

C5 Electives Requirement (21 - 24 18 - 21 credit units)

Arts and Science courses, or those from other Colleges that have been approved for Arts and Science credit, to complete the requirements for 120 credit unit Honours program, of which at least 66 credit units must be at the 200-level or higher.

If you require further assistance, please contact the Arts and Science Undergraduate Student Office.

<u>Bachelor of Science Honours Software Engineering Option (B.Sc. Honours SE) - Computer Science</u>

C1 College Requirement (15 credit units)

English Language Writing

- No change
 Indigenous Learning
 - No change

Quantitative Reasoning

- MATH 163.3 Introduction to Mathematical Reasoning
- MATH 164.3 Introduction to Linear Algebra

Choose 3 credit units from the following:

- MATH 110.3 Calculus I
- MATH 176.3 Advanced Calculus I

Choose 3 credit units from the following:

- MATH 164.3 Introduction to Linear Algebra (formerly MATH 264.3)
- MATH 266.3 Linear Algebra II

C3 Cognate Requirement (18 - 21 12 - 15 credit units)

Junior course requirements:

Choose **9 credit units** from the following areas, such that no more than 6 credit units are from any one area:

...

Senior course requirements:

PHIL 232.3 Ethics and Professional Responsibility in Computer Science

Choose 3 credit units from the following:

- <u>STAT 242.3</u> Statistical Theory and Methodology
- STAT 245.3 Introduction to Statistical Methods
- <u>EE 216.3</u> Probability Statistics and Numerical Methods (<u>EE 216.3</u> Probability Statistics and Numerical Methods is only for students in the College of Engineering)

Choose 6 credit units from the following:

MATH 112.3 or MATH 116.3 Calculus II

- MATH 211.3 Numerical Analysis I
- MATH 223.3 Calculus III for Engineers
- MATH 225.3 Intermediate Calculus I
- MATH 276.3 Vector Calculus I
- MATH 327.3 Graph Theory
- MATH 328.3 Combinatorics and Enumeration
- MATH 361.3 Group Theory and MATH 362.3 Rings and Fields
- MATH 364.3 Number Theory
- STAT 241.3 Probability Theory
- STAT 344.3 Applied Regression Analysis
- STAT 345.3 Design and Analysis of Experiments
- STAT 348.3 Sampling Techniques
- PHIL 243.3 Introduction to Symbolic Logic II

Business Science

If a course in Economics was chosen in C2 above, then choose 3 additional credit units of Electives in C5. If a course in Economics was **not** chosen in C2 above, then 3 credit units are required from:

Choose 0 - 3 credit units from the following:

- AREC 230.3 Innovation and Entrepreneurship
- COMM 102.3 Introduction to Business Management
- COMM 105.3 Introduction to Organizational Behaviour
- COMM 201.3 Introduction to Financial Accounting
- COMM 203.3 Introduction to Finance
- COMM 204.3 Introduction to Marketing
- COMM 205.3 Introduction to Operations Management
- COMM 210.3 Introduction to Management Accounting
- COMM 304.3 Introduction to Business Law
- ECON 111.3 Introductory Microeconomics
- ECON 114.3 Introductory Macroeconomics
- ENT 210.3
- ENT 220.3
- ENT 230.3

C4 Major Requirement (54 66 credit units)

- CMPT 116.3 or CMPT 141.3 Introduction to Computer Science
- CMPT 117.3 or <u>CMPT 145.3</u> Principles of Computer Science
- CMPT 214.3 Programming Principles and Practice
- CMPT 215.3 Introduction to Computer Organization and Architecture or CME 331.3 Microprocessor Based Embedded Systems
- CMPT 260.3 Mathematical Logic and Computing
- CMPT 270.3 Developing Object-Oriented Systems
- CMPT 280.3 Intermediate Data Structures and Algorithms
- CMPT 332.3 Operating Systems Concepts
- CMPT 340.3 Programming Language Paradigms
- CMPT 353.3 Full Stack Web Programming
- CMPT 360.3 Machines and Algorithms

- CMPT 370.3 Intermediate Software Engineering
- CMPT 371.3 Software Management
- CMPT 470.3 Advanced Software Engineering
- <u>CMPT 481.3</u> Human Computer Interaction
- PHIL 232.3 Ethics and Professional Responsibility in Computer Science
- STAT 241.3 Probability Theory

Choose 6 credit units from the following:

Note: For those students not in the Professional Internship Option, CMPT 405 and 3 additional credit units from the courses listed below are required. For those students in the Professional Internship Option, 6 additional credit units from the courses listed below are required.

- CMPT 300-Level, 400-Level
- CMPT 451.3 Modelling and Algorithms for Biological Systems
- up to at most 2 courses from <u>CME 332.3</u> Real Time Computing, <u>CME 341.3</u> Logic Design Using FPGAs, <u>CME 342.3</u> Introduction to Digital Integrated Circuits and System on Chip, <u>CME 433.3</u> Digital Systems Architecture, <u>CME 435.3</u> Verification of Digital Systems, <u>CME 451.3</u>

Choose **3 credit units** from the following:

- MATH 110.3 Calculus I
- MATH 176.3 Advanced Calculus I

Choose **3 credit units** from the following:

- STAT 242.3 Statistical Theory and Methodology
- STAT 245.3 Introduction to Statistical Methods
- <u>EE 216.3</u> Probability Statistics and Numerical Methods (only open to students in the College of Engineering)

Choose 6 credit units from the following:

- MATH 112.3 or MATH 116.3 Calculus II
- MATH 211.3 Numerical Analysis I
- MATH 223.3 Calculus III for Engineers
- MATH 225.3 Intermediate Calculus I
- MATH 276.3 Vector Calculus I
- MATH 327.3 Graph Theory
- MATH 328.3 Combinatorics and Enumeration
- MATH 361.3 Group Theory and MATH 362.3 Rings and Fields
- MATH 364.3 Number Theory
- STAT 344.3 Applied Regression Analysis
- STAT 345.3 Design and Analysis of Experiments
- STAT 348.3 Sampling Techniques
- PHIL 243.3 Introduction to Symbolic Logic II

C5 Electives Requirement (21 - 24 15 - 18 credit units)

Arts and Science courses, or those from other Colleges that have been approved for Arts and Science credit, to complete the requirements for 120 credit unit Honours program, of which at least 66 credit units must be at the 200-level or higher.

If you require further assistance, please contact the Arts and Science Undergraduate Student Office.

Bachelor of Science Four-year (B.Sc. Four-year) - Computer Science C1 College Requirement (15 credit units)

English Language Writing

No change

Indigenous Learning

No change

Quantitative Reasoning

- MATH 163.3 Introduction to Mathematical Reasoning
- MATH 164.3 Introduction to Linear Algebra

Choose 3 credit units from the following:

- MATH 110.3 Calculus I
- MATH 176.3 Advanced Calculus I

Choose 3 credit units from the following:

- MATH 164.3 Introduction to Linear Algebra (formerly MATH 264.3)
- MATH 266.3 Linear Algebra II

C3 Cognate Requirement (18 - 21 12 - 15 credit units)

Junior course requirements:

Choose **9 credit units** from the following areas, such that no more than 6 credit units are from any one area:

Senior course requirements:

PHIL 232.3 Ethics and Professional Responsibility in Computer Science

Choose 3 credit units from the following:

- STAT 242.3 Statistical Theory and Methodology
- STAT 245.3 Introduction to Statistical Methods

• <u>EE 216.3</u> Probability Statistics and Numerical Methods (<u>EE 216.3</u> Probability Statistics and Numerical Methods is only for students in the College of Engineering)

Choose 6 credit units from the following:

- MATH 112.3 or MATH 116.3 Calculus II
- MATH 211.3 Numerical Analysis I
- MATH 223.3 Calculus III for Engineers
- MATH 225.3 Intermediate Calculus I
- MATH 276.3 Vector Calculus I
- MATH 327.3 Graph Theory
- MATH 328.3 Combinatorics and Enumeration
- MATH 361.3 Group Theory and MATH 362.3 Rings and Fields
- MATH 364.3 Number Theory
- STAT 241.3 Probability Theory
- <u>STAT 344.3</u> Applied Regression Analysis
- STAT 345.3 Design and Analysis of Experiments
- STAT 348.3 Sampling Techniques
- PHIL 243.3 Introduction to Symbolic Logic II

Business Science

If a course in Economics was chosen in C2 above, then choose 3 additional credit units of Electives in C5. If a course in Economics was **not** chosen in C2 above, then 3 credit units are required from:

Choose **0 - 3 credit units** from the following:

- AREC 230.3 Innovation and Entrepreneurship
- COMM 102.3 Introduction to Business Management
- COMM 105.3 Introduction to Organizational Behaviour
- COMM 201.3 Introduction to Financial Accounting
- COMM 203.3 Introduction to Finance
- COMM 204.3 Introduction to Marketing
- COMM 205.3 Introduction to Operations Management
- COMM 210.3 Introduction to Management Accounting
- COMM 304.3 Introduction to Business Law
- ECON 111.3 Introductory Microeconomics
- ECON 114.3 Introductory Macroeconomics
- ENT 210.3
- ENT 220.3
- ENT 230.3

C4 Major Requirement (51 60 credit units)

- CMPT 116.3 or <u>CMPT 141.3</u> Introduction to Computer Science
- CMPT 117.3 or CMPT 145.3 Principles of Computer Science
- CMPT 214.3 Programming Principles and Practice
- CMPT 215.3 Introduction to Computer Organization and Architecture or CME 331.3 Microprocessor Based Embedded Systems
- CMPT 260.3 Mathematical Logic and Computing

- CMPT 270.3 Developing Object-Oriented Systems
- CMPT 280.3 Intermediate Data Structures and Algorithms
- PHIL 232.3 Ethics and Professional Responsibility in Computer Science

Choose **18 credit units** from the following:

- CMPT 317.3 Introduction to Artificial Intelligence
- CMPT 332.3 Operating Systems Concepts
- CMPT 340.3 Programming Language Paradigms
- CMPT 353.3 Full Stack Web Programming
- CMPT 360.3 Machines and Algorithms
- CMPT 370.3 Intermediate Software Engineering
- CMPT 381.3 Implementation of Graphical User Interfaces

Choose 6 credit units of CMPT courses with number 410 or higher:

Note: Courses numbered 400 - 409 may not be used to fulfill this requirement

• <u>CMPT — 400-Level</u>

Choose 3 credit units from the following:

- CME 332.3 Real Time Computing
- CME 334.3 Network Architecture and Protocols
- CME 341.3 Logic Design Using FPGAs
- CME 342.3 Introduction to Digital Integrated Circuits and System on Chip
- CME 433.3 Digital Systems Architecture
- <u>CME 435.3</u> Verification of Digital Systems
- CMPT 451.3 Modelling and Algorithms for Biological Systems
- <u>CMPT 300-Level</u>, 400-Level
- at most 2 courses from <u>CME 332.3</u> Real Time Computing, <u>CME 341.3</u> Logic Design Using FPGAs, <u>CME 342.3</u> Introduction to Digital Integrated Circuits and System on Chip, <u>CME 433.3</u> Digital Systems Architecture, <u>CME 435.3</u> Verification of Digital Systems

Choose 3 credit units from the following:

- MATH 110.3 Calculus I
- MATH 176.3 Advanced Calculus I

Choose 3 credit units from the following:

- **STAT 242.3** Statistical Theory and Methodology
- STAT 245.3 Introduction to Statistical Methods
- <u>EE 216.3</u> Probability Statistics and Numerical Methods (only open to students in the College of Engineering)

Choose 6 credit units from the following:

- MATH 112.3 or MATH 116.3 Calculus II
- MATH 211.3 Numerical Analysis I

- MATH 223.3 Calculus III for Engineers
- MATH 225.3 Intermediate Calculus I
- MATH 276.3 Vector Calculus I
- MATH 327.3 Graph Theory
- MATH 328.3 Combinatorics and Enumeration
- MATH 361.3 Group Theory and MATH 362.3 Rings and Fields
- MATH 364.3 Number Theory
- STAT 241.3 Probability Theory
- STAT 344.3 Applied Regression Analysis
- STAT 345.3 Design and Analysis of Experiments
- STAT 348.3 Sampling Techniques
- PHIL 243.3 Introduction to Symbolic Logic II

C5 Electives Requirement (24 - 27 21 - 24 credit units)

Arts and Science courses, or those from other colleges that have been approved for Arts and Science credit, to complete the requirements for 120 credit unit Four-year program, of which at least 66 must be at the 200 or higher level.

If you require further assistance, please contact the Arts and Science Undergraduate Student Office.

Bachelor of Science Three-year (B.Sc. Three-year) - Computer Science

C1 College Requirement (12 15 credit units)

English Language Writing

No change
 Indigenous Learning

No change

Quantitative Reasoning

- MATH 163.3 Introduction to Mathematical Reasoning
- MATH 164.3 Introduction to Linear Algebra

Choose 3 credit units from the following:

- MATH 110.3 Calculus I
- MATH 176.3 Advanced Calculus I

C2 Breadth Requirement (9 credit units)

PHIL 232 is recommended.

No further changes

C3 Cognate Requirement (45 9 credit units)

Junior course requirements:

Choose **9 credit units** from the following areas, such that no more than 6 credit units are from any one area:

...

Senior course requirements:

- MATH 164.3 Introduction to Linear Algebra or MATH 266.3 Linear Algebra II-
- <u>STAT 242.3</u> Statistical Theory and Methodology or <u>STAT 245.3</u> Introduction to Statistical Methods or <u>EE 216.3</u> Probability Statistics and Numerical Methods (<u>EE 216.3</u> Probability Statistics and Numerical Methods is only for students in the College of Engineering)

C4 Major Requirement (30 36 credit units)

- CMPT 116.3 or CMPT 141.3 Introduction to Computer Science
- CMPT 117.3 or CMPT 145.3 Principles of Computer Science
- CMPT 214.3 Programming Principles and Practice
- CMPT 215.3 Introduction to Computer Organization and Architecture or CME 331.3 Microprocessor Based Embedded Systems
- CMPT 260.3 Mathematical Logic and Computing
- CMPT 270.3 Developing Object-Oriented Systems
- CMPT 280.3 Intermediate Data Structures and Algorithms

Choose 9 credit units from the following:

- <u>CMPT 451.3</u> Modelling and Algorithms for Biological Systems
- CMPT 300-Level, 400-Level
- up to at most 1 course from CME 332.3 Real Time Computing, CME 334.3 Network Architecture and Protocols, CME 341.3 Logic Design Using FPGAs, CME 342.3 Introduction to Digital Integrated Circuits and System on Chip, CME 433.3 Digital Systems Architecture, CME 435.3 Verification of Digital Systems, CME 334.3 Network Architecture and Protocols

Choose 3 credit units from the following:

- MATH 110.3 Calculus I
- MATH 176.3 Advanced Calculus I

Choose 3 credit units from the following:

- STAT 242.3 Statistical Theory and Methodology
- STAT 245.3 Introduction to Statistical Methods
- <u>EE 216.3</u> Probability Statistics and Numerical Methods (only open to students in the College of Engineering)

C5 Electives Requirement (24 21 credit units)

Arts and Science courses, or those from other colleges that have been approved for Arts and Science credit, to complete the requirements for the 90 credit unit Three-year program, of which at least 42 must be at the 200-level or higher-level.

If you require further assistance, please contact the Arts and Science Undergraduate Student Office.

PHIL 232 is recommended.

Rationale:

- 1. MATH 163 provides an introduction to the type of mathematical thinking that is also relevant for computer programming.
- 2. MATH 133.4 (Engineering Mathematics I) and MATH 134.3 (Engineering Mathematics II) are accepted in Arts & Science programs as equivalent to MATH 110.3/176.3 and MATH 116.3/177.3, respectively, so adding them here just makes that apparent.
- 3. Students once had the option to take MATH 264 (which became 164) or 266, but now MATH 164 serves as the prerequisite for MATH 266. Enough time has gone by that very few students who took MATH 266 without 164 remain, so 266 no longer needs to be listed as an option.

Listing MATH 163 and 164 in C1, and moving the other MATH courses to C4, will ensure that the C1 requirement for Applied Computing and Computer Science programs is the same. This will facilitate easier transfer between programs, allowing students more time to decide which option is best for them.

- 4. Moving STAT 241 to the C4 Major Requirement will allow it to be included in the Major Average.
- 5. Moving PHIL 232 out of the C4 Major Requirement will exclude it from being included in the Major Average.

The moves of STAT 241 and PHIL 232 also ensure that these courses appear in the same requirements as they do in the Applied Computing programs (where used), which helps students compare program requirements/transfer.

- 6. BINF 451 became CMPT 451. As a "CMPT" course, it is automatically accepted in the C4 Major Requirement as "CMPT 400-level."
- 7. The ENT courses were deleted as of 202005, and no longer need to be listed.

Bachelor of Science Double Honours in Computer Science

Remove MATH 266 as an alternative to MATH 164; move MATH 110/176 to C3 Requirement, and add MATH 163 to the C1 requirement.

<u>Bachelor of Science Double Honours - Computer Science - Major 1</u> C1 College Requirement (15 credit units)

English Language Writing

No change

Indigenous Learning

No change

Quantitative Reasoning

- MATH 163.3 Introduction to Mathematical Reasoning
- MATH 164.3 Introduction to Linear Algebra

Choose 3 credit units from the following:

- MATH 110.3 Calculus I
- MATH 176.3 Advanced Calculus I

Choose 3 credit units from the following:

- MATH 164.3 Introduction to Linear Algebra (formerly MATH 264.3)
- MATH 266.3 Linear Algebra II

C2 Breadth Requirement (9 credit units)

Choose 9 credit units from the following areas with at least 3 credit units from one of Humanities or Social Sciences:

PHIL 232 (Humanities course) is recommended. See Requirement C3 for Business Science note.

Fine Arts
Humanities
Social Science
Courses with No Program Type

C3 Cognate Requirement (9 credit units)

Junior course requirements:

Choose **9 credit units** from the following areas, such that no more than 6 credit units are from any one area:

Biology

- BIOL 120.3 The Nature of Life
- BIOL 121.3 The Diversity of Life

Chemistry

- CHEM 112.3 General Chemistry I Structure Bonding and Properties of Materials
- CHEM 115.3 General Chemistry II Chemical Processes
- CHEM 250.3 Introduction to Organic Chemistry

Earth Science

- **GEOG 120.3** Introduction to Global Environmental Systems
- GEOL 121.3 Earth Processes
- GEOL 122.3 Earth History

Physics & Astronomy

- ASTR 113.3 Introduction to Stellar Astronomy
- PHYS 115.3 Physics and the Universe
- PHYS 117.3 Physics for the Life Sciences or PHYS 125.3 Physics and Technology

Additional course requirements:

Choose 3 credit units from the following:

- MATH 110.3 Calculus I
- MATH 176.3 Advanced Calculus I

C5 Electives Requirement (45 42 credit units)

Major 2 (36-42 credit units)

• Double Honours requirements in second discipline

Open Electives (3-9 0-6 credit units)

Arts and Science courses, or those courses from other Colleges which have been approved for Arts and Science credit, to complete the requirements for 120 credit unit Double Honours program, of which at least 66 must be at the 200-level or higher.

If you require further assistance, please contact the Arts and Science Undergraduate Student Office.

PHIL 232 is recommended.

Double Honours - Computer Science - Major 2

No change. (The current introductory paragraphs for this program option already inform students that there are Mathematics or Statistics prerequisites for courses listed in the program.)

Rationale: MATH 164 is now the prerequisite for MATH 266, so there is no longer any need to list them both. MATH 163 teaches students aspects of mathematical thinking that are also used in Computer Science. MATH 110 is retained as a C3 course, as it is a required prerequisite for courses required in the program and it cannot be moved to the C4 requirement due to credit unit limits for Double Honours programs.

