Academic Programs Committee of Council

University Course Challenge

Scheduled posting: December, 2019

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 Education
College of Engineering
Edwards School of Business
College of Graduate and Postdoctoral Studies
College of Law
College of Medicine
College of Nursing
School of Environment and Sustainability

Approval: Date of circulation: December 12, 2019
Date of effective approval if no challenge received: December 31, 2019

Next scheduled posting:

The next scheduled posting will be January 16, 2020, with a submission deadline **January 14, 2020.** 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 Office of the University Secretary.

College of Agriculture and Bioresources, Submission to December 2019 University Course Challenge

The following curricular revisions were approved by the College of Agriculture & Bioresources Undergraduate Affairs Committee on November 26, 2019. They are being submitted here for approval:

Changes to Soil Science Programs

Environmental Science

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

Minimum Requirements for Degree (120 credit units)

Direct entry students are required to select a minor in one of the fields of specialization within the College or an approved cross-college minor. Block transfer students do not require a minor but instead must take a prescribed number of courses from a list of approved restricted electives.

Year 1 - Fall Term (15 credit units)

- **AGRC 111.3** Discovery in Plant and Soil Sciences
- **BIOL 120.3** The Nature of Life
- **CHEM 112.3** General Chemistry I Structure Bonding and Properties of Materials
- **ECON 111.3** Introductory Microeconomics

Choose 3 credit units from the areas of Social Science, Humanities or Fine Arts:

Humanities

- **CHIN — 100-Level, 200-Level, 300-Level, 400-Level**
- **CLAS — 100-Level, 200-Level, 300-Level, 400-Level**
- **CREE — 100-Level, 200-Level, 300-Level, 400-Level**
- **ENG — 100-Level, 200-Level, 300-Level, 400-Level**
- **FREN — 100-Level, 200-Level, 300-Level, 400-Level**
- **GERM — 100-Level, 200-Level, 300-Level, 400-Level**
- **HEB — 100-Level, 200-Level, 300-Level, 400-Level**
- **HIST — 100-Level, 200-Level, 300-Level, 400-Level**
- **HNDI — 100-Level, 200-Level, 300-Level, 400-Level**
- **INTS — 100-Level, 200-Level, 300-Level, 400-Level**
- **JPNS — 100-Level, 200-Level, 300-Level, 400-Level**
- **LATN — 100-Level, 200-Level, 300-Level, 400-Level**
- **LIT — 100-Level, 200-Level, 300-Level, 400-Level**

- **PHIL — 100-Level, 200-Level, 300-Level, 400-Level**
- **RLST — 100-Level, 200-Level, 300-Level, 400-Level**
- **RUSS — 100-Level, 200-Level, 300-Level, 400-Level**
- **SNSK — 100-Level, 200-Level, 300-Level, 400-Level**
- **SPAN — 100-Level, 200-Level, 300-Level, 400-Level**
- **UKR — 100-Level, 200-Level, 300-Level, 400-Level**
- **WGST — 100-Level, 200-Level, 300-Level, 400-Level**
- Certain WGST courses may be considered a Humanities and/or Social Science. Refer to the Class Search.
- MUS 111 is acceptable toward the Humanities requirement.

Social Sciences

- **ANTH — 100-Level, 200-Level, 300-Level, 400-Level**
- **ARCH — 100-Level, 200-Level, 300-Level, 400-Level**
- **ECON — 100-Level, 200-Level, 300-Level, 400-Level**
- **GEOG 130.3** Environment Health and Planning
- **INDG — 100-Level, 200-Level, 300-Level, 400-Level**
- **IS — 100-Level, 200-Level, 300-Level, 400-Level**
- **LING — 100-Level, 200-Level, 300-Level, 400-Level**
- **PLAN — 100-Level, 200-Level, 300-Level, 400-Level**
- **POLS — 100-Level, 200-Level, 300-Level, 400-Level**
- **PSY — 100-Level, 200-Level, 300-Level, 400-Level**
- **SOC — 100-Level, 200-Level, 300-Level, 400-Level**
- **SOSC — 100-Level, 200-Level, 300-Level, 400-Level**
- **WGST — 100-Level, 200-Level, 300-Level, 400-Level**

Any senior-level social science course, provided the prerequisite is met. Please note that certain GEOG courses are considered Science courses. Refer to the Class Search.