Minor course revisions CMPT 140.3 Introduction to Creative Computing

Change to Note:

Old Note: Recommended for students who do not have Computer Science 30. CMPT 140 can be taken for credit after the completion of CMPT 100, but CMPT 100 cannot be taken for credit after completion of CMPT 140. Students with credit for CMPT 105, CMPT 111, CMPT 113, or CMPT 116 cannot obtain credit for CMPT 140. Students majoring the Computer Science and Applied Computing programs may not use CMPT 140 as a course in their major, but may count it as a junior elective. Students may receive credit for only one of CMPT 140 or BINF 151.

New Note: Recommended for students who do not have Computer Science 30. CMPT 140 can be taken for credit after the completion of CMPT 100, but CMPT 100 cannot be taken for credit after completion of CMPT 140. Students with credit for CMPT 105, CMPT 111, CMPT 113, CMPT 116, CMPT 141, or CMPT142 cannot obtain credit for CMPT 140. Students majoring in the Computer Science and Applied Computing programs may not use CMPT 140 as a course in their major, but may count it as a junior elective. Students may receive credit for only one of CMPT 140 or BINF 151.

Rationale: This revision will help to make it clear that students will not be allowed to take CMPT 140 for credit after successful completion of CMPT 141 or CMPT 142.

Environmental Biology

Minor program revisions

Bachelor of Science Honours and Four-year in Environmental Biology

Add PLSC 475.3 to the Area C list and add GEOL 247.3 and PLSC 475.3 to the list of restricted electives in the C4 Major Requirement.

Bachelor of Science Honours (B.Sc. Honours) - Environmental Biology

C4 Major Requirement (60 credit units)

- BIOL 120.3 The Nature of Life
- BIOL 121.3 The Diversity of Life
- BIOL 222.3 The Living Plant
- BIOL 224.3 Animal Body Systems
- BIOL 226.3 Genes to Genomics
- BIOL 228.3 An Introduction to Ecology and Ecosystems
- BIOL 301.3 Critical Issues in Biology
- BIOL 350.3 Field Course
- BIOL 410.3 Current Perspectives in Environmental Biology
- BIOL 480.3 Biology Research or BIOL 481.6 Extended Research Project in Biology

Courses chosen from each one of the four thematic areas:

A) Understanding effects of environmental contaminants

...

B) Theoretical basis of conservation and management strategies at multiple scales from individuals to landscapes

. . .

C) In depth knowledge of the structure and function of an aquatic or terrestrial community or ecosystems

Choose 3 credit units from the following:

- BIOL 373.3 Community Ecology
- BIOL 412.3 Limnology
- PLSC 422.3 Rangeland Ecology and Management
- PLSC 425.3 Forest Ecology
- PLSC 475.3 Insect Ecology

D) In depth knowledge of the phylogeny and field identification of a major plant or animal group

. . .

Choose 15 additional credit units (if you take <u>BIOL 481.6</u> Extended Research Project in Biology) or 18 additional credit units (if you take <u>BIOL 480.3</u> Biology Research) in senior BIOL or equivalent courses to total 60 credit units in the major from the list below:

- ANBI 470.3 Applied Animal Biotechnology
- ANSC 313.3 Animal Breeding and Genetics

- ARCH 270.3 Human Evolution
- BINF 351.3 Introduction to Bioinformatics
- BIOL 200-Level, 300-Level, 400-Level
- BMIS 487.3 Microbial Genetic Systems
- BMSC 210.3 Microbiology
- BMSC 220.3 Cell Biology
- CPPS 406.3 Comparative Vertebrate Histology
- FABS 212.3 Agrifood and Resources Microbiology
- GEOL 247.3 Palaeontology
- GEOL 343.3 Sedimentary Environments
- PBIO 230.3 On the Origin and Life of Animals
- PLSC 311.3 General Apiculture
- PLSC 405.3 Genetics of Plant Populations
- PLSC 411.3 Plant Breeding
- PLSC 416.3 Applied Plant Biotechnology
- PLSC 422.3 Rangeland Ecology and Management
- PLSC 425.3 Forest Ecology
- PLSC 475.3 Insect Ecology
- TOX 300.3 General Principles of Toxicology
- <u>TOX 301.3</u> Environmental Toxicology

Students with relevant work-related experience may qualify for a waiver of the BIOL 480 or BIOL 481 requirement; contact the Department of Biology for more information about this provision.

Bachelor of Science Four-year (B.Sc. Four-year) - Environmental Biology

C4 Major Requirement (42 credit units)

- BIOL 120.3 The Nature of Life
- BIOL 121.3 The Diversity of Life
- BIOL 222.3 The Living Plant
- BIOL 224.3 Animal Body Systems
- BIOL 226.3 Genes to Genomics
- BIOL 228.3 An Introduction to Ecology and Ecosystems
- BIOL 301.3 Critical Issues in Biology
- BIOL 410.3 Current Perspectives in Environmental Biology

Courses chosen from each one of the four thematic areas:

A) Understanding effects of environmental contaminants

. . .

B) Theoretical basis of conservation and management strategies at multiple scales from individuals to landscapes

. . .

C) In depth knowledge of the structure and function of an aquatic or terrestrial community or ecosystems

Choose 3 credit units from the following:

- BIOL 373.3 Community Ecology
- BIOL 412.3 Limnology
- PLSC 422.3 Rangeland Ecology and Management
- PLSC 425.3 Forest Ecology
- PLSC 475.3 Insect Ecology

D) In depth knowledge of the phylogeny and field identification of a major plant or animal group

. . .

Choose 6 credit units from the following:

- ANBI 470.3 Applied Animal Biotechnology
- ANSC 313.3 Animal Breeding and Genetics
- ARCH 270.3 Human Evolution
- BINF 351.3 Introduction to Bioinformatics
- BIOL 200-Level, 300-Level, 400-Level
- BMIS 487.3 Microbial Genetic Systems
- BMSC 210.3 Microbiology
- BMSC 220.3 Cell Biology
- CPPS 406.3 Comparative Vertebrate Histology
- FABS 212.3 Agrifood and Resources Microbiology
- GEOL 247.3 Palaeontology
- GEOL 343.3 Sedimentary Environments
- PBIO 230.3 On the Origin and Life of Animals
- PLSC 311.3 General Apiculture
- PLSC 405.3 Genetics of Plant Populations
- PLSC 411.3 Plant Breeding
- PLSC 416.3 Applied Plant Biotechnology
- PLSC 422.3 Rangeland Ecology and Management
- PLSC 425.3 Forest Ecology
- PLSC 475.3 Insect Ecology
- <u>TOX 300.3</u> General Principles of Toxicology
- TOX 301.3 Environmental Toxicology

Rationale: These changes will expand learning opportunities and provide more choice for ENVB students. The subject material of PLSC 475 aligns well with the goals of thematic area C in the C4 Major Requirements of the ENVB program and provides an insect perspective within the larger field of community ecology.

Geology

New course(s):

GEOL 205.3 A Geologic Journey in Spain The Earth System Through Time

A field course involving data collection, analysis, and interpretation of geologic features with the goal of allowing the students to gain a better appreciation of the internal and external dynamics of our planet and integrating the evolution of the biosphere as a fundamental component of our planet. Interactions between physical and biologic processes as responsible for shaping the face of the Earth will be highlighted, including topics such as the evolution of the atmosphere and major mass extinctions. Northern Spain is rich in cultural patrimony, including numerous UNESCO heritage sites including archaeologic sites (e.g. Altamira and Tito Bustillo Paleolithic caves) and historic monuments that will

enrich and expand the student's learning experience. Several extra-geologic activities have been planned to add cultural value to this international trip.

Prerequisite(s): One of GEOL 108.3, GEOL 109.3, GEOL 121.3, or GEOL 122.3. Each student must have completed a minimum of 30 credit units and have an overall average of at least 65%.

Note: Costs in addition to tuition will apply to this course.

Instructor(s): Luis A. Buatois, M. Gabriela Mangano

Rationale: The Department of Geological Sciences is keen on organizing a study-abroad opportunity for 2nd-year undergraduate students coming from all programs. This is a much-needed experience that allows students to move from the classroom context to the natural world. The basic idea of the class is to re-engage our students with nature and, through a deeper understanding of the processes that have modelled the Earth through time, to gain full appreciation of the uniqueness of our planet and our responsibilities to take care of it. Through experiential learning, the students will explore the underlying external and internal dynamics of our planet as a substantial context to frame the evolutionary history of our planet. This journey through geologic time is aimed to increase awareness of the delicate balance among physical and biologic processes, leading to a further appreciation of the wonders of Earth as a system in constant change.

Indigenous Governance and Politics

Minor program revisions

Degree-Level Certificate in Indigenous Governance and Politics

Replace POLS 322.3 with POLS 324.3.

Requirements (15 credit units)

Complete the following 6 credit units:

- INDG 107.3 Introduction to Canadian Indigenous Studies
- POLS 222.3 Indigenous Governance and Politics

Choose 9 credit units from the following:

- GEOG 352.3
- HIST 265.3
- HIST 266.3 History Wars Issues in Native Newcomer Relations
- HIST 310.3 Beavers Booze and Bully Boys Fur Trade Wars in North America
- INDG 220.3 Aboriginal Rights and the Courts
- INDG 256.3 A Critical Survey of the History of Indigenous Child Welfare in Canada
- INDG 264.3 Aboriginal People and Canadian Politics
- INDG 265.3 Aboriginal People and Development
- INDG 362.3 Aboriginal People and Northern Development
- <u>INDG 410.3</u> Aboriginal Self Determination Through Mitho Pimachesowin Ability to Make a Good Living
- PLAN 445.3 Planning with Indigenous Communities
- POLS 221.3 Global Indigenous Politics
- POLS 322.3 First Nations Management and Administrative Systems
- POLS 323.3 First Nations Policies and Programs
- POLS 324.3 Metis otehpayimusuak and apihtawikosisanak Governance
- POLS 422.3 Indigenous Governance and Self Determined Sustainable Development
- SOC 219.3 Indigenous Peoples and Justice in Canada
- SOC 319.3 Indigenous People in Urban Areas
- SOC 341.3 Institutional Racism and Indigenous People

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Rationale: POLS 322.3 (First Nations Management and Administrative Systems) has been deleted, and POLS 324.3 (Métis otehpayimusuak and âpihtawikosisânak Governance) has been created as a more up-to-date course on a related topic.

Indigenous Studies

Minor course revisions:

INDG 216.3 The Presence of the Past in Contemporary Indigenous Life

Prerequisite change:

Old prerequisite: INDG 107.3

New prerequisite: INDG 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, INDG,

LING, NS, POLS, PSY, SOC, or WGST

Rationale: This change aligns the prerequisites of this course with other 200-level INDG courses.

International Studies

Minor program revisions:

Bachelor of Arts Honours and Four-year in International Studies

- 1. Make GEOG 125.3 a B2 Breadth Requirement, and reduce the number of credit units required from other Science courses from 6 to 3 credit units.
- 2. In the B3 Cognate Requirement, combine separate requirements for ANTH 111 or SOC 112.3, and IS (to be POLS) 110.3, so that student will now be required to take 6 credit units from ANTH 111.3, POLS 110.3, or SOC 112.3, in addition to the other requirements. Remove the note advising students that they need only POLS 112.3 as the prerequisite for senior POLS courses.
- Remove ANTH 244.3, ECON 272.3, GEOG 340.3, GEOG 352.3, HIST 210.3, HIST 277.3, HIST 278.3, HIST 308.6, HIST 471.6, HIST 487.3, INDG 366.3, POLS 253.3, POLS 254.3, and RLST 233.3 from the restricted electives list in the B4 Major Requirement.
- 4. Add ECON 275.3, 277.3, 354.3, 356.3, 376.3; GEOG 240.3, 333.3; HIST 233.3, 239.3, 243.3, 272.3, 294.3, 371.3, 375.3, 387.3, 453.3, 474.3; POLS 207.3, 237.3, 251.3, 324.3, 345.3, 410.3; WGST 201.3, 210.3; and SOC 202.3, 224.3, 284.3, 310.3, 402.3, 408.3, 484.3 to the restricted electives list in the B4 Major Requirement.

Bachelor of Arts (B.A. Honours) - International Studies

B2 Breadth Requirement (6 credit units)

GEOG 125.3 Environmental Science and Society

Choose 6 3 credit units from the following:

Science

B3 Cognate Requirement (24 credit units)

Junior course requirements:

Choose 6 credit units from the following:

- ANTH 111.3 One World Many Peoples Introduction to Cultural Anthropology
- POLS 110.3 Understanding our Globalized World
- SOC 112.3 Foundations in Sociology Social Construction of Everyday Life
- ANTH 111.3 One World Many Peoples Introduction to Cultural Anthropology or SOC 112.3
 Foundations in Sociology Social Construction of Everyday Life
- IS 110.3 Understanding our Globalized World

*Students who have declared International Studies as their major require only POLS 112.3 Justice and Injustice in Politics and Law (not POLS 111.3 Democratic Citizenship in Canada and POLS 112.3 Justice and Injustice in Politics and Law) as a prerequisite for senior POLS courses. Students are responsible for approaching the Department of Political Studies for necessary prerequisite overrides.

Choose **6 credit units** from the following:

HIST — 100-Level

Language course requirements:

Choose 12 credit units in ONE modern language other than English: Chinese, French, German, Japanese, Spanish, Ukrainian; or a language approved by the Program Coordinator. These courses must be taught in the subject language (not in English). It is recommended that students take additional language courses.

Chinese

Please note that CHIN 233.3 Images of China in Film is not acceptable for credit toward this requirement.

CHIN — 100-Level, 200-Level, 300-Level, 400-Level

French

Please note that <u>FREN 216.3</u> is not acceptable for credit toward this requirement.

• FREN — 100-Level, 200-Level, 300-Level, 400-Level

German

Please note that GERM 265.3, and GERM 266.3 are not acceptable for credit toward this requirement.

GERM — 100-Level, 200-Level, 300-Level, 400-Level

Japanese

Please note that <u>JPNS 233.3</u> Popular Culture and Cinema in Japan is not acceptable for credit toward this requirement.

Spanish

Please note that <u>SPAN 250.3</u> Historical Trends of the Spanish Language, <u>SPAN 251.3</u> The Spanish of Latin Americans, <u>SPAN 309.3</u>, and <u>SPAN 310.3</u> are not acceptable for credit toward this requirement.

• SPAN — 100-Level, 200-Level, 300-Level, 400-Level

Ukrainian Ukranian

• UKR — 100-Level, 200-Level, 300-Level, 400-Level

B4 Major Requirement (57 credit units)

- ECON 254.3 International Trading System
- GEOG 208.3 World Regional Development
- 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
- IS 211.3 Introduction to International Studies Development
- IS 212.3 International Studies and Conflict
- IS 401.3 International Cooperation and Conflict
- IS 402.3 International Development
- POLS 256.3 Understanding Political Science Research or SOC 232.3 Methods of Social Research
- POLS 261.3 Global Politics
- POLS 262.3 Global Governance

Choose 24 credit units from the following:

At least 6 credit units must be at the 400-level or above.

- ANTH 227.3 Cultures of Central and Eastern Europe
- ANTH 231.3 Cross Cultural Perspectives on Health and Illness
- ANTH 235.3 Anthropological Approaches to Ethnicity and Ethnic Groups
- ANTH 244.3 Political Ecology Anthropology and Global Environmental Issues
- ANTH 310.3 Anthropology of Gender
- ANTH 329.3 Environmental Anthropology
- ANTH 332.3 Anthropology of Infectious Disease Critical Gender and Race Perspectives
- ANTH 339.3 Cultural Change, Globalization and Development
- ANTH 405.3 Anthropology of Disaster and Disruption
- ECON 221.3 Women and the Economy
- ECON 256.3 International Monetary System
- ECON 270.3 Development in Non Industrialized Countries
- ECON 272.3
- ECON 275.3 Economics of Natural Resources
- **ECON 277.3** Economics of the Environment
- **ECON 314.3** Development Economics
- ECON 354.3 International Trade and Commercial Policy
- **ECON 356.3** International Monetary Economics
- **ECON 376.3** Energy Economics
- GEOG 240.3 Sustainable Cities and Regions
- GEOG 340.3
- GEOG 333.3 Global Climate Change
- GEOG 352.3
- HIST 210.3

- HIST 233.3 War and Medicine from Paracelsus to Penicillin
- HIST 234.3 Europe from 1870 to 1939 War Politics and Culture in Modern Mass Society
- HIST 235.3 Europe since 1939 From the Second World War to the Creation of the European Union and Beyond
- HIST 239.3 The Age of Revolutions in the Atlantic World
- HIST 242.3 The Reverberations of the Industrial Revolution
- HIST 267.3 African History From Hominids to 1900
- HIST 268.3 African History 1900 until Yesterday
- HIST 272.3 Human Rights in History
- HIST 277.3
- HIST 278.3
- HIST 279.3 The Middle East in the 20th Century
- HIST 294.3 International and Global History
- HIST 303.3 Sex Gender and Sexuality in Africa
- HIST 308.6 Rome Building and Living in the Ancient City
- HIST 370.3 Violence Smuggling and Vice Borderlands and the Gaps of Power
- HIST 371.3 Power and Change The History of Energy
- HIST 375.3 USA Foreign Relations 1890s to the Present
- HIST 387.3 Eugenics Birth Control and Venereal Disease in Republican China and the Global Context
- HIST 388.3 Mass Killing and Genocide in the Twentieth Century
- HIST 389.3 The Israeli Palestinian Conflict
- HIST 445.3 British Cities Empire and Global Environmental Change
- HIST 453.3 Decolonization in the Post Colonial World
- HIST 474.3 The United States in the Nuclear Age
- HIST 471.6
- HIST 472.3 The United States and the Middle East
- HIST 478.3 United States and the Vietnam Wars
- HIST 487.3
- HIST 488.3 Topics in History of Development
- INDG 321.3 International Indigenous Disaster Risk Reduction
- INDG 366.3
- POLS 207.3 Feminist Political Theory
- POLS 221.3 Global Indigenous Politics
- POLS 237.3 Modern Political Theory
- POLS 244.3 Politics of Development
- POLS 245.3 Politics of Africa
- POLS 251.3 Social Movements and Change
- POLS 253.3
- POLS 254.3 Democratization and Development in Latin America
- POLS 263.3 The Politics of International Law
- POLS 324.3 Métis otehpayimusuak and âpihtawikosisânak Governance
- POLS 341.3 Asian Government and Politics
- POLS 345.3 Resource Extraction and Sustainable Development
- POLS 362.3 Global Political Economy
- POLS 364.3 International Terrorism
- POLS 370.3 War and Society in Global Politics
- POLS 372.3 Peacebuilding and Political Reconciliation
- POLS 375.3 Canadian Foreign Policy in the Global Era
- POLS 410.3 The Politics of Security
- POLS 446.3 Democracy in Africa
- POLS 460.3 Ethics and Global Politics
- POLS 461.3 Topics in Global Politics
- POLS 465.3 Nationalism

- POLS 471.3 Global Governance in a Contested World
- RLST 233.3
- SOC 202.3 Environmental Sociology
- SOC 204.3 Rural Sociology
- SOC 205.3 Comparative Race and Ethnic Relations
- SOC 224.3 Collective Behavior
- SOC 260.3 Social Change and Global Solidarity
- SOC 284.3 Surveillance and Society
- SOC 305.3 Ethnic Stratification
- SOC 310.3 White Collar and Corporate Crime in the Global Context
- SOC 344.3 Sociology of Women Gender and Development
- SOC 360.3 Globalization and Social Justice
- SOC 402.3 Sociology of Agriculture and Food
- SOC 408.3 Colonialism Gender and Violence
- SOC 409.3 Sociology of Development
- SOC 484.3 Surveillance and Power
- WGST 201.3 Images of Gender and Sexuality in Popular Culture
- WGST 210.3 Gendered Perspectives on Current Events
- WGST 411.3 Situated Transnational Feminisms
- One of PSY 379.3 or SOC 379.3 or <u>ECON 379.3</u> Washington Center Topics in Economics or <u>GEOG 379.3</u> Washington Center Topics in Geography or <u>POLS 379.3</u> Washington Center Topics in Political Studies or ANTH 379.3
- One of <u>POLS 383.3</u> Career Internship or POLS 384.3 or <u>ECON 387.3</u> Economics Career Internship or <u>SOSC 320.6</u> Washington Center Internship or <u>POLS 482.6</u> Saskatchewan Legislative Internship

Bachelor of Arts (B.A. Four-year) - International Studies

B2 Breadth Requirement (6 credit units)

• GEOG 125.3 Environmental Science and Society

Choose **6 3 credit units** from the following:

Science

B3 Cognate Requirement (24 credit units)

Junior course requirements:

Choose 6 credit units from the following:

- ANTH 111.3 One World Many Peoples Introduction to Cultural Anthropology
- POLS 110.3 Understanding our Globalized World
- SOC 112.3 Foundations in Sociology Social Construction of Everyday Life
- ANTH 111.3 One World Many Peoples Introduction to Cultural Anthropology or SOC 112.3
 Foundations in Sociology Social Construction of Everyday Life
- IS 110.3 Understanding our Globalized World

*Students who have declared International Studies as their major require only <u>POLS 112.3</u> Justice and Injustice in Politics and Law (not <u>POLS 111.3</u> Democratic Citizenship in Canada and <u>POLS 112.3</u> Justice and Injustice in Politics and Law) as a prerequisite for senior POLS courses. Students are responsible for approaching the Department of Political Studies for necessary prerequisite overrides.

Choose 6 credit units from the following:

HIST — 100-Level

Language course requirements:

Choose 12 credit units in ONE modern language other than English: Chinese, French, German, Japanese, Spanish, Ukrainian; or a language approved by the Program Coordinator. These courses must be taught in the subject language (not in English). It is recommended that students take additional language courses.

Chinese

Please note that CHIN 233.3 Images of China in Film is not acceptable for credit toward this requirement.

CHIN — 100-Level, 200-Level, 300-Level, 400-Level

French

Please note that **FREN 216.3** is not acceptable for credit toward this requirement.

FREN — 100-Level, 200-Level, 300-Level, 400-Level

German

Please note that GERM 265.3, and GERM 266.3 are not acceptable for credit toward this requirement.

• GERM — 100-Level, 200-Level, 300-Level, 400-Level

Japanese

Please note that <u>JPNS 233.3</u> Popular Culture and Cinema in Japan is not acceptable for credit toward this requirement.

Spanish

Please note that <u>SPAN 250.3</u> Historical Trends of the Spanish Language, <u>SPAN 251.3</u> The Spanish of Latin Americans, <u>SPAN 309.3</u>, and <u>SPAN 310.3</u> are not acceptable for credit toward this requirement.

SPAN — 100-Level, 200-Level, 300-Level, 400-Level

Ukrainian Ukranian

UKR — 100-Level, 200-Level, 300-Level, 400-Level

B4 Major Requirement (54 credit units)

- ECON 254.3 International Trading System
- GEOG 208.3 World Regional Development
- 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
- IS 211.3 Introduction to International Studies Development
- IS 212.3 International Studies and Conflict
- IS 401.3 International Cooperation and Conflict
- IS 402.3 International Development
- POLS 256.3 Understanding Political Science Research or SOC 232.3 Methods of Social Research
- POLS 261.3 Global Politics
- POLS 262.3 Global Governance

Choose 21 credit units from the following:

At least 6 credit units must be at the 300-level or above.

- ANTH 227.3 Cultures of Central and Eastern Europe
- ANTH 231.3 Cross Cultural Perspectives on Health and Illness
- ANTH 235.3 Anthropological Approaches to Ethnicity and Ethnic Groups
- ANTH 244.3 Political Ecology Anthropology and Global Environmental Issues
- ANTH 310.3 Anthropology of Gender
- ANTH 329.3 Environmental Anthropology
- ANTH 332.3 Anthropology of Infectious Disease Critical Gender and Race Perspectives
- ANTH 339.3 Cultural Change, Globalization and Development
- ANTH 405.3 Anthropology of Disaster and Disruption
- ECON 221.3 Women and the Economy
- ECON 256.3 International Monetary System
- <u>ECON 270.3</u> Development in Non Industrialized Countries
- ECON 272.3
- ECON 275.3 Economics of Natural Resources
- ECON 277.3 Economics of the Environment
- ECON 314.3 Development Economics
- ECON 354.3 International Trade and Commercial Policy
- ECON 356.3 International Monetary Economics
- ECON 376.3 Energy Economics
- GEOG 240.3 Sustainable Cities and Regions
- GEOG 340.3
- GEOG 333.3 Global Climate Change
- GEOG 352.3
- HIST 210.3
- HIST 233.3 War and Medicine from Paracelsus to Penicillin
- HIST 234.3 Europe from 1870 to 1939 War Politics and Culture in Modern Mass Society
- HIST 235.3 Europe since 1939 From the Second World War to the Creation of the European Union and Beyond
- HIST 239.3 The Age of Revolutions in the Atlantic World
- HIST 242.3 The Reverberations of the Industrial Revolution
- HIST 267.3 African History From Hominids to 1900
- HIST 268.3 African History 1900 until Yesterday
- HIST 272.3 Human Rights in History
- HIST 277.3
- HIST 278.3

- HIST 279.3 The Middle East in the 20th Century
- HIST 294.3 International and Global History
- HIST 303.3 Sex Gender and Sexuality in Africa
- <u>HIST 308.6</u> Rome Building and Living in the Ancient City
- HIST 370.3 Violence Smuggling and Vice Borderlands and the Gaps of Power
- HIST 371.3 Power and Change The History of Energy
- HIST 375.3 USA Foreign Relations 1890s to the Present
- HIST 387.3 Eugenics Birth Control and Venereal Disease in Republican China and the Global Context
- HIST 388.3 Mass Killing and Genocide in the Twentieth Century
- HIST 389.3 The Israeli Palestinian Conflict
- HIST 445.3 British Cities Empire and Global Environmental Change
- HIST 453.3 Decolonization in the Post Colonial World
- HIST 474.3 The United States in the Nuclear Age
- HIST 471.6
- HIST 472.3 The United States and the Middle East
- HIST 478.3 United States and the Vietnam Wars
- HIST 487.3
- HIST 488.3 Topics in History of Development
- INDG 321.3 International Indigenous Disaster Risk Reduction
- INDG 366.3
- POLS 207.3 Feminist Political Theory
- POLS 221.3 Global Indigenous Politics
- POLS 237.3 Modern Political Theory
- POLS 244.3 Politics of Development
- POLS 245.3 Politics of Africa
- POLS 251.3 Social Movements and Change
- POLS 253.3
- POLS 254.3 Democratization and Development in Latin America
- POLS 263.3 The Politics of International Law
- POLS 324.3 Métis otehpayimusuak and âpihtawikosisânak Governance
- POLS 341.3 Asian Government and Politics
- POLS 345.3 Resource Extraction and Sustainable Development
- POLS 362.3 Global Political Economy
- POLS 364.3 International Terrorism
- POLS 370.3 War and Society in Global Politics
- POLS 372.3 Peacebuilding and Political Reconciliation
- POLS 375.3 Canadian Foreign Policy in the Global Era
- POLS 410.3 The Politics of Security
- POLS 446.3 Democracy in Africa
- POLS 460.3 Ethics and Global Politics
- POLS 461.3 Topics in Global Politics
- POLS 465.3 Nationalism
- POLS 471.3 Global Governance in a Contested World
- RLST 233.3
- SOC 202.3 Environmental Sociology
- SOC 204.3 Rural Sociology
- SOC 205.3 Comparative Race and Ethnic Relations
- SOC 224.3 Collective Behavior
- SOC 260.3 Social Change and Global Solidarity
- **SOC 284.3** Surveillance and Society
- SOC 305.3 Ethnic Stratification
- SOC 310.3 White Collar and Corporate Crime in the Global Context
- SOC 344.3 Sociology of Women Gender and Development

- SOC 360.3 Globalization and Social Justice
- SOC 402.3 Sociology of Agriculture and Food
- SOC 408.3 Colonialism Gender and Violence
- SOC 409.3 Sociology of Development
- SOC 484.3 Surveillance and Power
- WGST 201.3 Images of Gender and Sexuality in Popular Culture
- WGST 210.3 Gendered Perspectives on Current Events
- WGST 411.3 Situated Transnational Feminisms
- One of PSY 379.3 or SOC 379.3 or <u>ECON 379.3</u> Washington Center Topics in Economics or <u>GEOG 379.3</u> Washington Center Topics in Geography or <u>POLS 379.3</u> Washington Center Topics in Political Studies or ANTH 379.3
- One of <u>POLS 383.3</u> Career Internship or POLS 384.3 or <u>ECON 387.3</u> Economics Career Internship or <u>SOSC 320.6</u> Washington Center Internship or <u>POLS 482.6</u> Saskatchewan Legislative Internship

Rationale:

- 1. During its October meeting, the International Studies Program Committee (ISPC) recommended that GEOG 125.3 should be included as a cognate requirement. GEOG 125.3 is clearly relevant to understanding global climate change, a pressing international issue.
- 2. During September 2022 course and program challenge, Political Studies successfully proposed to change IS 110 (Understanding our Globalized World) to POLS 110.3 (Understanding our Globalized World). The ISPC proposed the removal of POLS 112.3. The new POLS 110.3 (formerly IS 110.3) was automatically included as a B3 requirement option after it successfully passed the September 2022 College of Arts and Science course and program challenge. Because of this change, it was determined that POLS 110.3 represented the most appropriate POLS 100-level offering for International Studies' interdisciplinary B.A. 4-Year and B.A. Honours programs.

3. Courses being removed:

- a. ECON 272.3, GEOG 340.3, GEOG 352.3, HIST 210.3, HIST 277.3, HIST 278.3, , HIST 487.3, INDG 366.3, and RLST 233.3 are moribund and the ISPC members are not aware of plans to reactivate them. HIST 471.6 has been closed.
- b. During the October meeting of the International Studies Program Committee (ISPC), the International Studies program's college-level advisory committee, ANTH representative (Susanna Barnes) informed the ISPC that ANTH 244.3 was not being offered moving forward.
- c. During September 2022 course and program challenge, Political Studies successfully proposed to delete POLS 253.3 and POLS 254.3.
- d. During its October meeting, the ISPC determined that HIST 308.6 was not a suitable B4 requirement course for International Studies B.A. 4-Year and B.A. Honours. In the opinion of the ISPC, HIST 308.6 (Rome Building and Living in the Ancient City) does not dedicate enough attention to contemporary international topics and challenges.
- 4. During its October meeting, the ISPC recommended that these thirty-two (32) courses be included as options to fulfill the B4 requirement. All are directly related to various current international issues, such as global climate change, development, globalization, international conflict and cooperation, global health, intercultural relations, global governance, transnational movements, and international relations theory.

Linguistics

New course(s):

LING 114.3 Indigenous Languages and Stories Introduction to the Structure of Language 3 Lecture hours

Storytelling/oral stories have long been a tool for teaching and language transmission and a central component of Indigenous stewardship of knowledge and values. This course explores how we can learn about core principles of Indigenous language structure and Linguistics through the study of narratives. Course topics include organization of stories/events, word and sentence structure, and speech sounds, as well as an extensive discussion on the function of stories and narratives, i.e. centrally, how language is intrinsically tied to worldview and conceptualization of the world. It showcases how each language is a holistic complex system. The course also addresses how settler colonialism has impacted the study of Indigenous languages as well as the field of linguistics.

Instructor(s): Chantale Cenerini, Martin Kohlberger, Olga Lovick, Bettina Spreng

Rationale: This course will focus on Indigenous languages, the specialty of more than half of the current Linguistics faculty. In recent years, our students also have expressed the desire to learn more about the Indigenous languages of Turtle Island.

Minor course revisions:

LING 112.3 Dynamics of Language

Prerequisite change:

Old prerequisite: LING 111

New prerequisite: LING 111.3 or LING 114.3

Rationale: LING 114 will provide the same introductory level of preparation for senior courses as does LING 111, and therefore the department agrees that it should be accepted as an alternate prerequisite

where LING 111 appears.

Music

Minor program revisions
Bachelor of Music Performance Honours

Remove MUAP 300.0 and 400.0.

Bachelor of Music Performance Honours (B.Mus. Performance Honours)

G4 Applied Music Ensemble (7 credit units)

Voice students must take 2 credit units of <u>MUAP 206.1</u> Music Theatre and 2 credit units of <u>MUAP 203.1</u> Greystone Singers and/or <u>MUAP 204.1</u> University Chorus

Piano students must take 2 credit units of MUAP 207.1 Chamber Ensemble

All performance majors must participate in at least one departmental ensemble per year for four years.

- MUAP 300.0 B.Mus. Performance Third Year Recital
- MUAP 400.0 B.Mus. Performance Fourth Year Recital

Choose 2 credit units from the following:

- MUAP 201.1 Wind Orchestra
- MUAP 202.1 Concert Band
- MUAP 203.1 Greystone Singers
- MUAP 204.1 University Chorus

- MUAP 205.1 Orchestra with Strings
- MUAP 212.1 Symphony Orchestra

Choose 5 credit units from the following:

- MUAP 201.1 Wind Orchestra
- MUAP 202.1 Concert Band
- MUAP 203.1 Greystone Singers
- MUAP 204.1 University Chorus
- MUAP 205.1 Orchestra with Strings
- MUAP 206.1 Music Theatre
- MUAP 207.1 Chamber Ensemble
- MUAP 208.1 Jazz Ensemble
- MUAP 209.1
- MUAP 210.1
- MUAP 211.1
- MUAP 212.1 Symphony Orchestra

Rationale: The original purpose of these courses was to identify students within the B.Mus. Performance program at the third and fourth year level. However, these courses are no longer needed following the implementation of streamed applied lessons in the third and fourth years of all B.Mus. degrees.

Course deletion(s):

MUAP 300.0 BMus Performance Third Year Recital MUAP 400.0 BMus Performance Fourth Year Recital

See B.Mus. Performance Honours revision above.

Philosophy

New course(s):

PHIL 304.3 Aquinas Moral Political and Legal Philosophy

3 Seminar hours

Thomas Aquinas, widely considered the greatest and most influential thinker of the medieval period, advanced a philosophical project of such depth and coherence that it still influences and informs the thought of many philosophers today. This course will examine Aquinas's conception of moral philosophy – an account of how we should think about human choices and actions, laws, and the state – and consider its continuing relevance for human living and flourishing today.

Prerequisite(s): 3 credit units in philosophy at the 200-level or above, and completion of 24 credit units at the university level; or permission of the instructor.

Note: Students who have taken PHIL 413.3 Philosophy of Thomas Aquinas II cannot take this course for credit.

Instructor(s): John Liptay

Rationale: The motivation for creating this course is three-fold. First, given the important role that Aquinas plays in the Catholic Intellectual Tradition, this course will enhance the distinctiveness of STM's philosophy program. Second, the creation of a course with a focus on Aquinas' moral philosophy will enhance the student experience by providing students with the opportunity to study a main source of the natural law tradition in ethics - a tradition that remains a live option in normative ethical theory - which is not otherwise available to them at the U. of S. Third, the course falls in the area of specialization of one of STM's tenured faculty (John Liptay) and will foster his ability to serve as a Teacher-Scholar.

PHIL 304.3 and PHIL 413.3 will be equivalent courses in Banner.

Regional and Urban Planning

Minor course revisions:

Bachelor of Arts Honours in Regional and Urban Planning

Add PLAN 491.3 as a required course in the B4 Major Requirement.

Bachelor of Arts Honours (B.A. Honours) - Regional and Urban Planning

B4 Major Requirement (60-63-66 credit units)

- AREC 432.3 Rural Development Theory and Applications or ECON 347.3 or ECON 348.3 Urban Economics
- ECON 211.3 Intermediate Microeconomics
- GEOG 222.3 Introduction to Geomatics
- GEOG 240.3 Sustainable Cities and Regions
- GEOG 280.3 Environmental Geography
- PLAN 341.3 Urban Planning
- PLAN 343.3 Legal Issues in Planning
- PLAN 346.3 Introduction to Urban Design
- PLAN 360.3 Urban Data Analysis and Visualization
- PLAN 390.3 Research and Field Methods in Planning
- PLAN 395.3 Planning History and Theory
- PLAN 410.3 Planning Internship or PLAN 411.0 Planning Work Placement
- PLAN 442.3 Regional Planning
- PLAN 490.3 Senior Planning Studio
- PLAN 491.3 Honours Thesis in Planning
- PLAN 495.3 Professional Planning Practice
- POLS 306.3 Local Governance and Policy or POLS 328.3 Public Policy Analysis
- <u>SOC 204.3</u> Rural Sociology or <u>SOC 206.3</u> Sociology of Communities and Community Development

Choose 3 credit units from the following:

...

B5 Electives Requirement (18-21-24 credit units)

Arts and Science courses, or those from other Colleges which have been approved for Arts and Science credit, to complete the requirements for 120 credit unit Honours program. Of the 120 credit units required at least 66 must be at the 200-level or higher and no more than 60 in one subject.

If you require further assistance, please contact the Arts and Science Undergraduate Student Office.

Rationale: At present, any RUP Honours student is required to self declare as an Honours student and maintain a 70% average in upper year courses. To build a more robust RUP Honours program the department proposes an Honours Thesis course (PLAN 491.3) similar to other Honours programs in this department (Environment and Society and Hydrology).

New course(s):

PLAN 491.3 Honours Thesis in Planning

Research

Students will work on an applied, experiential learning project under the supervision of a faculty advisor. Research and field methods are an essential part of any planner's toolkit. This course is designed to allow students to apply their theoretical and technical knowledge to a local community planning issue of concern. Students will employ field skills in an independent research project. The student will develop a research proposal for approval by the faculty advisor, employ a combination of qualitative and quantitative research methods and produce an honours thesis followed by a presentation highlighting thesis content and major findings. The honours thesis and presentation will be graded by the faculty advisor and a Second Reader.

Prerequisite(s): PLAN 390 and permission of the instructor.

Note: Enrolment in this course is restricted to students in the Regional and Urban Planning program. Instructor(s): Robert Patrick; Ehab Diab; Brenda Wallace; Ana Hidalgo; Tim Steuart Rationale: At present, the only requirement for an honours degree in RUP is a 70%. Students may check a box in Degree Works and self declare as an honours student. The RUP program wishes to change this procedure by introducing an honours thesis course. If approved, this will be consistent with the honours requirement for other programs in the same department, Geography and Planning, i.e. GEOG 490 and GEOG 491.

Studio Art

Minor course revisions ART 242.3 Sculpture and Related Work II B

Prerequisite change:

Old prerequisite: ART 241.3

New prerequisite: ART 141.3 or permission of the instructor.

Rationale: This change harmonizes the prerequisites for this course with the changes made in other

sculpture courses last year.

Items for Information

The policy revision listed below was approved through the Arts & Science College Course and Program Challenge and is now submitted to the University Course Challenge for information.

Biology

Minor course revisions:

BIOL 321.3 Mathematical Modelling for Biologists

Prerequisite change:

Old prerequisite: BIOL 120 or BIOL 121; and one of MATH 110, MATH 123, MATH 125 or MATH 164; and completion of 45 cu of university level courses.

New prerequisite: BIOL 120.3 or BIOL 121.3; and one of MATH 110.3, MATH 123.3, MATH 125.3, MATH 133.4, MATH 164.3, or MATH 176.3; and completion of 45 cu of university level courses.

Rationale: MATH 133 and MATH 176 cover the core differential calculus concepts in MATH 110 and therefore should adequately serve as calculus prerequisites for this course.

BIOL 470.3 Conservation Biology

Prerequisite change:

Old prerequisite: BIOL 228 and BIOL 302 or permission of the instructor.

New prerequisite: BIOL 228.3; and BIOL 301.3 or permission of the instructor.

Rationale: MATH 133 and MATH 176 cover the core differential calculus concepts in MATH 110 and

therefore should adequately serve as calculus prerequisites for this course.