Statistics courses in social sciences are not accepted for credit toward the Social Science Requirement (eg. ECON 204, PSY 233, PSY 234, SOC 225 and SOC 325).

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

Fine Arts

- 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

Year 1 - Winter Term (15 credit units)

- AGRC 112.3 Animal Agriculture and Food Science
- AGRC 113.3 Agri Food Issues and Institutions
- BIOL 121.3 The Diversity of Life or EVSC 110.3 Renewable Resources and Environment
- CHEM 115.3 General Chemistry II Chemical Processes or CHEM 250.3 Introduction to Organic Chemistry

Choose 3 credit units from the areas of Social Science, Humanities or Fine Arts:

Humanities

- CHIN — 100-Level, 200-Level, 300-Level, 400-Level
- CLAS — 100-Level, 200-Level, 300-Level, 400-Level
- CREE — 100-Level, 200-Level, 300-Level, 400-Level
- ENG — 100-Level, 200-Level, 300-Level, 400-Level
- FREN — 100-Level, 200-Level, 300-Level, 400-Level
- GERM — 100-Level, 200-Level, 300-Level, 400-Level
- HEB — 100-Level, 200-Level, 300-Level, 400-Level
- HIST — 100-Level, 200-Level, 300-Level, 400-Level
- HNDI — 100-Level, 200-Level, 300-Level, 400-Level
- INTS — 100-Level, 200-Level, 300-Level, 400-Level
- JPNS — 100-Level, 200-Level, 300-Level, 400-Level
- LATN — 100-Level, 200-Level, 300-Level, 400-Level
- LIT — 100-Level, 200-Level, 300-Level, 400-Level
- PHIL — 100-Level, 200-Level, 300-Level, 400-Level
- RLST — 100-Level, 200-Level, 300-Level, 400-Level
- RUSS — 100-Level, 200-Level, 300-Level, 400-Level
- SNSK — 100-Level, 200-Level, 300-Level, 400-Level

- **SPAN — 100-Level, 200-Level, 300-Level, 400-Level**
- **UKR — 100-Level, 200-Level, 300-Level, 400-Level**
- **WGST — 100-Level, 200-Level, 300-Level, 400-Level**
- Certain WGST courses may be considered a Humanities and/or Social Science. Refer to the Class Search.
- MUS 111 is acceptable toward the Humanities requirement.

Social Sciences

- **ANTH — 100-Level, 200-Level, 300-Level, 400-Level**
- **ARCH — 100-Level, 200-Level, 300-Level, 400-Level**
- **ECON — 100-Level, 200-Level, 300-Level, 400-Level**
- **GEOG 130.3** Environment Health and Planning
- **INDG — 100-Level, 200-Level, 300-Level, 400-Level**
- **IS — 100-Level, 200-Level, 300-Level, 400-Level**
- **LING — 100-Level, 200-Level, 300-Level, 400-Level**
- **PLAN — 100-Level, 200-Level, 300-Level, 400-Level**
- **POLS — 100-Level, 200-Level, 300-Level, 400-Level**
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- **SOSC — 100-Level, 200-Level, 300-Level, 400-Level**
- **WGST — 100-Level, 200-Level, 300-Level, 400-Level**

Any senior-level social science course, provided the prerequisite is met. Please note that certain GEOG courses are considered Science courses. Refer to the Class Search.

Statistics courses in social sciences are not accepted for credit toward the Social Science Requirement (eg. ECON 204, PSY 233, PSY 234, SOC 225 and SOC 325).