College Policies

Repeating Courses

Failures and marks below 60% in courses taken from the University of Saskatchewan will be excluded from the average if the course has been retaken from the University of Saskatchewan according to the following rules:

- 1. A failed course can be retaken. The highest mark in this course from the University of Saskatchewan will be used in the average.
- 2. A course in which the grade was 50 to 59% can be retaken *once* and only the highest mark will be used in the average. Please note that once a student has passed an upper-level course, no prerequisite course can be taken for a higher mark. For example, BIOL 120.3 could not be retaken if the student has already passed BIOL 226.3 (or its equivalent at another university).
- 3. A course in which the grade was 50 to 59% may be retaken simultaneously with a course for which it is a prerequisite. For example, if a student passed CHEM 112.3 with a grade between 50 to 59%, the student would be allowed to retake the course in the same term as taking CHEM 115.3 or CHEM 250.3.
- 4. A course that has been deleted or is no longer offered (as verified by the department/unit that offers the course) can be "repeated" by taking another course, in consultation with the Undergraduate Student Office and the department/unit that offers the course, and considering the following:
 - i. The new course is currently offered; and
 - ii. The new course is closely related (subject, topic, and/or level) to the original course. This applies only in those cases where the deleted course has not been replaced by another specific course; if there is a currently offered, equivalent course, even if the current course is offered in a rotation, students must use the equivalent course as the repeat for the deleted course.
- 5. The grades earned for all attempts of the course will remain on the transcript.
- 6. For admission, promotion and graduation purposes, other colleges may follow different rules for calculation of the average. For example, they may use only the first grade earned or they may use all grades earned for a course.

- 7. Grades for courses transferred from other universities are not used for the calculation of averages to determine promotion and graduation eligibility. Transfer grades are used in the average for admission to an Honours program. A student cannot retake for credit or to raise the average a course for which transfer credit has been received. A failed transfer course may be retaken at the University of Saskatchewan.
- 8. A course in which the grade was 60% or higher may be retaken to improve the grade to meet admission standards for other Colleges, if space is available in a class section. (Please see the information available from those specific Colleges to determine which course grade they will use in their admissions calculations.) Students in this circumstance must submit an A&S Permission to Repeat a Course form (https://jira.usask.ca/servicedesk/customer/portal/7/group/77). Overrides will be entered approximately 2 weeks prior to the start of term in which the requested course offering is scheduled, and students will then have access to remaining seats. The new grade will not be A course in which the grade was 60% or higher may not be retaken to raise the grade used in the student's Major Average or the Cumulative Weighted Average (overall average) calculated for Arts & Science programs.

Rationale: Some other colleges have admission requirements that include not only a minimum overall average, but also minimum grades in specific courses. Making the above revisions will allow students to repeat A&S courses to achieve the minimum course grade, rather than re-taking the equivalent course at another institution. As noted in the policy, such retakes will only be allowed when space is available in the course (registration no earlier than 2 weeks prior to the start of the term), and the grade for such repeats will not be used in the A&S Major Average or CWA.

Second Degree Programs

https://programs.usask.ca/arts-and-science/policies.php#SecondDegreePrograms

Programs in Arts & Science and in other colleges of this University may be combined to enable the student to obtain more than one degree in less time than if the two programs were taken separately. Students intending to complete degrees from Arts & Science and from another college should be aware that they must be admitted to the other college before they can receive the other college degree. It is possible to complete an Arts & Science degree while registered as a student in another college.

Students who wish to follow a Second Degree Program are advised to consult the Undergraduate Student Office of the College of Arts & Science to ascertain the precise course requirements. The duration of the Second Degree Program and the course requirements are determined by the following regulations:

Second Degree Program Regulations

- Residency requirement: Students must meet the residency requirements for the College of Arts & Science.
- Additional credit requirements: Students pursuing a B.A., B.A.&Sc., B.F.A., B.Mus. or B.Sc. (including B.Sc. (BMSC)) degree in addition to another different degree, must complete at least 30 Arts & Science credit units not used for the other degree. These additional Arts & Science credits are required regardless of the number of Arts & Science courses included in the program leading to the first degree. These courses must be allowable for credit in the College of Arts & Science.
- 3. Program requirement: Students must satisfy all program requirements and the graduation standards for the degree being attempted.
 Note: In some cases, these regulations may mean that students are required to take more than the minimum 90 credit units for a Three-year degree or more than 120 credit units for a Four-year or Honours degree. The credit units which are in excess of the 90 or 120 may or may not be in the subject of the major.

- 4. For students completing an Arts & Science degree and a degree from another college, the number of senior (200-level, 300-level and 400-level) credit units required is dependent on the courses chosen for the degree in the other college. To determine requirements for the second degree, students must consult the Undergraduate Student Office, College of Arts & Science, prior to their final year.
- 5. Date of commencement of a second degree program:
 - a) Once a degree has been received, students who have 18 credit units or fewer remaining to fulfill the requirements of their chosen second degree may follow the program requirements listed in the Catalogue year in which they successfully completed the first course in the new Major Requirement, provided that such students will complete their program requirements within 10 years from this date of commencement. If the date of commencement is more than 10 years from the date of completion, students will be required to meet the program requirements from a Catalogue year within the 10-year limit.
 - b) Students who have received a degree and have **more than 18 credit units** remaining to fulfill the requirements of their chosen second degree must complete the program requirements and the graduation standards which are in place for the academic session following their graduation. in which they begin their studies toward the additional degree or certificate (For example, students who complete a B.Sc. Three-year and return to upgrade to a B.Sc. Four-year must follow the new B.Sc. Program). It is expected that students will complete their second degree program within 10 years. Students taking longer than 10 years to complete their second degree program will be required to meet the current program requirements. If the date of program commencement is more than 10 years ago, students should contact the Undergraduate Student Office. Such students will be required to meet the current degree requirements.
- 6. The overall and major Cumulative Weighted Averages (C.W.A.) for Arts & Science graduation are calculated on grades from all University of Saskatchewan courses taken, including any course from another college which credits toward the Arts & Science degree and all Arts & Science courses taken while in another college. This means that the average will include all courses which transfer to the College of Arts & Science, even if they exceed the minimum number of credit units required for the Second Degree program requirements. Under certain restrictions, failures and marks below 60% will be excluded from the average if these courses have been retaken in accordance with the rules of the College. See "Cumulative Weighted Average" in this section.
- 7. Students who have completed a B.A. Type A (Humanities) prior to a B.Sc. (Science) are exempt from the Humanities Writing Requirement included in B.Sc. programs from 2005-2006 to 2019-2020.

Arts & Science: Second B.A., B.A.&Sc. or B.Sc. Degree (B.A. and B.A., B.A.&Sc. and B.A.&Sc., or B.Sc. and B.Sc.)

B.A. as a Second Degree

B.Sc. as a Second Degree

B.A.&Sc. as a Second Degree

Upgrade of Arts & Science Three-year, Four-year, or Double Honours degree

Degrees for students with a B.A. or B.Sc. from another university

B.F.A. (In Studio Art or Drama) as a Second Degree

Bachelor of Music (B.Mus.) as a Second Degree

Other Colleges

Arts & Science and Agriculture & Bioresources, Dentistry, Education, Edwards School of Business, Engineering, Kinesiology, Medicine, Nursing, Nutrition & Dietetics, Pharmacy, Veterinary Medicine

Students who wish to pursue a second degree program in Arts & Science with a degree from another college (listed above) must complete the required minimum additional 30 credit units. Students must complete all of the program requirements for the chosen degree type and major.

See <u>Second Degree Program Regulations</u> above for additional information, and please consult the Undergraduate Student Office for more information if you have questions specific to your combination of programs.

Arts & Science and Law

The Second Degree Program in Arts & Science and Law, leading to the B.A., B.A.&Sc., B.F.A., or B.Sc. (including B.Sc. (BMSC)) and J.D., is available. Up to 18 credit units of LAW courses may be counted as senior electives in the College of Arts & Science by students following the Second Degree Program, except for the LAW courses which are primarily skills-based courses. Excluded courses include:

- LAW 384.3
- LAW 430.3
- LAW 439.3
- All Moots, including LAW 427.3, LAW 441.3, LAW 447.3, LAW 448.3, LAW 450.3, LAW 459.3, and LAW 464.3
- All practicums, including LAW 492.12

Students are encouraged to consult an Advisor in the College of Arts & Science to confirm that a particular LAW course will be counted toward their Arts & Science degree requirements.

The College of Arts & Science will use up to the first 18 credit units of eligible LAW courses successfully completed to fulfill elective credit in the Arts & Science degree, and the grades from these courses will be used in the calculation of the Arts & Science average.

Students must be admitted to the College of Law to be eligible for the J.D.

See Second Degree Program Regulations above for additional information.

Arts & Science Degree and B.Ed./B.Mus.(Mus.Ed.)

Students who have completed the B.Ed./B.Mus.(Mus.Ed.) may ordinarily complete the work for an undergraduate degree in Arts & Science upon successful completion of an additional 30 Arts & Science credit units. Such students may not receive a B.A. in Music or a B.Mus. in Music Education degree as a subsequent degree. Students must consult the Undergraduate Student Office for details.

See <u>Second Degree Program Regulations</u> above for additional information.

Date of Commencement of a Program

Students have the option to comply with the regulations and degree requirements in effect at the time of their first registration in a course which credits toward their major; or to meet requirements subsequently approved by the College and implemented prior to the last term in which the student enrols in courses required for the program. Arts & Science courses include those courses from other colleges that have been approved for Arts & Science credit.

Students in programs which require courses no longer taught by the department must consult with the department about how to complete degree requirements.

It is expected that students will complete their degree programs within 10 years of their first registration. Students taking more than 10 years to complete their programs will usually be required to meet current degree and graduation requirements.

Once a student has received an Arts & Science degree, rules governing the date of commencement for any subsequent degree program are those provided in the <u>Second Degree Programs</u> section of these policies, commences in the first academic session in which study begins for the second degree alone.

Rationale: It is not uncommon for students to pursue more than one degree at the same time. The current policy requires them either to receive both degrees at the same Convocation ceremony, or to change their Date of Commencement for the second degree to the term immediately after they receive the first degree. This causes problems as many students are not aware of the policy, receive their first degree, and then find out about it. In a significant number of cases, the program requirements for the second degree have changed enough to require students to take a large number of unexpected additional courses, and the student then changes their mind about receiving the second degree. This choice is both negative for the student and for the College.

The proposed change will allow students who are close to completing their second degree (when they receive the first) to remain in the Catalogue year in which they first took a course in the second major (i.e. a course that counts in the Major Requirement for that program), which will reduce the number of students choosing not to complete the second degree.

History

Minor course revisions:

HIST 389.3 The Israeli Palestinian Conflict

New course number: **HIST 227.3**

Change in course hours – move from 1.5 lecture and 1.5 seminar hours to 3 lecture hours. Rationale: The Department of History believes that the course content is better aligned with other 200-level HIST courses than with 300-level HIST courses. 200-level HIST courses have larger enrolment caps (50, rather than 18 at the 300-level), so this change will allow more students to benefit from each offering.

Linguistics

Minor course revisions:

LING 242.3 Phonetics

LING 243.3 Morphological Patterns in Language

LING 347.3 Discourse Analysis

Prerequisite change:

Old prerequisite: LING 111

New prerequisite: LING 111.3 or LING 114.3

Rationale: LING 114 will provide the same introductory level of preparation for senior courses as does LING 111, and therefore the department agrees that it should be accepted as an alternate prerequisite where LING 111 appears.

LING 230.3 Aspects of Translation Theories and Practice

Prerequisite change:

Old prerequisite: LING 111.3; and 6 credit units of courses in one language other than English, or permission of the instructor.

New prerequisite: LING 111.3 or LING 114.3; and 6 credit units of courses in one language other than

English, or permission of the instructor.

Rationale: See LING 112 above.

LING 241.3 Introduction to Syntax

Prerequisite change:

Old prerequisite: LING 110, or LING 111, or permission of the department.

New prerequisite: LING 110.3, LING 111.3, LING 114.3, or permission of the department.

Rationale: See LING 112 above.

LING 244.3 Sociolinguistics

Prerequisite change:

Old prerequisite: LING 111; and one of LING 112, SOC 111, SOC 112, WGST 210, or 6 credit units of ARBC, CHIN, CREE, FREN, GERM, GRK, HEB, HNDI, JPNS, LATN, RUSS, SNSK, SPAN or UKR courses.

New prerequisite: LING 111.3 or LING 114.3; and one of LING 112.3, SOC 111.3, SOC 112.3, WGST 210.3, or 6 credit units of ARBC, CHIN, CREE, FREN, GERM, GRK, HEB, HNDI, JPNS, LATN, RUSS, SNSK, SPAN or UKR courses.

Rationale: See LING 112 above.

LING 245.3 Lexicology

LING 248.3 Second Language Acquisition

LING 343.3 Child Language Development

LING 346.3 Language in Time and Space

Prerequisite change:

Old prerequisite: LING 111 and LING 112.

New prerequisite: LING 111.3 or LING 114.3; and LING 112.3.

Rationale: See LING 112 above.

LING 247.3 The Major Languages of the World

Prerequisite change:

Old prerequisite: LING 111; and LING 112 or 6 credit units ARBC, CHIN, CREE, FREN, GERM, GRK, HEB, HNDI, JPNS, LATN, RUSS, SNSK, SPAN or UKR courses.

New prerequisite: LING 111.3 or LING 114.3; and LING 112.3 or 6 credit units ARBC, CHIN, CREE,

FREN, GERM, GRK, HEB, HNDI, JPNS, LATN, RUSS, SNSK, SPAN or UKR courses.

Rationale: See LING 112 above.

LING 250.3 World Englishes

Prerequisite change:

Old prerequisite: LING 110.3 or LING 111.3 or 24 credit units at the university level

New prerequisite: LING 110.3, LING 111.3, LING 114.3, or 24 credit units at the university level.

Rationale: See LING 112 above.

LING 251.3 Intercultural Communication

Prerequisite change:

Old prerequisite: LING 111; or 24 credit units of university courses; or 6 credit units ARBC, CHIN, CREE, FREN, GERM, GRK, HEB, HNDI, JPNS, LATN, RUSS, SNSK, SPAN, or UKR courses. New prerequisite: LING 111.3, LING 114.3, 24 credit units of university courses, or 6 credit units ARBC, CHIN, CREE, FREN, GERM, GRK, HEB, HNDI, JPNS, LATN, RUSS, SNSK, SPAN, or UKR courses. Rationale: See LING 112 above.

LING 252.3 Languages and Cultures of Canada

LING 253.3 Indigenous Languages of Canada

Prerequisite change:

Old prerequisite: LING 111 or 24 credit units of university courses.

New prerequisite: LING 111.3, LING 114.3, or 24 credit units of university courses.

Rationale: See LING 112 above.

LING 340.3 Principles of Phonology

Prerequisite change:

Old prerequisite: LING 111; or permission of the department.

New prerequisite: LING 111.3, LING 114.3, or permission of the department.

Rationale: See LING 112 above.

LING 348.3 Materials Design in Second Language Acquisition

Prerequisite change:

Old prerequisite: LING 111.3, LING 112.3 and 6 credit units 200, 300 or 400-level LING.

New prerequisite: LING 111.3 or LING 114.3; LING 112.3; and 6 credit units 200, 300 or 400-level LING.

Rationale: See LING 112 above.

LING 351.3 Applied Linguistics Internship

Prerequisite change:

Old prerequisite: LING 111.3; LING 112.3; one of LING 248.3, LING 251.3, LING 348.3; and 6 credit units LING courses at the 200-level or above.

New prerequisite: LING 111.3 or LING 114.3; LING 112.3; one of LING 248.3, LING 251.3, LING 348.3;

and 6 credit units LING courses at the 200-level or above.

Rationale: See LING 112 above.

LING 360.3 Pragmatics

Prerequisite change:

Old prerequisite: LING 111.3 and 3 credit units 200-level LING courses, or permission of the department.

New prerequisite: (LING 111.3 or LING 114.3) and 3 credit units 200-level LING courses; or permission of

the department.
Rationale: See LING 112 above.

LING 370.3 Introduction to Speech and Language Pathology

Prerequisite change:

Old prerequisite: LING 111, LING 112, LING 241, and LING 242

New prerequisite: LING 111.3 or LING 114.3; LING 112.3; LING 241.3; and LING 242.3.

Rationale: See LING 112 above.

LING 402.3 Language and Culture

Prerequisite change:

Old prerequisite: LING 111 plus either LING 112 or LING 244, and 6 credit units of senior Linguistics courses.

New prerequisite: LING 111.3 or LING 114.3; and LING 112.3 or LING 244.3; and 6 credit units of senior Linguistics courses.

Rationale: See LING 112 above.

LING 403.3 Research Methods in Linguistics

Prerequisite change:

Old prerequisite: LING 111 and 112 and a minimum of 9 credit units of LING courses at the 200-level or higher.

New prerequisite: LING 111.3 or LING 114.3; and LING 112.3; and a minimum of 9 credit units of LING courses at the 200-level or higher.

Rationale: See LING 112 above.

LING 404.3 Language and Gender

Prerequisite change:

Old prerequisite: LING 111; and LING 244 and 3 credit units of senior LING or permission of the

department.

New prerequisite: LING 111.3 or LING 114.3; and LING 244.3; and 3 credit units of senior LING or

permission of the department. Rationale: See LING 112 above.

Philosophy

Minor course revisions

PHIL 412.3 Philosophy of Thomas Aquinas

New course title: Aquinas' Philosophy of God and the Human Person

New short title: Aquinas Phil God and Human

New course description: Thomas Aquinas, widely considered the greatest and most influential thinker of the medieval period, advanced a philosophical project of such depth and coherence that it still influences and informs the thought of many philosophers today. Drawing upon the basic metaphysical framework Aquinas sets out, this course will examine his thought about God and the nature of the human person and consider its continuing relevance today.

New course number: PHIL 303.3

Prerequisite change:

Old prerequisite: 6 credit units in philosophy at the 200-level or above, and completion of 24 credit units at the university level; or permission of the instructor.

New prerequisite: 3 credit units in philosophy at the 200-level or above, and completion of 24 credit units at the university level; or permission of the instructor.

New Note: Students who have taken PHIL 412.3 Philosophy of Thomas Aquinas I cannot take this course for credit.

Rationale: Thomas Aquinas plays an important role in the Catholic Intellectual Tradition and his philosophy is therefore an area of study that enhances the distinctiveness of STM's philosophy program. The current course, PHIL 412, includes more material than can be adequately covered in a thirteen week course, so in order to do justice to Aquinas' philosophy on the whole, this course will be altered so that it focuses on Aquinas' philosophy of God and the human person, while a second offering will focus on his moral philosophy. Other PHIL courses focused on historical figures in philosophy are offered at the 300-level (such as PHIL 306, 312, 312, 314, and 315), so renumbering this course will help students to understand that this course is just a similar option in this area.

Regional and Urban Planning

Minor course revisions

PLAN 329.3 Integrated Water Resource Planning

New course number: PLAN 429.3

Rationale: There are 4 elective capstone courses in the RUP program: PLAN 441; PLAN 445; PLAN 446 and PLAN 329. Given that these are capstone courses it makes sense to number them all at the same level.

College of Dentistry – University Course Challenge Submission, December 2022

The following changes have been approved by the College of Dentistry and are being submitted here for approval through University Course Challenge.

Contact: Jolana Piercy

Course Deletions

DENT 206.1: Dental Ethics, Professionalism and Misconduct

Introduces students to ethics and professionalism within the dental profession. Concepts of regulation, practice standards, misconduct and ethical decision making are discussed to heighten dental students' awareness and understanding of these tenets.

Weekly hours: 1 Lecture hours

Restriction(s): This course is restricted to students in the Doctor of Dental Medicine program in the

College of Dentistry.

DENT 210.2: Application of Dental Research to Clinical Decision Making I

Provides students with knowledge of how to access, understand and critically evaluate dental scientific literature. The course will consist of lectures and laboratory sessions. In the laboratory sessions, students will perform computer generated literature searches in the Health Science Computer Lab.