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

Fine Arts

- **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**

Year 2 (30 credit units)

- EVSC 203.3 Sampling and Laboratory Analysis
- EVSC 210.3 Environmental Physics
- EVSC 220.3 Environmental Soil Science
- FABS 212.3 Agrifood and Resources Microbiology OR BMSC 210.3 Microbiology
- GEOL 206.3 Earth Systems or GEOG 120.3 Introduction to Global Environmental Systems
- MATH 104.3 Elementary Calculus or MATH 110.3 Calculus I or MATH 125.3 Mathematics for the Life Sciences
- PLSC 213.3 Principles of Plant Ecology
- PLSC 214.3 Statistical Methods or STAT 245.3 Introduction to Statistical Methods

Choose 3 credit units from the following:

- ENG 111.3 Literature and Composition Reading Poetry
- ENG 112.3 Literature and Composition Reading Drama
- ENG 113.3 Literature and Composition Reading Narrative
- ENG 114.3 Literature and Composition Reading Culture
- ENG 120.3 Introduction to Creative Writing

Open Electives

- Choose 3 credit units open electives

Years 3 & 4 (60 credit units)

- ENVS 401.3 Sustainability in Action or EVSC 485.3
- GEOG 222.3 Introduction to Geomatics
- RCM 300.3 Effective Professional Communication

Choose 3 credit units of Environmental Policy from the following:

- AREC 330.3 Land Resource Economics
- ECON 275.3 Economics of Natural Resources
- ECON 277.3 Economics of the Environment
- GEOG 280.3 Environmental Geography

Choose 3 credit units of Environmental Risk Assessment from the following:

- ENVE 381.3 Sustainability and Environmental Assessment

- GEOG 235.3 Earth Processes and Natural Hazards A Canadian Perspective
- GEOG 386.3 Environmental Impact Assessment
- TOX 301.3 Environmental Toxicology
- TOX 321.3 Risk Assessment and Regulatory Toxicology

Choose 6 credit units of Environmental Quality from the following:

- CHEM 375.3 Environmental Chemistry
- EVSC 420.3 Environmental Fate and Transport of Toxic Substances
- EVSC 421.3 Contaminated Site Management and Remediation
- EVSC 430.3
- GEOG 225.3 Hydrology of Canada
- GEOG 233.3 Introduction to Weather and Climate
- GEOG 325.3 Principles of Fluvial Systems
- GEOG 333.3 Global Climate Change
- GEOL 229.3 Introductory Geochemistry
- **SLSC 342.3 Agronomic Soil Microbiology**
- SLSC 350.3 Terrestrial Restoration

Choose 3 credit units Field Courses from the following:

- EVSC 380.3 Grassland Soils and Vegetation
- SLSC 480.3 Soils and Boreal Landscapes

Choose 6 credit units of Agriculture and the Environment from the following:

- ANBI 375.3 Animals and the Environment
- ENVE 432.3 Land Management and Reclamation
- PLSC 201.3 Field Crops of Western Canada or PLSC 222.3 Introduction to Field Crops
- PLSC 401.3 Sustainable Crop Production
- PLSC 422.3 Rangeland Ecology and Management
- PLSC 425.3 Forest Ecology
- SLSC 312.3 Soil Fertility and Fertilizers

Choose 6 credit units from the following:

- SLSC 232.3 Soil Genesis and Classification

- **SLSC 313.3** Environmental Soil Chemistry
- **SLSC 322.3** Environmental Soil Physics
- **SLSC ~~344.3~~ 444.3** Soil Ecology

Choose 12 credit units of restricted electives:

Direct entry students are required to select a minor in one of the fields of specialization within the College or an approved cross-college minor. Completion of the minor requirements will satisfy the Restricted Electives requirement. Students transferring under a block transfer agreement with another college or institution do not require a minor but instead must take a prescribed number of courses from a list of approved restricted electives. For a list of these classes see the Block Transfer section below.