Weekly hours: 1.5 Lecture hours

DENT 214.2: Oral Histology and Embryology

A lecture and laboratory course that studies the development, histology and function of oral structures that have special significance to dentistry. Course content considers the processes involved in craniofacial development; the development of the teeth and palate; and the histology of hard and soft tissues of the oral and perioral regions.

Weekly hours: 2 Lecture hours

DENT 321.2: Dental Materials II

A continuation of Dent 221: Dental Materials I, covering the remaining materials used in clinical dentistry. Completion of this course will provide the student with theoretical and practical concepts of modern dental materials, and provide the skills necessary to remain current in this rapidly changing field.

Weekly hours: 3 Lecture hours

DENT 542.2: Health Sciences Interdisciplinary Relationships

The relevance of the basic sciences to clinical dentistry and the scientific basis of various aspects of clinical dentistry are examined in detail. As well, this course provides opportunities to learn more about and discuss the impact of the medical conditions on dental treatment, and the interaction between dentists and physicians with regard to the medical management of patients under the care of dentists.

Weekly hours: 1 Lecture hours

Course Name Changes

DENT 221.2: Dental Materials

A basic program to familiarize students with the terminology and theoretical concepts of dental materials used in clinical dentistry, as well as the safety issues concerning dental materials.

Weekly hours: 1 Lecture hours

DENT 314.3 231: Oral Microbiology Immunology and Physiology

Considers those areas of microbiology, immunology and physiology with special significance to dentistry. Major topics are oral microflora and ecology; molecular biology of microbial adherence; formation and metabolism of dental plaque; microbiology of dental caries and periodontal disease; immunology of dental caries and periodontal disease; physiology of salivary glands and saliva; classification and physiology of neuroreceptors and their integration/modulation by the central nervous system; and the physiology of pain, taste, swallowing and mastication.

Weekly hours: 2 Lecture hours

Rationale:

CPPS 398 Deletion: The College of Medicine will no longer offer this course or it's equivalent. The content addressed in the course is addressed in other College of Dentistry year 1 courses.

DENT 206 Deletion: Topics from this course are discussed in DENT 480 and 580 and a full course in year 1 is not a good use of student time. This course will be merged with DENT 210 and DENT 208. DENT 208 is a full year, 3 credit unit course, which will introduce students to the study of dentistry and cover the topics from DENT 208 and DENT 210 that are not covered in other courses.

DENT 210 Deletion: The topics discussed in this course are useful, but their goal is to create dental researchers, not clinicians. The goal of the DMD program is to create clinicians. Students wishing to focus on research can register in the combined BSc/ DMD program, and these topics will be discussed in the BSc courses. A limited overview of Dental research will also be offered in DENT 208.

DENT 214 Deletion: The materials discussed in this course can be seamlessly merged with the topics discussed in DENT 231 (nee 314). It is not necessary for students to take both courses.

DENT 314 Name Change: Oral Microbiology Immunology and Physiology are better discussed in Year one. College naming convention requires year 1 courses be coded 2XX. Change to DENT 231.3. Name and topics will remain the same.

DENT 321 Deletion: DENT 221 and 321 (Dental Materials I and Dental Materials II) will be compressed offered in Year 1 in order to better prepare students for Operative courses and better distribute student schedules in years 1 and 2.

DENT 542 Deletion: This course is not an appropriate use of the time of the students because it consists of a large number of external presentations which conveyed little knowledge. The content will be more appropriately integrated into DENT 586. Students also have a number of opportunities to explore interdisciplinary relationships in year 3 and 4 rosters. This deletion will balance content and maximize the time of students.

Supplement: The DMD program was compressed from a 5-year program to a 4-year program a number of years ago, but the courses were not compressed, resulting in repetition of subject matter and inefficient use of student's time. As the College introduces new technologies and increased clinical components, topics that historically took up a great deal of students' time need to be reexamined. The above changes will allow the College to be more economical in our teaching time and allow students a better school life balance, while maintaining teaching standards and introducing cutting edge advancements.

The course changes will result in the following program changes:

Program Revisions - D.M.D. and the IDDP pathway for the D.M.D program

Doctor of Dental Medicine (D.M.D.)

In the first year of the four-year dental program, the basic science courses are closely integrated, physically and academically, with those of the College of Medicine.

Students must successfully complete all courses in a given year in the program to progress to the next year and to graduate.

Doctor of Dental Medicine (D.M.D.) (207 195 credit units)

Year 1

42 37 credit units

- CPPS 398, or equivalent, per the College of Dentistry (Approved March 2, 22-JP)
- DENT 206.1 (Approved September 28, 2022-JP)
- DENT 208.3
- DENT 210.2 (Approved September 28, 2022-JP)
- DENT 214.2 (Approved December 4, 2022- JP)
- DENT 220.6
- DENT 221.2
- DENT 225.2
- DENT 226.3
- DENT 231.3 (Approved December 4, 2022- JP)
- DENT 291.18

Year 2

58 53 credit units

- DENT 301.2
- DENT 306.6
- DENT 309.2
- DENT 314.3 (Approved December 4, 2022- JP)
- DENT 317.3
- DENT 319.4
- DENT 320.5
- DENT 321.2(Approved September 28, 2022-JP)
- DENT 324.3
- DENT 330.5

- DENT 340.4
- DENT 348.3
- DENT 353.2
- DENT 360.5
- DENT 388.3
- DENT 392.6

Year 3

58 credit units

- DENT 401.3
- DENT 409.2
- DENT 417.4
- DENT 419.5
- DENT 420.5
- DENT 424.4
- DENT 430.6
- DENT 440.5
- DENT 448.3
- DENT 455.2
- DENT 460.5
- DENT 463.3
- DENT 466.2
- DENT 475.4
- DENT 480.2
- DENT 486.3

Year 4

49 47 credit units

- DENT 501.2
- DENT 517.4
- DENT 524.4
- DENT 542.2 (Approved September 28, 2022 JP)
- DENT 563.3
- DENT 580.2
- DENT 586.32

International Dental Degree Program (IDDP)

Doctor of Dental Medicine (D.M.D.)

The IDDP program admits citizens or residents of Canada who have completed a degree in dentistry from an international program that is not accredited by the Commission on Dental Accreditation of Canada (CDAC). Students must demonstrate a level of preclinical knowledge, acumen, and technical skill that is, at minimum, comparable to that of dental students who have completed year 2 of the Doctor of Dental Medicine (D.M.D.) program. This level of competency will be demonstrated through successful completion of the DENT 497.0 course in this program. Students will join the D.M.D. program in year 3 and will complete years 3 and 4, which is the clinical component of the D.M.D. program. Successful completion of the program will allow the granting of a D.M.D. degree and will provide eligibility to sit the National Dental Examining Board of Canada (NDEB) examinations, successful completion of which is required for licensure in Canada.

D.M.D. Program Requirements (107-105 credit units)

IDDP students are required to complete the last two years of the standard-route D.M.D. program, alongside students who were admitted through the standard D.M.D. admission process.

Year 1 (58 credit units)

This year of study matches up with Year 3 in the standard-route D.M.D. program.

Note: DENT 497.0 Essential Dentistry Skills must be successfully completed.

- DENT 401.3
- DENT 409.2
- DENT 417.4
- DENT 419.5
- DENT 420.5
- DENT 424.4
- DENT 430.6
- DENT 440.5
- DENT 448.3
- DENT 455.2
- DENT 460.5
- DENT 463.3
- DENT 466.2
- DENT 475.4
- DENT 480.2
- DENT 486.3

This year of study matches up with Year 4 in the standard-route D.M.D. program.

- DENT 501.2
- DENT 517.4
- DENT 524.4
- DENT 542.2
- DENT 563.3
- DENT 580.2
- DENT 586.32



College of Education – December 2022 University Course Challenge

The curricular revision listed below was approved by the College of Education Faculty Council on Friday, December 9, 2022 and is now submitted to the University Course Challenge for approval.

Contact: Arvelle Van Dyck (arvelle.vandyck@usask.ca)

1. Revisions to Arts Education Teaching Area Requirements for the B.Ed. program routes at the Early/Middle Years level

Rationale: The Departments of Music and Drama within the College of Arts and Science have made some changes to their slate of courses covering music history and drama history. These changes impact the Arts Education Teaching Areas 1 and 2 at the Early/Middle Years level.

Changes:

- Deletion of DRAM 303.3, 304.3, MUS 150.3, MUS 151.3, MUS 250.3, MUS 303.3, MUS 364.3, MUS 365.3, and MUS 367.3 from the "Art/Music/Drama History" requirement in the Arts Education Teaching Areas 1 and 2 at the Early/Middle Years level.
- Addition of MUS 112.3, MUS 155.3, MUS 156.3, MUS 255.3, MUS 352.3, MUS 458.3, and MUS 459.3 to the "Art/Music/Drama History" requirement in the Arts Education Teaching Areas 1 and 2 at the Early/Middle Years level.

Catalogue Entry

Early/Middle Years - Teaching Area 1

Arts Education

Please Note: any 100-level course taken after the first 6 credit units will be counted as a senior course.

Choose 6 credit units from the following Art History, Drama History, or Music History courses:

- ARTH 100-Level, 200-Level, 300-Level, 400-Level
- DRAM 203.3 History of Theatre from 600 BCE to 1850 CE
- **DRAM 204.3** History of Theatre from 1850 to Present
- <u>DRAM 303.3</u> Advanced Studies in Theatre History I 600 BCE to 1850 CE To be deleted, effective 202305 (April 2022 UCC)
- <u>DRAM 304.3</u> Advanced Studies in Theatre History II 1850 to Present To be deleted, effective 202305 (April 2022 UCC)
- MUS 111.3 History of Popular Music
- MUS 112.3 History of Country Music
- MUS 150.3 Closed course
- MUS 151.3 Closed course
- MUS 155.3 Music in History and the Present

- MUS 156.3 Music History I Compositions Cultures and Connections from Antiquity to the High Classical Period
- MUS 175.3 Jazz History Survey
- MUS 250.3 Closed course
- MUS 255.3 Music History II Compositions Cultures and Connections from the Late Classical Period to the Present
- MUS 303.3 Closed course
- MUS 311.3 History of Opera
- MUS 352.3 Music Politics and Power To be created, effective 202305 (October 2022 UCC)
- <u>MUS 364.3</u> Music of Classical Period To be deleted, effective 202305 (October 2022 UCC)
- MUS 365.3 Moribund
- MUS 367.3 Moribund
- MUS 368.3 Music in Canada
- MUS 457.3 Music since 1950
- MUS 458.3 Introduction to Music and the Supernatural *To be created, effective 202305 (October 2022 UCC)*
- MUS 459.3 Introduction to Music Gender and Sexuality To be created, effective 202305 (October 2022 UCC)
- MUS 463.3 Seminar in Wind Literature and Materials

Choose 12 credit units from the following Fine Arts courses:

- ART 100-Level, 200-Level, 300-Level, 400-Level
- ARTH 100-Level, 200-Level, 300-Level, 400-Level
- DRAM 100-Level, 200-Level, 300-Level, 400-Level
- MUS 100-Level, 200-Level, 300-Level, 400-Level

Early/Middle Years – Teaching Area 2

Arts Education

Please Note: any 100-level course taken after the first 6 credit units will be counted as a senior course.

Choose 3 credit units from the following Art History, Drama History, or Music History:

- ARTH 100-Level, 200-Level, 300-Level, 400-Level
- DRAM 203.3 History of Theatre from 600 BCE to 1850 CE
- **DRAM 204.3** History of Theatre from 1850 to Present
- DRAM 303.3 Advanced Studies in Theatre History I 600 BCE to 1850 CE To be deleted, effective 202305 (April 2022 UCC)
- <u>DRAM 304.3</u> Advanced Studies in Theatre History II 1850 to Present To be deleted, effective 202305 (April 2022 UCC)
- MUS 111.3 History of Popular Music

- MUS 112.3 History of Country Music
- MUS 150.3 Closed course
- MUS 151.3 Closed course
- MUS 155.3 Music in History and the Present
- MUS 156.3 Music History I Compositions Cultures and Connections from Antiquity to the High Classical Period
- MUS 175.3 Jazz History Survey
- MUS 250.3 Closed course
- MUS 255.3 Music History II Compositions Cultures and Connections from the Late Classical Period to the Present
- MUS 303.3 Closed course
- MUS 311.3 History of Opera
- MUS 352.3 Music Politics and Power *To be created, effective 202305 (October 2022 UCC)*
- MUS 364.3 Music of Classical Period To be deleted, effective 202305 (October 2022 UCC)
- MUS 365.3 Moribund
- MUS 367.3 Moribund
- MUS 368.3 Music in Canada
- MUS 457.3 Music since 1950
- MUS 458.3 Introduction to Music and the Supernatural *To be created, effective 202305 (October 2022 UCC)*
- MUS 459.3 Introduction to Music Gender and Sexuality *To be created, effective 202305 (October 2022 UCC)*
- MUS 463.3 Seminar in Wind Literature and Materials

Choose 9 credit units from the following Fine Arts courses:

- ART 100-Level, 200-Level, 300-Level, 400-Level
- ARTH 100-Level, 200-Level, 300-Level, 400-Level
- DRAM 100-Level, 200-Level, 300-Level, 400-Level
- MUS 100-Level, 200-Level, 300-Level, 400-Level

2. Revisions to the Indian Teacher Education Program (ITEP) program route requirements (ITEP - Early/Middle Years and ITEP - Secondary)

Rationale: The proposed changes to the ITEP program route include open electives, which are courses that are either education or external courses, which will replace external electives. Also, the addition of Year 1 Education Learning Communities (EDLC 101.0 and 102.0), EPSE 348.3, INTS 100.3 and ECUR 200.3 for 2023-2024 on.

Indian Teacher Education Program (ITEP)

Bachelor of Education (B.Ed.) - Early/Middle Years

Please see the <u>Bachelor of Education (B.Ed.) Early/Middle Years Teaching Areas</u> for a list of courses that count towards the Early/Middle Years Teaching Areas 1 and 2 requirements.

Year 1 (27 24 credit units)

Education Learning Communities

Fall Term

• EDLC 101.0 Education Learning Community On Campus

Winter Term

• EDLC 102.0 Education Learning Community in Our City

Education Courses

- EFDT 101.3 Introduction to Education
- Choose 3 credit units from the following:
 - <u>EART 303.3</u> Methods in Elementary Visual Art or <u>EART 304.3</u> Arts Education in the Early Years
 - o ECUR 352.3 Methods in Elementary Physical Education or EART 353.3
 - ECUR 450.3 Elementary Health Methods or ECUR 451.3 Health in the Early Years
 - EIND 380.3 Incorporating Cultural Arts of Indian Metis and Inuit People into School Programs

External Course Requirements

INTS 100.3: Strategies for Academic Success

Choose 6 credit units of junior-level English:

• <u>ENG — 100-Level</u>

If Cree, French or Languages is a Teaching Area, choose 3 credit units of junior level English. If English Language Arts or if both English Language Arts and Cree, French or Languages are Teaching Areas, none of these 6 credits are required.

Choose 3 credit units of Fine Arts:

• Arts Education courses from Early/Middle Years Teaching Areas 1 or 2

If Arts Education is a Teaching Area, these 3 credit units are **not** required.

Choose 3 credit units of Science:

Science courses from Early/Middle Years Teaching Areas 1 or 2

If Science is a Teaching Area, replace with 3 credit units of 100- to 400-level Open Electives.

Choose 6 credit units of electives:

• Open Electives 100-400 level (must be compiled using 3 or 6 credit unit courses)

Choose 3 junior level credit units of Indigenous Studies:

- INDG 100-Level, 200-Level, 300-Level, 400-Level
- HIST 265.3
- HIST 315.3 Indigenous Health History
- SOC 341.3 Institutional Racism and Indigenous People

If Indigenous Studies or Social Sciences/Social Studies is a Teaching Area, these 3 credit units are **not** required.

Choose 3 credit units of Social Sciences/Social Studies:

• Social Sciences/Social Studies courses from Early/Middle Teaching Areas 1 or 2

If Indigenous Studies or Social Sciences/Social Studies is a Teaching Area, these 3 credit units are **not** required.

Choose 3 credit units from the following:

• Early/Middle Years - Teaching Area 1

Open Electives

Depending on choice in Teaching Areas, 3 to 9 credit units of <u>100-, 200-, 300-, 400-level Open Electives</u> will be required.

Year 2 (36 credit units)

Education Courses

- ECUR 200.3: Curriculum and Instruction
- <u>ECUR 316.3</u> Methods in K to 9 Mathematics II or <u>ECUR 312.3</u> Methods in Elementary Mathematics
- EDST 321.3 Field Experience Learning in Contexts
- <u>EFDT 301.3</u> Educator Identity in Contexts Anti Oppressive and Ethical Beginnings
- EFDT 313.3 Pedagogies of Place Context Based Learning
- <u>EPSE 202.3</u> Psychological Foundations of Teaching and Learning
- <u>ECUR 307.3</u> Early Literacy Prekindergarten to Grade 3* or <u>ECUR 309.3</u> Introduction to Elementary English Language Arts**

External Course Requirements

Choose 3 credit units of Science:

• Science courses from Early/Middle Years Teaching Areas 1 or 2

If Science is a Teaching Area, these 3 credit units are **not** required.

Choose 3 credit units of Mathematics or Statistics:

- ECUR 311.3 Methods in K to 9 Mathematics I
- MATH 100-Level, 200-Level, 300-Level, 400-Level
- STAT 100-Level, 200-Level, 300-Level, 400-Level

If Mathematics is a Teaching Area, these 3 credit units are **not** required.

Choose 3 credit units of Kinesiology:

- KIN 121.3 Functional Basis of Physical Activity
- KIN 122.3 Social Behavioral Foundations of Physical Activity
- KIN 146.3 Physical Activity and School Aged Children and Youth

If Physical Education is a Teaching Area, replace with 3 credit units of 100- to 400-level Open Electives.

Choose 6-3 credit units from the following:

• Early/Middle Years - Teaching Area 1

Choose 6 credit units from the following:

• Early/Middle Years - Teaching Area 2

Year 3 (33 36 credit units)

Education Courses

- <u>ECUR 308.3</u> Reading and Writing Development Prekindergarten to Grade 3* or <u>ECUR 310.3</u> Literacy Across the Elementary Curriculum Assessment and Planning in a Relational Context**
- ECUR 322.3 Methods in Elementary Science or ECUR 323.3 Science in the Early Years
- ECUR 382.3 Methods in Elementary Social Studies or ECUR 383.3 Social Studies in the Early Years
- EDST 322.3 Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing
- EPSE 348.3: Essentials of Assessing Student Learning

External Course Requirements

Choose 3 credit units of Kinesiology:

- KIN 121.3 Functional Basis of Physical Activity
- KIN 122.3 Social Behavioral Foundations of Physical Activity
- KIN 146.3 Physical Activity and School Aged Children and Youth
- KIN 100-Level, 200-Level, 300-Level, 400-Level

Recommended Course: KIN 146.3 Physical Activity and School Aged Children and Youth

If Physical Education is a Teaching Area, these 3 credit units are **not** required.

Choose 12 credit units from the following:

• Early/Middle Years - Teaching Area 1

Choose 6 credit units from the following:

• Early/Middle Years - Teaching Area 2

Year 4 (24 credit units)

Choose an Extended Practicum option from the following:

- EXPR 422.15 Professional Extended Practicum
- <u>EXPR 423.3</u> Alternative Field Experiences Practicum I Adult Learning and Community Based Educational Settings AND <u>EXPR 425.12</u> Alternative Field Experiences Practicum II Saskatchewan Schools
- EXPR 424.3 Alternative Field Experiences Practicum I International Opportunities AND
 EXPR 425.12 Alternative Field Experiences Practicum II Saskatchewan Schools

Education Courses

- <u>EADM 303.3</u> Education in Society Structures Systems and Stakeholders
- <u>EPSE 390.3</u> Exceptional Learners

Choose 3 credit units from the following:

- EADM 411.3 Inquiry Project and Community Learning Field Experience
- ECUR 411.3 Inquiry Project and Community Learning Field Experience
- EFDT 411.3 Inquiry Project and Community Learning Field Experience
- <u>EPSE 411.3</u> Inquiry Project and Community Learning Field Experience

^{*}If <u>ECUR 307.3</u> Early Literacy Prekindergarten to Grade 3 is taken, <u>ECUR 308.3</u> Reading and Writing Development Prekindergarten to Grade 3 must also be taken.

^{**}If <u>ECUR 309.3</u> Introduction to Elementary English Language Arts is taken, <u>ECUR 310.3</u> Literacy Across the Elementary Curriculum Assessment and Planning in a Relational Context must also be taken.

Indian Teacher Education Program (ITEP)

Bachelor of Education (B.Ed.) - Secondary

Please see the <u>Bachelor of Education (B.Ed.) Secondary Teaching Areas</u> for a list of courses that count towards the Secondary Teaching Areas 1 and 2 requirements.

Year 1 (30 27 credit units)

Education Learning Communities

Fall Term

• EDLC 101.0 Education Learning Community On Campus

Winter Term

• EDLC 102.0 Education Learning Community in Our City

Education Courses

• EFDT 101.3 Introduction to Education

External Course Requirements

• INTS 100.3 Strategies of Academic Success

Choose 3 credit units of Indigenous Studies

- INDG 100-Level, 200-Level, 300-Level, 400-Level
- HIST 265.3
- <u>HIST 315.3</u> Indigenous Health History
- SOC 341.3 Institutional Racism and Indigenous People

If Indigenous Studies or Social Sciences/Social Studies is a Teaching Area, replace with 3 credit units of 100- to 400-level Open Electives.

Choose 6 credit units of junior-level English:

• ENG — 100-Level

If English Language Arts is a Teaching Area, replace with 3 credit units of 100- to 400-level Open Electives.

Choose 6 credit units from the following:

• <u>Secondary - Teaching Area 1</u> (100-level)

Choose 6 credit units from the following:

• <u>Secondary - Teaching Area 2</u> (100-level)

Choose 6 credit units from the following:

Open External Electives 100-400 level (must be compiled using 3 or 6 credit unit courses)

Year 2 (33 credit units)

Education Courses

- ECUR 200.3: Curriculum and Instruction
- EPSE 202.3 Psychological Foundations of Teaching and Learning
- EDST 321.3 Field Experience Learning in Contexts
- EFDT 301.3 Educator Identity in Contexts Anti Oppressive and Ethical Beginnings
- <u>EFDT 313.3</u> Pedagogies of Place Context Based Learning

Choose 3 credit units from the following:

- EADM 100-Level, 200-Level, 300-Level, 400-Level
- ECUR 100-Level, 200-Level, 300-Level, 400-Level
- EFDT 100-Level, 200-Level, 300-Level, 400-Level
- EMUS 100-Level. 200-Level. 300-Level. 400-Level
- EPSE 100-Level, 200-Level, 300-Level, 400-Level
- ETAD 100-Level, 200-Level, 300-Level, 400-Level

External Course Requirements

Choose 6 senior level credit units from the following:

• <u>Secondary - Teaching Area 1</u> (200-level, 300-level, or 400-level)

Choose 6 senior level credit units from the following:

• Secondary - Teaching Area 2 (200-level, 300-level, or 400-level)

Choose 6 credit units of open electives from the following:

• Open Elective 100-400 level (Open Electives are either education or academic courses and must be compiled using 3 or 6 credit unit courses)

Year 3 (30 36 credit units)

External Course Requirements

Choose 12 credit units from the following:

• Secondary - Teaching Area 1

Choose 3 credit units from the following:

• Secondary - Teaching Area 2

Choose 3 6 credit units from the following:

• Open External Electives 100-400 level (must be compiled using 3 or 6 credit unit courses)

Education Courses

- ECUR 320.3 Literacy Across the Secondary Curriculum
- ECUR 325.3 Relational Curriculum Making in the Secondary Context
- EDST 322.3 Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing
- EPSE 348.3: Essentials of Assessing Student Learning

Choose 6 credit units of Education methods courses (3 credit units of Teaching Area 1 methods and 3 credit units of Teaching Area 2 methods) from the following:

- EART 331.3 Methods in Secondary Visual Art
- ECUR 318.3 Methods in Secondary Mathematics
- ECUR 326.3 Methods for Teaching Science in Secondary School
- ECUR 349.3 Methods in Middle Years and Secondary Drama
- <u>ECUR 357.3</u> Methods in Secondary Physical Education (Teaching Area 1 only; B.Sc. Kinesiology graduates only)
- ECUR 362.3 Introduction to Principles and Practices of Second Language Teaching
- ECUR 379.3 Introductory Methods in Secondary English Language Arts
- ECUR 386.3 Methods in Secondary Social Studies

Year 4 (27 24 credit units)

Choose an Extended Practicum option from the following:

- EXPR 422.15 Professional Extended Practicum
- <u>EXPR 423.3</u> Alternative Field Experiences Practicum I Adult Learning and Community Based Educational Settings AND <u>EXPR 425.12</u> Alternative Field Experiences Practicum II Saskatchewan Schools
- EXPR 424.3 Alternative Field Experiences Practicum I International Opportunities **AND**EXPR 425.12 Alternative Field Experiences Practicum II Saskatchewan Schools

Education Courses

- EADM 303.3 Education in Society Structures Systems and Stakeholders
- <u>EPSE 390.3</u> Exceptional Learners

Choose 3 credit units from the following:

- EADM 411.3 Inquiry Project and Community Learning Field Experience
- ECUR 411.3 Inquiry Project and Community Learning Field Experience
- <u>EFDT 411.3</u> Inquiry Project and Community Learning Field Experience
- <u>EPSE 411.3</u> Inquiry Project and Community Learning Field Experience

Choose 3 credit units from the following:

- EADM 100-Level, 200-Level, 300-Level, 400-Level
- ECUR 100-Level, 200-Level, 300-Level, 400-Level
- EFDT 100-Level, 200-Level, 300-Level, 400-Level
- EMUS 100-Level, 200-Level, 300-Level, 400-Level
- EPSE 100-Level, 200-Level, 300-Level, 400-Level
- ETAD 100-Level, 200-Level, 300-Level, 400-Level

3. Revision of pre-requisites for EPSE 570.3: Individual Project in Special Education

Rationale: EPSE 570.3: Individual Project in Special Education is the 'capstone' (final project) course for the Post-Degree Certificate in Education: Special Education. Thus, it is important that students complete all required courses leading up to EPSE 570 so they have the necessary knowledge/skill to engage in completing the final project. Given the course description (listed below), it is reasonable that the students takes all the other Special Education certificate courses before this one.

Change: To revise the prerequisites for EPSE 570.3: Individual Project in Special Education to include EPSE 390, 414, 500, 510, 520, 530, 540, 551, and 560.

EPSE 570.3: Individual Project in Special Education

Designed to assist students to integrate content and experiences from other courses through an individual project. Aim is to prepare reflective practitioners capable of conducting a critical review of the research literature, integrating this knowledge into their professional repertoire, and communicating the products of this research to colleagues and others.

Weekly hours: 3 Lecture hours

Prerequisite(s): EPSE 390, 414, and 500, 510, 520, 530, 540, 551, and 560.

College of Engineering - University Course Challenge Submission, December 2022

The following changes have been approved through the College of Engineering and are being submitted here for approval through University Course Challenge.

Contact: Temi Ojo (temitope.ojo@usask.ca)

Program Revisions

1) The college proposes an adjustment to allow "GEOL 465.3 Mineral Deposits OR GEOL 413 Advanced Aqueous Geochemistry" as a choice to fulfill requirements for the Mining Option in the B.E. in Geological Engineering, as follows:

Geological Engineering Mining Engineering Option

Required Courses (15 credit units)

An "Option" within the College of Engineering is a prescribed set of courses that provides a concentration of specialized training in one particular field of study in the Bachelor of Science in Engineering (B.E.) program. Options are approved at the College level but are unique to Departments within the College, consisting of at least 15 credit units, none of which are core courses taken by all students within the Department.

This option equips students pursuing the Bachelor of Science in Engineering (B.E.) Geological Engineering program with a foundational knowledge of mining operations. Curricular emphasis is placed on process engineering, mine design, excavation techniques, and mineral deposits. Graduates of this option are anticipated to have an interest in the mining operations and are likely to pursue careers in the associated industry.

Required Courses (15 credit units)

- GEOE 377.3 Fundamentals of Mining and Mineral Processing (replaces a Group C elective)
- GEOE 380.3 Mine Ventilation (replaces a Group C elective)
- GEOE 430.3 Drill Blast and Excavate (replaces a Group C elective)
- GEOE 431.3 Mine Design (replaces a Group C elective)
- GEOL 465.3 Mineral Deposits or GEOL 413 Advanced Aqueous Geochemistry (replaces a Group A elective)

Rationale: GEOL 465 is relevant to students intending to pursue a career in hard rock mining but has limited relevance to students intending to pursue a career in soft rock mining (e.g., potash, coal). Understanding the aqueous geochemical (water management) aspects of mine wastes and site remediation is central to virtually all forms of mining.

2) The college proposes adding GEOL 464 Geoscience of Green Energy and the Digital Economy to the list of Group A Electives in the B.E. in Geological Engineering, as follows:

Bachelor of Science in Engineering – Geological Engineering

Year 1 (41-44 credit units)

Year 2 (36 credit units)

Year 4 (33 credit units)

Group Electives

Group A

- CHEM 377.3 Industrial Chemistry
- GEOG 335.3 Glacial Geomorphology
- GEOL 229.3 Introductory Geochemistry
- GEOL 282.3 Earth Physics
- GEOL 334.3 Gravity Magnetics Electromagnetic and Radiometric Methods
- GEOL 335.3 Seismology and Ground Penetrating Radar Methods
- GEOL 358.3
- GEOL 413.3 Aqueous Geochemistry
- GEOL 463.3 Petroleum Geology
- GEOL 464.3 Geoscience of Green Energy and the Digital Economy
- GEOL 465.3 Mineral Deposits
- GEOL 482.3 Electrical Methods in Geophysical Prospecting
- GEOL 483.3 Seismology

Rationale: This new course is highly relevant to geological engineering students as it covers the geological characteristics of green energy sources (e.g., solar, wind, geothermal, hydroelectric, tidal, nuclear) and identifies key aspects of subsurface engineering required to develop these resources (e.g., required critical materials, energy storage, waste disposal).

3) The college proposes merging the science elective lists into 1 list and removing CHEM 115.3, as follows:

Bachelor of Science in Engineering - Mechanical Engineering

Year 1 (41-44 credit units)

Year 2 (36 credit units)

Year 3 (36 credit units)

Year 4 (36 credit units)

Electives

List 1 Science Elective List

- BIOL 120.3 The Nature of Life
- CHEM 115.3 General Chemistry II Chemical Processes
- GEOL 121.3 Earth Processes
- PHYS 125.3 Physics and Technology

List 2

- ASTR 213.3 Astronomical Photometry
- ASTR 214.3 Astronomical Spectroscopy
- CHEM 221.3 Analytical Chemistry I
- CHEM 231.3 Inorganic Chemistry I
- CHEM 242.3 Thermodynamics and Kinetics
- CHEM 250.3 Introduction to Organic Chemistry
- EVSC 203.3 Sampling and Laboratory Analysis
- EVSC 210.3 Environmental Physics
- GEOG 120.3 Introduction to Global Environmental Systems
- GEOL 224.3 Mineralogy
- GEOL 245.3 Introduction to Sedimentary Rocks
- GEOL 258.3 Structural Geology

Rationale: Lists 1 and 2 were based on the old first year program and are confusing to students who now only must take one science elective. Students are not allowed to take both CHEM146 and the first-year chemistry course (CHEM115) for credit.

Course Revisions

Course Deletion

4) The college proposes the deletion of BLE 313 as follows:

BLE 313.3: Instrumentation

Static and dynamic characteristics of transducers and circuits used in the measurement of variables such as force, pressure, strain, temperature, humidity and electromagnetic radiation. Introduction to data loggers and digital data acquisition. The course emphasizes the importance of understanding the fundamental principles of transducers and associated circuitry from the standpoint of both design and selection of measurement systems.

Prerequisite(s): CE 318 or ME 321; PHYS 155; and EE 204 (taken).

Note: Students with credit for ABE 313 may not take this course for credit.

Rationale: BLE 313 has not been required for other programs in Engineering anymore and the previous instructor, Dr. Scott Noble developed an equivalent course in ME program. BLE 313 has not been offered for a while and will not be offered anymore.

College of Graduate and Postdoctoral Studies, University Course Challenge - December 2022

The following new courses and curricular changes have been approved by the College of Graduate and Postdoctoral Studies and are now being submitted to University Course Challenge for approval:

Contact: Melissa Kyrejto (melissa.kyrejto@usask.ca)

Agriculture and Bioresources

New Course:

AGRC 800.0: Work Integrated Learning Concentration

Graduate students apply their academic knowledge while acquiring and expanding transferable skills through work experience. A self-directed plan completed by the student, with input from the employer and approved by the supervisor, supervisory committee and graduate chair, will detail the anticipated learning outcomes. Regular self- and employer evaluations are required, along with a final paper. This is an open learning class which can take place in any academic term.

<u>Prerequisite or Restriction(s):</u> Permission must be granted by AgBio dean's office. Students must be pursuing a thesis-based graduate program (ie., MSc or PhD) in Animal and Poultry Science, Plant Sciences, Soil Science, Food Science, or Agricultural and Resource Economics.

<u>Note(s):</u> Students enrolled in the work integrated learning concentration in the College of Agriculture and Bioresources must register in AGRC 800.0.

<u>Rationale:</u> Graduate students will have the opportunity to pursue full-time employment while still being registered in the thesis-based program. This will allow them to explore the job market, build their professional network, acquire new and desirable skill sets in their field, and earn a salary. Students are expected to return to their full-time studies following the internship.

Approved by CGPS' Graduate Programs Committee on November 29, 2022.

New Concentration and minor program change(s):

Adding the new **Work Integrated Learning Concentration** as an option to the MSc and PhD degrees in Soil Science, Plant Science, Applied Microbiology, Food Science, Animal and Poultry Science, and Agricultural Economics.

Soil Science Doctor of Philosophy (Ph.D.)

Admission Requirements

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Degree Requirements

Students must maintain continuous registration in the 996 course.

- GPS 960.0
- GPS 961.0, if research involves human subjects
- GPS 962.0, if research involves animal subjects
- SLSC 825.3 or SLSC 850.1

- SLSC 990.0
- SLSC 996.0
- a minimum 5 credit units of electives
- comprehensive examination
- qualifying examination

Work-Integrated Learning Concentration

Students may choose to pursue a concentration in a professional work experience setting, while continuing work toward their thesis. Students must maintain continuous registration in the FDSC 994.0 and complete the following course:

AGRC 800.0 Work Integrated Learning Concentration

Soil Science Master of Science (M.Sc.) - Thesis-based

Admission Requirements

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Degree Requirements

Students must maintain continuous registration in the 994 course.

- GPS 960.0
- GPS 961.0, if research involves human subjects
- GPS 962.0, if research involves animal subjects
- SLSC 825.3
- SLSC 826.3
- SLSC 990.0
- SLSC 994.0
- a minimum 9 credit units of electives
- completion of 1 credit unit in data analysis (univariate statistics or multivariate statistics, etc.)

Work-Integrated Learning Concentration

Students may choose to pursue a concentration in a professional work experience setting, while continuing work toward their thesis. Students must maintain continuous registration in the FDSC 994.0 and complete the following course:

AGRC 800.0 Work Integrated Learning Concentration

Plant Sciences Doctor of Philosophy (Ph.D.)

Admission Requirements

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Degree Requirements

Students must maintain continuous registration in the 996 course.

- GPS 960.0
- GPS 961.0, if research involves human subjects
- GPS 962.0, if research involves animal subjects
- PLSC 990.0
- PLSC 996.0
- a minimum 6 credit units
- oral comprehensive examination
- qualifying examination
- thesis examination

Work-Integrated Learning Concentration

Students may choose to pursue a concentration in a professional work experience setting, while continuing work toward their thesis. Students must maintain continuous registration in the FDSC 994.0 and complete the following course:

AGRC 800.0 Work Integrated Learning Concentration

Plant Sciences

Master of Science (M.Sc.) - Thesis-based

Admission Requirements

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Degree Requirements

Students must maintain continuous registration in the 994 course.

- GPS 960.0
- GPS 961.0, if research involves human subjects
- GPS 962.0, if research involves animal subjects
- PLSC 990.0
- PLSC 994.0
- a minimum 9 credit units at the 800-level
- thesis examination

Work-Integrated Learning Concentration

<u>Students may choose to pursue a concentration in a professional work experience setting, while continuing work toward their thesis. Students must maintain continuous registration in the FDSC 994.0 and complete the following course:</u>

AGRC 800.0 Work Integrated Learning Concentration

Applied Microbiology
Doctor of Philosophy (Ph.D.)

Admission Requirements

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Degree Requirements

Students must maintain continuous registration in the 996 course.

- GPS 960.0
- GPS 961.0, if research involves human subjects
- GPS 962.0, if research involves animal subjects
- APMC 990.0
- APMC 996.0
- a minimum of 3 credit units at the 800-level
- additional courses, if recommended by the student's Advisory Council
- comprehensive examination
- qualifying examination
- · thesis defense

Work-Integrated Learning Concentration

Students may choose to pursue a concentration in a professional work experience setting, while continuing work toward their thesis. Students must maintain continuous registration in the FDSC 994.0 and complete the following course:

AGRC 800.0 Work Integrated Learning Concentration

Applied Microbiology
Master of Science (M.Sc.) - Thesis-based

Admission Requirements

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Degree Requirements

Students must maintain continuous registration in the 994 course.

- GPS 960.0
- GPS 961.0, if research involves human subjects
- GPS 962.0, if research involves animal subjects
- APMC 990.0
- APMC 994.0

- a minimum of 9 credit units at the 800-level
- additional courses, if recommended by the student's Advisory Committee
- thesis defense

Work-Integrated Learning Concentration

Students may choose to pursue a concentration in a professional work experience setting, while continuing work toward their thesis. Students must maintain continuous registration in the FDSC 994.0 and complete the following course:

AGRC 800.0 Work Integrated Learning Concentration

Food Science
Doctor of Philosophy (Ph.D.)

Admission Requirements

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Degree Requirements

Students must maintain continuous registration in the 996 course.

- GPS 960.0
- GPS 961.0, if research involves human subjects
- GPS 962.0, if research involves animal subjects
- A minimum 3 credit units
- FDSC 990.0 in the Fall and Winter Terms is required for the duration of the program
- FDSC 996.0
- qualifying and comprehensive examinations
- thesis defense

Work-Integrated Learning Concentration

Students may choose to pursue a concentration in a professional work experience setting, while continuing work toward their thesis. Students must maintain continuous registration in the FDSC 994.0 and complete the following course:

AGRC 800.0 Work Integrated Learning Concentration

Food Science Master of Science (M.Sc.) - Thesis-based

Admission Requirements

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Degree Requirements

Students must maintain continuous registration in the 994 course.

- GPS 960.0
- GPS 961.0, if research involves human subjects
- GPS 962.0, if research involves animal subjects
- A minimum of 9 credit units
- FDSC 990.0 in the Fall and Winter Terms is required for the duration of the program
- registration in FDSC 994.0
- thesis defense

Work-Integrated Learning Concentration

<u>Students may choose to pursue a concentration in a professional work experience setting, while continuing work toward their thesis. Students must maintain continuous registration in the FDSC 994.0 and complete the following course:</u>

AGRC 800.0 Work Integrated Learning Concentration

Animal and Poultry Science Doctor of Philosophy (Ph.D.)

Admission Requirements

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Degree Requirements

Students must maintain continuous registration in the 996 course.

- GPS 960.0
- GPS 961.0, if research involves human subjects
- GPS 962.0, if research involves animal subjects
- ANSC 990.0
- ANSC 996.0
- a minimum of 6 credit units at the 800-level
- comprehensive examination
- no specified residence requirement
- qualifying examination
- thesis defense

Note: the advisory committee may recommend additional courses.

Work-Integrated Learning Concentration

Students may choose to pursue a concentration in a professional work experience setting, while continuing work toward their thesis. Students must maintain continuous registration in the FDSC 994.0 and complete the following course:

AGRC 800.0 Work Integrated Learning Concentration

Animal and Poultry Science
Master of Science (M.Sc.) - Thesis-based

Admission Requirements

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Degree Requirements

Students must maintain continuous registration in the 994 course.

- GPS 960 0
- GPS 961.0, if research involves human subjects
- GPS 962.0, if research involves animal subjects
- ANSC 990.0
- ANSC 994.0
- a minimum of 9 credit units at the 800-level
- no specified residence requirement
- thesis defense

Note: the advisory committee may recommend additional courses.

Work-Integrated Learning Concentration

Students may choose to pursue a concentration in a professional work experience setting, while continuing work toward their thesis. Students must maintain continuous registration in the FDSC 994.0 and complete the following course:

AGRC 800.0 Work Integrated Learning Concentration

Agricultural Economics
Doctor of Philosophy (Ph.D.)

Admission Requirements

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Degree Requirements

Students must maintain continuous registration in the 996 course. \\

- GPS 960.0
- GPS 961.0, if research involves human subjects
- GPS 962.0, if research involves animal subjects

A minimum of 21 credit units, including the following:

• AREC 990.0

- AREC 996.0
- complete 3 credit units of Macroeconomics
- complete 6 credit units chosen based on the student's area of specialization. These courses
 must be approved by the student's advisory committee and the College of Graduate Studies and
 Research. Courses may be taken outside the Department, but in an area related to the area of
 specialization.
- complete 6 credit units of Econometrics
- complete 6 credit units of Microeconomics
- comprehensive examination
- qualifying examination

Work-Integrated Learning Concentration

<u>Students may choose to pursue a concentration in a professional work experience setting, while continuing work toward their thesis. Students must maintain continuous registration in the FDSC 994.0 and complete the following course:</u>

AGRC 800.0 Work Integrated Learning Concentration

Agricultural Economics Master of Science (M.Sc.) - Thesis-based

Students whose undergraduate training is in an area of specialization other than <u>agricultural</u> economics, economics, or a relevant field, are usually required to take about one year of additional training in agricultural economics at the <u>undergraduate</u> level.

Admission Requirements

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Degree Requirements

Students must maintain continuous registration in the 994 course.

- GPS 960.0
- GPS 961.0, if research involves human subjects
- GPS 962.0, if research involves animal subjects

A minimum of 18 credit units including the following:

- AREC 990.0
- AREC 994.0
- complete 3 credit units of Econometrics
- complete 6 credit units of Microeconomics
- complete 9 credit units chosen based on the student's area of specialization. These courses
 must be approved by the student's advisory committee and the College of Graduate Studies and
 Research.

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Courses may be taken outside the Department, but in an area related to the area of specialization. Courses are generally taken at the graduate level. However, one course may be at the senior undergraduate level on approval of the student's advisory committee.

Work-Integrated Learning Concentration

Students may choose to pursue a concentration in a professional work experience setting, while continuing work toward their thesis. Students must maintain continuous registration in the FDSC 994.0 and complete the following course:

AGRC 800.0 Work Integrated Learning Concentration

Rationale: The Work Integrated Learning Concentration will be available to any eligible graduate student registered in a thesis-based program in the College of Agriculture and Bioresources. For more details on specific eligibility requirements, please refer to the attached Policies and Procedures document. The purpose of the Work Integrated Learning Concentration is to allow graduate students to apply their academic knowledge in a professional setting, as well as expand their professional network while acquiring and expanding transferable skills through work experience.

Approved by CGPS' Graduate Programs Committee on November 29, 2022.

Community and Population Health Sciences

Minor Program Modification:

Change to the program requirements for the MSc in Community and Population Health to allow for courses to be taught in a compressed, modular format.

Community and Population Health Sciences Master of Science (M.Sc.) - Thesis-based

Degree Requirements

Students must maintain continuous registration in the 994 course.

- GPS 960.0
- GPS 961.0, if research involves human subjects
- GPS 962.0, if research involves animal subjects
- oral thesis defense
- residency requirement: M.Sc. students are required to live locally until core program
 requirements have been met, including thesis committee approval of pre-proposal, and
 completion of required courses.

A minimum of 18 credit units, including the following:

- 4 credit units of elective graduate-level courses (A 400-level undergraduate course may be taken
 with approval of the Graduate Program Chair). A one credit unit course may be used in
 addition to a three-credit unit class to meet the minimum elective requirement.
- CHEP 800.3
- CHEP 821.2
- CHEP 822.2
- CHEP 823.2
- CHEP 824.2
- An approved 3 credit unit research methods class. The following classes are approved for the MSc research methods requirement with other selections needing approval from the Graduate Chair:
 - CHEP 805.3
 - CHEP 816.3
 - o CHEP 818.3
 - o CHEP 820.3
- CHEP 990.0
- CHEP 994.0

Rationale: Rather than four 3 c.u. core courses taught over two terms, we will offer five intensive modules of 2-3 credit units each to cover the required content and support progressive learning during the first term of study. Four modules will be based on updates to current courses, and one new 2 c.u. course will specifically address health care services and health policy. Updates to curricular content (for example to include additional Indigenous health content) is anticipated within individual courses as part of this process. This new delivery will allow us to update our required content to reflect current community and population health problems and issues, improve efficiency, eliminate duplication, and fill gaps in our current content without altering the total credit units required for the MSc degree.

Approved by CGPS' Graduate Programs Committee on November 29, 2022.

New Course:

CHEP 823.2: Introduction to Health Care and Public Health Systems

This course is an introduction to health care and public health systems with some history, definitions, principles, and challenges at local, national and global levels. Learners will be introduced to the variety of players intervening in these systems, and will become aware of continuous quality improvement research, data sources and frequently used health systems research methods.

<u>Prerequisite or Restriction(s):</u> Must be registered in CHEP graduate program or have permission of instructor.

Instructor(s): Dr. Cory Neudorf, Dr. Juan-Nicolas Pena-Sanchez, and/or Dr. Gary Groot Rationale: This class is created as part of our MSc CPHS Graduate Renewal. This class will specifically be an introduction to health care, public health systems and policy in order to provide learners with the relevant context, principles and definitions necessary to successfully undertake the community and population health sciences MSc program in the department. In the recent survey of our alumni, the lack of teaching in this area was clearly flagged as a gap in our program. With its 2 CU, this new course will efficiently fulfill this new content. It will also provide a foundation for an additional

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concentration in Health Care and Public Health Systems that will draw medically trained students.

Approved by CGPS' Graduate Programs Committee on November 29, 2022.

Course Modification(s):

The following CHEP Course relabels are noted here for information:

CHEP 813.3: Embodied Inequities Social and Structural Determinants of Population Health

Current course number: 813
New course number: 821
Current credit units: 3
New credit units: 2

<u>Current course title:</u> Embodied Inequities Social and Structural Determinants of Population Health <u>New course title:</u> Introduction to Community and Population Health Equity

<u>Current course description:</u> Will focus on a critical consideration of social determinants of health with a focus on the theoretical influences and methodological approaches that inform each. Conceptual and methodological strengths and challenges will be considered with a view to developing critical interpretive skills for the analysis of data sets and research reports and for the translation of findings to applied settings.

<u>New course description:</u> Centered on equity, this course will focus on population/public health as discipline and practice; community health, health promotion, health advocacy; Indigenous health; and global, environmental, and planetary health. Content will include theoretical and methodological considerations.

Rationale: Change is part of MSc CPHS Graduate Renewal.

CHEP 802.3: Community and Population Health Research Methods

Current course number: 802 New course number: 822 Current credit units: 3 New credit units: 2

Rationale: Change is part of MSc CPHS Graduate Renewal.

CHEP 811.3: Professional Research Skills in Community and Population Health

Current course number: 811
New course number: 824
Current credit units: 3
New credit units: 2

<u>Current course title:</u> Professional Research Skills in Community and Population Health <u>New course title:</u> Qualitative and Alternative Research Skills in Community and Population Health <u>Current course description:</u> The goal of the course is to equip graduate students with professional research skills in areas such as grant writing, communication, critical and creative thinking, team leadership and management, research collaborations, research application process, knowledge mobilization and translation.

<u>New course description:</u> The goal of the course is to equip graduate students with research skills through practice in qualitative and alternative data collection approaches, methods and analysis; critical and creative thinking; community-based research collaborations and team management; and knowledge mobilization and translation.

Rationale: Change is part of MSc CPHS Graduate Renewal.

CHEP 800.3: Epidemiology

Current course title: Epidemiology

New course title: Introduction to Epidemiology and Biostatistics

<u>Current course description:</u> Introduces key concepts and the basic methods used in epidemiology to evaluate the distribution and determinants of community and population health.

<u>New course description:</u> Introduces key concepts and the basic methods used in epidemiology and biostatistics and their application to improving public and population health.

<u>Rationale</u>: Change is part of MSc CPHS Graduate Renewal. This course is not changing significantly but will better prepare students for other classes in epidemiology and biostatistics.

Approved by CGPS' Graduate Programs Committee on November 29, 2022.

Environment and Sustainability

Minor Program Modification:

Correction to the overall credit unit count (as this was a typo). Addition of a course choice between ENVS 884.1 or ENVS 885.1.

Governance Foundations for Sustainability Graduate Certificate (G.Cert.)

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Certificate Requirements (8 credit units)

The certificate can be taken as a stand-alone program or the certificate can be applied to the completion of the Master of Sustainability (M.Ss).

 ENVS 818.1 (This course is required for all the graduate certificates. Students that have successfully completed this course previously will not be required to repeat it.)

A minimum of **7_credit units**, <u>comprised of the following</u>:

- ENVS 882.2
- ENVS 884.1 or ENVS 885.1
- ENVS 886.2
- ENVS 834.2

<u>Rationale:</u> The Governance Foundations for Sustainability certificate is currently listed in the catalogue as requiring 10 cu for completion. This is not correct. We are not proposing a change in the number of CUs required to complete this certificate. The approved original proposal (November 19, 2020 – University Council) was for an 8cu certificate. This must just have been entered as a typo at some point.

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As well, with the programmatic changes to our Master of Sustainability program (approved at UCC in June 2022), ENVS 884 will no longer be a required course in the program and will likely not be offered as frequently as needed for certificate students. As a solution, we propose a two–course option in this certificate—either ENVS 884 (Fundamentals of Environmental Policy and Law) or ENVS 885 (Practical Law for Project Development). ENVS 885 is an alternative law course that is a required course for the Energy Security stream in the MSs. Both courses currently exist within SENS's suite of courses.

Approved by CGPS' Graduate Programs Committee on December 05, 2022.

School of Public Health

Minor Program Modification:

Change to clarify the need for continuous registration in PUBH 994 in the MPH thesis-based program.

Public Health

Master of Public Health (M.P.H.) - Thesis-based

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Degree Requirements

Students in the M.P.H. program must achieve a minimum of 70% in each of the core courses to earn course credit and progress through program completion.

- 9 credit units of elective courses
- GPS 962.0 if research involves animal subjects

A minimum of 42 credit units, including the courses required for admission and the following core classes:

Students must maintain continuous registration in PUBH 994

- PUBH 840.3
- PUBH 990.0
- PUBH 993.9
- PUBH 994.0

<u>Rationale:</u> It is currently inferred that student registered in master's thesis programs need to maintain continuous registration in their 994-thesis requirement. The school would like to add the continuous registration requirement to the language in the catalogue to make this requirement specific and bring it inline with the language of our other thesis programs.

Approved by CGPS' Graduate Programs Committee on December 05, 2022.

Items For Information

The following new courses and curricular changes have been approved by the College of Graduate and Postdoctoral Studies and are now being submitted to University Course Challenge for information.

Course Modification(s):

EE 800.3: Circuit Elements in Digital Computations

Current Title: Circuit Elements in Digital Computations

Proposed Title: Advanced Computer Architecture

<u>Current description</u>: The electrical circuit aspects of digital systems. Includes: logic devices, data bus design, processor architecture, input-output techniques, input-output devices, magnetic and electronic storage devices, computer communication techniques and devices.

<u>New description:</u> This class covers FPGA and logic synthesis, instruction set architecture, ALU, data path and control, memory system design, I/O interfacing and advanced computer architecture.

Current weekly hours: 3 Lecture hours and 3 Practicum/Lab hours

Proposed weekly hours: 3 Lecture hours

<u>Rationale:</u> EE 800.3 has been offered many years with the updated contents at the Department of Electrical Engineering. Changing the title, description, and weekly hours will ensure what is in the catalogue aligns.

ENVS 806.3: Field Skills in Environment and Sustainability

<u>Current description</u>: Combining a field experience at Redberry Lake Biosphere Reserve with a team oriented sustainability assessment, this course will provide hands-on training in a variety of practical skills and techniques in ecological hydrological and social sciences related to rural communities and agro-ecosystems. Students should be prepared to work in the outdoors.

<u>New description</u>: This is a core course for the MWS program, which exposes students to field methods in water security related subjects, including hydrology, environmental science, water resources management, water and communities, and water and health. The course learning objectives include fundamentals of hydrology, fundamentals of social engagement, field skills in hydrology, and data collection and management.

<u>Rationale:</u> As courses are adjusted and updated year-to-year, many of our calendar descriptions have not been updated in years and have become slightly out of date. We propose to update the descriptions of 8 of our courses to reflect the current content and subject matter for the courses.

ENVS 809.3: Doctoral Seminar in Environment and Sustainability

<u>Current description</u>: This seminar course will examine ideas and assumptions that underpin attempts to achieve "sustainability" and explore different strategies aimed at advancing sustainability objectives. Students will examine fundamental conflicts in values and choices, governance options and challenges, and scientific and societal uncertainty about human-environment interactions.

New description: This seminar course will examine ideas, debates, and assumptions that underpin attempts to achieve "sustainability" and explore inter- and transdisciplinary research strategies to understand social-ecological systems and advance sustainability objectives. This course will foster professional research and critical review skills in students and provide guidance on academic writing.

Rationale: As courses are adjusted and updated year-to-year, many of our calendar descriptions have not been updated in years and have become slightly out of date. We propose to update the descriptions

of 8 of our courses to reflect the current content and subject matter for the courses.

ENVS 822.3: Biodiversity Conservation and Sustainability

<u>Current description</u>: A graduate level course designed to introduce students in an integrative manner to the field of biodiversity conservation and how to apply its principles to best promote sustainability. Understanding biodiversity and its management requires an interdisciplinary approach with particular reference to mechanisms of change and human impacts on the environment. This course will be interdisciplinary in its approach. The course will focus on: biodiversity (definition, types of biodiversity, distribution, economic and social value); threats to biodiversity (habitat loss, exotic species and their impacts, climate change); and conservation of biodiversity (species at risk, habitats, protected areas). This course will also review social, ethical and policy issues surrounding biodiversity conservation and management (international approaches and agreements, national strategy and regulations for Canada, Saskatchewan provincial regulations), including traditional knowledge.

<u>New description</u>: A graduate level course designed to introduce students in an integrative manner to the field of biodiversity conservation and how to apply its principles to best promote sustainability. Understanding biodiversity and its management requires an interdisciplinary approach with particular reference to mechanisms of change and human impacts on the environment. This course will be interdisciplinary in its approach.

<u>Rationale:</u> As courses are adjusted and updated year-to-year, many of our calendar descriptions have not been updated in years and have become slightly out of date. We propose to update the descriptions of 8 of our courses to reflect the current content and subject matter for the courses.

ENVS 826.3: Climate Change

<u>Current description</u>: This course will help the student develop a fundamental understanding of the climate system, and the potential environmental and social consequences of climate change. Students will also gain a broad knowledge of climate change, climate change impacts in the water cycle, arctic hydrology and how it is related to sea level rising.

<u>New description:</u> This course will help the student develop a fundamental knowledge of the consequences of climate change from the environmental and social aspects. Students will gain a comprehensive understanding of climate change, and its impacts on the different parts of the Earth systems, such as the water cycle, arctic hydrology and how it is related to sea level rising. Climate change impacts on human society will also be discussed.

<u>Rationale:</u> As courses are adjusted and updated year-to-year, many of our calendar descriptions have not been updated in years and have become slightly out of date. We propose to update the descriptions of 8 of our courses to reflect the current content and subject matter for the courses.

ENVS 828.3: Isotope Tracers in Catchment Hydrology

Current title: Isotope Tracers in Catchment Hydrology

New title: Isotope Hydrology

<u>Current description</u>: This course is an introduction to the principles of stable isotope chemistry as applied to environmental research in the hydrosphere and biosphere, focusing on the use of stable isotope investigative tools in a variety of ecological situations.

New description: This course is an introduction to the use of isotope tracers in catchment hydrology.

The course covers the principles of isotope chemistry and then how isotope tracing can be used in groundwater hydrology, surface water hydrology and determining the sources and age of plant transpiration. Basic research and applied used of tracers will be covered for earth scientists, engineers, and ecologist.

<u>Rationale:</u> As courses are adjusted and updated year-to-year, many of our calendar descriptions have not been updated in years and have become slightly out of date. We propose to update the descriptions of 8 of our courses to reflect the current content and subject matter for the courses.

ENVS 832.3: Risk Assessment and Negotiation of Environmental Issues

<u>Current description</u>: This course helps students develop a comprehensive understanding of the interdisciplinary nature of environmental issues and teaches them the roles that science and society have in the assessment and management of such issues. The class will elucidate the perspectives of different stakeholders using classic and interactive elements.

<u>New description</u>: This course introduces the concepts of risk assessment and environmental negotiation. Negotiations and consultations are central to managing relations among diverse stakeholder groups in assessing and addressing environmental issues. This course uses experiential learning where students actively investigate an environmental issue, conduct a risk assessment, and negotiate an outcome among stakeholders through role play.

<u>Rationale:</u> As courses are adjusted and updated year-to-year, many of our calendar descriptions have not been updated in years and have become slightly out of date. We propose to update the descriptions of 8 of our courses to reflect the current content and subject matter for the courses.

ENVS 851.2: Design Thinking for Sustainability

<u>Current description</u>: Design thinking harnesses insights from users of a service or product to prototype innovative solutions. Students will be introduced to products and services that moved through design thinking spaces of inspiration, ideation, and implementation while studying how design thinking has fostered new products and services that are sustainably regenerative.

New description: Design thinking harnesses insights from users to prototype innovative solutions. Students learn how products and services move through design thinking spaces of inspiration, ideation, and implementation to foster new products and services that are sustainably regenerative. Students develop a new product or service using design thinking tools to address a sustainability challenge. Rationale: As courses are adjusted and updated year-to-year, many of our calendar descriptions have not been updated in years and have become slightly out of date. We propose to update the descriptions of 8 of our courses to reflect the current content and subject matter for the courses.

ENVS 861.3: Fundamentals of Climate Change Vulnerability Assessments

<u>Current description</u>: This course is designed to demonstrate how climate science is used in vulnerability assessments for managing complex socio-ecological systems. It will also explore the concept of vulnerability and the degree to which geophysical, biological and socio-economic systems are susceptible to, and able to cope with, impacts of climate change.

<u>New description:</u> This course aims to support the students in developing a comprehensive understanding of the impacts of climate change, adaptation, and vulnerability. Students will also explore the concepts of the assessment the climate change vulnerability, the potential risks and benefits

of climate change, and how to cope with the impacts of climate change or the adaptation options. Rationale: As courses are adjusted and updated year-to-year, many of our calendar descriptions have not been updated in years and have become slightly out of date. We propose to update the descriptions of 8 of our courses to reflect the current content and subject matter for the courses.

INDG 802.3: Applied Native Studies Research Methods

<u>Current title</u>: Applied Native Studies Research Methods <u>New title</u>: Applied Indigenous Studies Research Methods

INDG 803.3: Theoretical Issues in Native Studies

<u>Current title:</u> Theoretical Issues in Native Studies <u>New title:</u> Theoretical Issues in Indigenous Studies

LING 815.3: Topics in Language Structure

Current prerequisite: N/A

New prerequisite: Registration in a Graduate program.

LING 817.3: Topics in Typology and Areal Linguistics

Current prerequisite: N/A

New prerequisite: Registration in a Graduate program.

LING 818.3: Second Language Acquisition

Current prerequisite: N/A

New prerequisite: Registration in a Graduate program.

LING 819.3: Bilingualism and Multilingualism

Current prerequisite: N/A

New prerequisite: Registration in a Graduate program.

LING 820.3: Topics in Applied Linguistics

Current prerequisite: N/A

Proposed prerequisite: Registration in a Graduate program.

ME 843.3: Materials Characterization Techniques

<u>Current description</u>: An overview of both established and new materials characterization techniques, including mechanical characterization (hardness measurements, tensile test), electrical characterization techniques (electrical resistivity), x-ray diffraction, thermal analysis (e.g., DTA, DSC, TGA, TMA, DMA), optical microscopy, electron microscopy (e.g., SEM, TEM, EDS, WDS), and surface analysis.

<u>New description</u>: An overview of both established and new materials characterization techniques, including mechanical characterization (e.g., hardness measurements, tensile test, Charpy impact test,

fatigue test), x-ray diffraction, x-ray fluorescence, optical microscopy, electron microscopy (e.g., SEM, EDS, WDS), and thermal analysis (e.g., DTA, DSC, TGA, TMA).

<u>Rationale:</u> Electrical characterization techniques (electrical resistivity) and TEM (from electron microscopy) were removed because of lack of equipment for demonstration. ME's TEM was decommissioned a few years ago. It is no longer necessary to keep them in the syllabus.

ME 862.3: Analysis and Synthesis of Linear Control Systems

<u>Current description</u>: Extension of linear feedback control principles emphasizing transfer functions and frequency response. Stability - Routh, Hurwitz, root locus, Nyquist. Bode plots. Compensation - series and minor loop equalization. Parameter plane analysis.

<u>New description</u>: Introduces students to analysis and controller design for linear control systems. Topics include: Laplace transform and transfer function, modeling of physical systems, system transient and frequency responses, system stability and analyses, root locus techniques, state space representation, controller design via root locus and state space, z-Transform and digital control systems, and applications of Matlab and Simulink to control systems.

<u>Rationale:</u> With advances in computing technologies and control systems, the topics covered have been modified to (1) reflect the trends in the field of control system, such as z-Transform and digital control system and application of Matlab and Simulink in control systems and (2) remove some of the topics, such as Stability — Routh and Hurwitz, now typically being covered in the second- or third-year undergraduate courses, such as ME 351 at USask.

ME 887.3: Introduction to Microsystems

Current prerequisite: N/A

New prerequisite: Permission of the instructor.

PTH 880.12: Clinical Practice IV

<u>Current description</u>: A full-time clinical education course, normally three clinical placements of five weeks duration each, anywhere in Canada. With special permission students may participate in a structured inter-professional international clinical practicum. A clinical caseload of advancing complexity and amount is assigned, incorporating the theory from the previous modules.

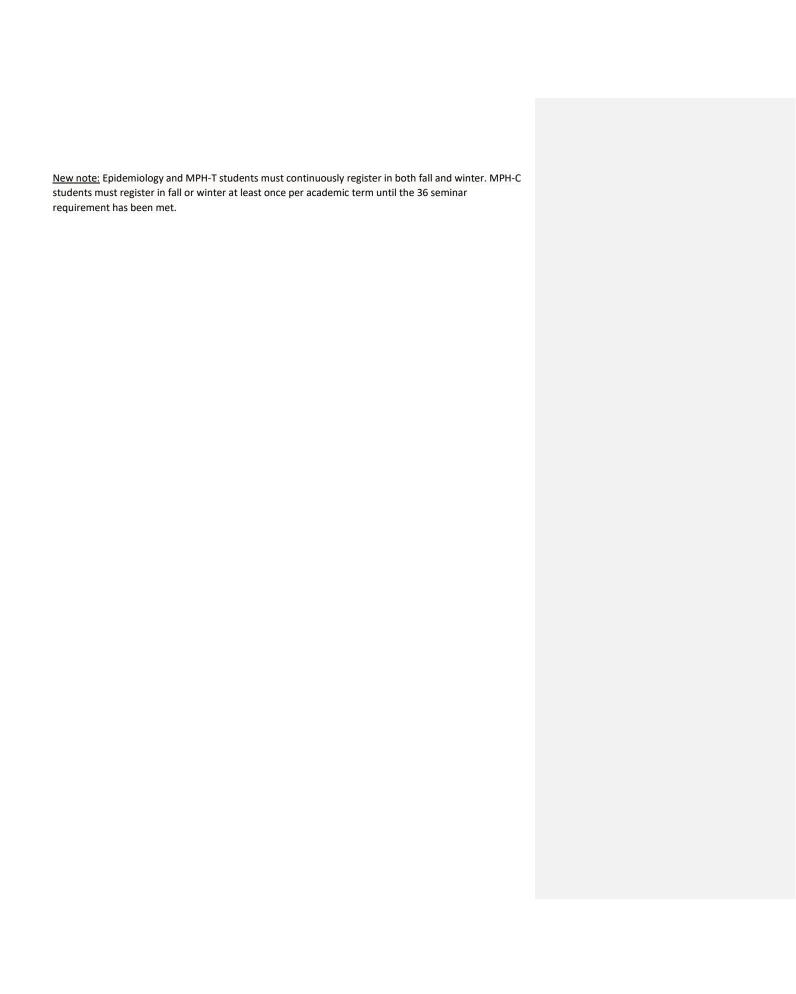
<u>New description</u>: A full-time clinical education course, normally two clinical placements of six weeks duration each, anywhere in Canada. With special permission students may participate in a structured inter-professional international clinical practicum. A clinical caseload of advancing complexity and amount is assigned, incorporating the theory from the previous modules.

PSY 817.3: Indigenous Cultural Safety for Psychologists

<u>Current title</u>: Indigenous Cultural Safety for Psychologists <u>New title</u>: Indigenous Cultural Safety for Helping Professionals

PUBH 990.0: Public Health Seminar

<u>Current note:</u> All MPH and Epidemiology students must register in both the fall and winter terms for this course.



University Course Challenge – College of Law

The following curricular changes were approved by the College of Law Faculty Council and are being submitted to University Course Challenge for approval:

Course Deletions

LAW 300.0: Law Minor Research Paper

The Minor Research Paper is a single piece of work 4,000 - 12,500 words (exclusive of footnotes, endnotes, title pages, table of contents, and bibliography) which is analytical in nature and includes a research paper, a case comment, drafting exercise or book or literature review and which is valued for at least 25% of the student's mark in a course.

LAW 301.0: Law Major Research Paper

The Major Research Paper is a single piece of work 7,500 - 12,500 words (exclusive of footnotes, endnotes, title pages, table of contents, and bibliography) which incorporates a substantial element of original analysis by the student and which is valued at between 70% and 100% of the student's mark in a course.

Rationale: While the minor and major papers have always been required for the J.D. degree, 2021-22 was the first year they were created as courses (University Course Challenge, December 2020). The courses were meant to facilitate program monitoring; however, it's been determined that Degree Works is a more effective tool for this. With the deletion of these two courses, the J.D. program will not change; the requirements will remain embedded in the students' courses of choice.

Minor Program Revisions

Juris Doctor (J.D.) (90 credit units)

Year 1 (30 credit units)

During the first year, students must pass LAW 245 Legal Research and Writing with a grade of 60% or better and must pass LAW 244 Dispute Resolution. In addition, students must pass each of the following courses, and achieve an annual GPA of 64% or better:

- LAW 202.5 Contracts
- LAW 203.5 Criminal Law
- LAW 210.5 Property I
- LAW 211.5 Tort Law I
- LAW 230.5 Constitutional Law
- LAW 232.3 Kwayeskastasowin Setting Things Right
- LAW 244.0 Dispute Resolution
- LAW 245.2 Legal Research and Writing

Year 2 and Year 3 (60 credit units)

Students must register in 15 credit units per term. Students must receive a grade of 60% or better in

each of the LAW 300 Minor Research Paper, LAW 301 Major Research Paper, and the seminar requirement, to receive credit for the research paper requirements or the seminar requirement.

The following courses are is required in Year 2:

- LAW 340.3 Administrative Law I
- LAW 300.0 Law Minor Research Paper or LAW 301.0 Law Major Research Paper

The following courses are required in either Year 2 or Year 3:

- LAW 300.0 Law Minor Research Paper
- LAW 301.0 Law Major Research Paper
- LAW 421.3 Legal Ethics and Professionalism or LAW 497.3 Legal Ethics Clinical Seminar*

Students must complete 3 credit units from the following list of upper-year Indigenous Law courses, or equivalent, as approved by the Associate Dean, Academic:

- LAW 308.3 Global Indigenous Rights and Resource Development
- LAW 313.3 Selected Topics in Indigenous Legal Studies
- LAW 341.3 First Nations Economic Development
- LAW 422.3 Indigenous Legal Processes
- LAW 436.3 Aboriginal Law
- LAW 443.3 Indigenous Peoples and the Criminal Process
- LAW 447.3 Aboriginal Rights Moot
- LAW 453.3 Aboriginal Law and Policy in Canada
- LAW 473.3
- LAW 479.3 Selected Topics in Indigenous Legal Studies Seminar
- LAW 480.3 Indigenous Peoples in International and Comparative Law

Remaining LAW courses to complete the 90 credit units are to be selected by students from offered LAW courses:

• LAW — 300-Level, 400-Level

Note: Students must complete a minimum of 3 credit units from the following list of Seminar Classes or equivalent, as approved by the Associate Dean, Academic (Year 2 or Year 3). The Seminar Class may meet more than one requirement. Choices are as follows:

- LAW 305.3 Clinical Law
- LAW 393.3
- LAW 341.3 First Nations Economic Development
- LAW 400.3 Wildlife Law
- LAW 405.3 Advanced Criminal Law
- LAW 406.3 Law and Culture
- LAW 413.3 Current Issues in Law Reform
- LAW 414.3 Access to Justice and the Institutions of Justice
- LAW 416.3 Elder Law
- LAW 418.3 Sexual Assault
- LAW 420.3 Current Issues in Insolvency
- LAW 422.3 Indigenous Legal Processes
- LAW 424.3 Sports Law
- LAW 426.3 Advanced Secured Transactions
- LAW 429.3
- LAW 431.3 Advanced Constitutional Law
- LAW 432.3 Human Rights
- LAW 433.3 Sallows Human Rights Seminar
- LAW 435.3 Law and Economics
- LAW 438.3 Economic Inequality Poverty and the Law
- LAW 442.3 Refugee Law
- LAW 443.3 Indigenous Peoples and the Criminal Process
- LAW 446.3 Natural Resources Law
- LAW 453.3 Aboriginal Law and Policy in Canada
- LAW 458.3 Advanced Health Law
- LAW 463.3 Fiduciary Obligations

- LAW 465.3 Law Development and the International System
- LAW 466.3 Youth Criminal Justice
- LAW 470.3
- LAW 473.3
- LAW 474.3 Children and Law
- LAW 479.3 Selected Topics in Indigenous Legal Studies Seminar
- LAW 480.3
- LAW 481.3 Business Regulation
- LAW 482.3 Criminal Intensive Seminar
- LAW 485.3 International Criminal Law
- LAW 486.3 Law and Psychiatry
- LAW 488.3 Tax Policy
- LAW 491.3 Clinical Law Seminar
- LAW 493.3 Systemic Justice
- LAW 494.3 Prison Law and Human Rights
- LAW 497.3 Legal Ethics Clinical Seminar

Please note the following:

- •In special cases, a student may be given permission by the Associate Dean, Academic to undertake a program involving a load in excess of 15 credit units.
- •Students may be permitted to take a maximum of 6 credit units given by another College, during second and third year, for credit in the College of Law. The course(s) must be approved by the Associate Dean, Academic. Applications are assessed from the standpoint of how the outside senior-level course contributes to the applicant's understanding of the law.
- *Students who choose to complete LAW 497.3 Legal Ethics Clinical Seminar must complete LAW 492.12 Clinical Law Practicum concurrently. LAW 492.12 Clinical Law Practicum will be counted toward the 15 credit unit course load per term required in Years 2 and 3.

College of Medicine, University Course Challenge Submission, December 2022

The following change has been approved by the College of Medicine and is now being submitted to University Course Challenge for final approval:

Course Deletion:

MEDC 309.8: Selective Clinical Rotations

This 6 week course is designed to allow medical students to further pursue their own interests from among a selected list of areas within 4 weeks of internal medicine and 2 weeks of surgery. The two Selective opportunities are available throughout Year 3 as part of the rotation schedule.

Restriction(s): M.D. program only; in appropriate year of study only.

Rationale: This course is no longer a requirement of the program as it has been replaced by MEDC 408.8 Selective Clinical Rotations.

Contact: Sherry Pederson



University Course Challenge – December 2022

The following items were approved by Edwards Faculty Council on December 9, 2022 and are now submitted to the University Course Challenge for Approval.

Contact: Vicky Parohl (parohl@edwards.usask.ca)

Certificate in Entrepreneurship

Minor Program Revision

Change required course of COMM 341.3 Entrepreneurial Thinking and Innovation for the Certificate in Entrepreneurship (CENT) to be Comm 341.3 Entrepreneurial Thinking and Innovation or Comm 346.3 Technology Commercialization.

Requirements (24 credit units)
Required Courses (15 credit units)

- COMM 101.3 Introduction to Business
- COMM 201.3 Introduction to Financial Accounting
- COMM 204.3 Introduction to Marketing
- <u>COMM 341.3</u> Entrepreneurial Thinking and Innovation or <u>COMM 346.3 Technology</u>
 <u>Commercialization</u>
- COMM 349.3 Introduction to Entrepreneurship

Electives (9 credit units)

- COMM 104.3 Foundations of Business Statistics
- COMM 105.3 Introduction to Organizational Behaviour
- COMM 203.3 Introduction to Finance
- <u>COMM 205.3</u> Introduction to Operations Management
- COMM 210.3 Introduction to Management Accounting
- COMM 211.3 Human Resource Management
- COMM 229.3 Personal Financial Management
- COMM 352.3 Marketing Strategy

Rationale: Currently, Comm 341.3 Entrepreneurial Thinking and Innovation is one of the required courses for CENT, but it is a challenging course to staff because of the specific focus of that course. Comm 346.3 Technology Commercialization is a current offering with in-house instructional expertise, and it includes several parallel learning objectives. Comm 346.3 is an excellent required course for CENT because commercializing technology is an important skill for many of the students who might register in that program. Due to resources constraints and the inability to offer both Comm 341 and Comm 346 consistently in the same year, it makes sense to include one or the other as a required course for CENT.

Aboriginal Business Administration Certificate

Minor Program Revisions

Add COMM 121.3 Business Mathematics as a required Math course option alongside MATH 102.3 Precalculus Mathematics in the Aboriginal Business Administration Certificate.

Rationale: Students are coming in with already having an equivalent to MATH 102.3 from high school and because currently there is no option and MATH 102.3 is required are having to retake the course. Adding COMM 121.3 as an option allows those students to take the Business Math and have one more core course towards their B.Comm. should they chose to ladder in.

Change English 3 cu requirement to 3 cu English Language Writing Requirement

Rationale: Broadens the course options available for students to take from four classes to 21 and better aligns with the new B.Comm. 2021 curriculum which requires the 3 cu English Language Requirement as well.

Change 6 cu Social Sciences Non-Commerce Electives to 6 cu Non-Commerce Electives.

Broadens the course options available for students and aligns with the new B.Comm. 2021 curriculum which does not restrict to social sciences or humanities any longer.

Mark-up for Proposed Changes

Requirements (48 credit units)

Year 1 - Fall Term and Winter Term

COMM 115.0 Business School Life I

Year 2 - Fall and Winter Term

- COMM 120.0 Business School Life II
- In year 2 of the program, students in good standing will be allowed to take five classes per term with advisor approval.

Required Courses (36 credit units)

- COMM 100.3 Business Communication
- **COMM 101.3** Introduction to Business
- **COMM 104.3** Foundations of Business Statistics
- COMM 105.3 Introduction to Organizational Behaviour
- COMM 201.3 Introduction to Financial Accounting
- COMM 203.3 Introduction to Finance
- COMM 204.3 Introduction to Marketing
- COMM 211.3 Human Resource Management

- COMM 229.3 Personal Financial Management
- ECON 114.3 Introductory Macroeconomics
- **ECON 111.3** Introductory Microeconomics
- MATH 102.3 Precalculus Mathematics or COMM 121.3 Business Mathematics

English Language Requirement (3 credit units)

- Choose 3 credit units from the following:
 - o (ELWR List)

Social Sciences Non-Commerce Electives (6 credit units)

Choose 6 credit units of 100-level non-COMM electives Humanities or Social Sciences:

Please note: Certain WGST courses may be considered a Humanities and/or Social Science. Refer to the Class Search.

PSY 101 will not be accepted for credit. If you have questions about a class that is not listed here, but appears to be a Humanities or Social Science class, or would like to take a senior-level class, please contact the Edwards School of Business.

- ANTH 100-Level
- ARCH 100 Level
- ← CHIN 100-Level
- CMRS 100-Level
- CREE 100-Level
- ENG 100 Level
- FREN 100 Level
- GEOG 130.3 Environment Health and Planning
- ◆ GERM 100-Level
- GRK 100-Level
- <u>HEB 100 Level</u>
- HIST 100 Level
- HNDI 100 Level
- INCC 100-Level
- INDG 100-Level
- ◆ IS 100 Level
- JPNS 100 Level
- LATN 400 Level
- LING 100-Level
- LIT 100-Level
- PHIL 100-Level
- POLS 100 Level
- PSY 100 Level
- RLST 100-Level

- RUSS 100-Level
- SNSK 100 Level
- SOC 100-Level
- ◆ SPAN 100-Level
- UKR 100-Level
- WGST 100-Level

Senior Commerce Elective (3 credit units)

 3 credit units of senior level Commerce elective (This must be chosen in conjunction with an academic advisor.)

For Information

The following change has been submitted to APC for approval:

Change the name from Aboriginal Business Administration Certificate to Indigenous Business Administration Certificate.

Rationale: To better align with the preferred terminology and description the University and community are now using to refer to Indigenous peoples.

Bachelor of Commerce

Course Revision

Change calendar description for COMM 347.3 Indigenous Business in Canada.

The Saskatchewan and Canadian business landscape is changing. Aboriginal Entrepreneurs and Businesses are making bigger impacts in the business community and this trend will continue. This course is intended to provide knowledge about the unique environment in which aboriginal owned businesses operate. This unique environment creates some interesting opportunities and even more unexpected challenges. The impact of treaties, the Indian Act, Land Claim Settlements and other issues are all discussed in the context of their impact on economic development for aboriginal peoples. This course also examines the best practices related to the legal structures, governance models and management systems of aboriginal businesses by studying successful aboriginal businesses and communities. These case studies focus on Western Canada and specifically Saskatchewan.

This course explores how Indigenous communities in Canada achieve greater self-determination through economic development. Historic, legal, political, cultural, social, and economic realities of Indigenous Peoples and communities are discussed and approaches and best practices that Indigenous communities utilize to achieve success in their economic pursuits are explored. An understanding of truth and reconciliation is developed, with a specific focus on economic reconciliation and meaningful Indigenous engagement in business settings.

Rationale: The proposed calendar description better reflects the direction of the course.