Open Electives

- Choose 12 credit units open electives

Resource Science

Bachelor of Science in Renewable Resource Management [B.Sc.(RRM)]

Minimum Requirements for Degree (120 credit units)

Students are required to achieve a 60% Cumulative Weighted Average on 120 credit units of approved courses.

Year 1 (30 credit units)

- 3 credit units open electives
- **BIOL 120.3** The Nature of Life
- **BIOL 121.3** The Diversity of Life
- **CHEM 112.3** General Chemistry I Structure Bonding and Properties of Materials
- **ECON 111.3** Introductory Microeconomics
- **EVSC 110.3** Renewable Resources and Environment
- **GEOG 120.3** Introduction to Global Environmental Systems or **GEOL 206.3** Earth Systems
- **INDG 107.3** Introduction to Canadian Indigenous Studies
- **MATH 104.3** Elementary Calculus or **MATH 110.3** Calculus I or **MATH 125.3** Mathematics for the Life Sciences
- **RRM 114.3** Introductory Resource Economics and Policy

Year 2 (30 credit units)

- 12 credit units open electives

- **EVSC 203.3** Sampling and Laboratory Analysis
- **GEOG 222.3** Introduction to Geomatics
- **GEOG 280.3** Environmental Geography
- **PLSC 213.3** Principles of Plant Ecology or **BIOL 228.3** An Introduction to Ecology and Ecosystems or **GEOG 271.3**
- **RCM 300.3** Effective Professional Communication
- **RRM 215.3** Identification of Saskatchewan Plants and Soils

Note: Students planning to declare a Soil Science minor are advised to register in **EVSC 220.3** Environmental Soil Science or **SLSC 240.3** Agricultural Soil Science as an open elective and meet with an academic advisor as soon as possible to plan their program.

Year 3 (30 credit units)

- 3 credit units open electives
- **GEOG 322.3** Introduction to Geographic Information Systems
- **PLSC 214.3** Statistical Methods or **STAT 245.3** Introduction to Statistical Methods
- **RRM 201.1** Geographical Information Systems
- **RRM 301.9** Field Course in Renewable Resource Management
- **RRM 312.3** Natural Resource Management and Indigenous Peoples
- **RRM 323.2** Resource Data and Environmental Modeling
- **SLSC 232.3** Soil Genesis and Classification
- one of **GEOG 385.3** Analysis of Environmental Management and Policy Making, **GEOG 386.3** Environmental Impact Assessment or **ENVE 381.3** Sustainability and Environmental Assessment

Year 4 (30 credit units)

- **ENVS 401.3** Sustainability in Action or **EVSC 485.3**
- **RRM 421.6** Group Project in Renewable Resource Management

Choose 21 credit units of restricted electives from the following, depending on area of interest:

Aboriginal Land Management

Ecology

Geological Sciences

Northern Studies

Physical Geography

Policy

Resource Economics Policy

Soil Science

- EVSC 220.3 **Environmental Soil Science**
- SLSC 312.3 **Soil Fertility and Fertilizers**
- SLSC 313.3 **Environmental Soil Chemistry**
- SLSC 322.3 **Environmental Soil Physics**
- **SLSC 342.3 Agronomic Soil Microbiology**
- ~~**SLSC 344.3**~~ **SLSC 444.3 Soil Ecology**
- SLSC 460.3 **Forest Soils**
- SLSC 480.3 **Soils and Boreal Landscapes**

Techniques

Water Science

Soil Science

Minor

Requirements (18 credit units)

- SLSC 232.3 Soil Genesis and Classification
- SLSC 240.3 Agricultural Soil Science or EVSC 220.3 Environmental Soil Science

Choose 12 credit units from the following:

- EVSC 203.3 Sampling and Laboratory Analysis
- EVSC 380.3 Grassland Soils and Vegetation
- EVSC 420.3 Environmental Fate and Transport of Toxic Substances
- EVSC 421.3 Contaminated Site Management and Remediation
- RRM 215.3 Identification of Saskatchewan Plants and Soils
- SLSC 312.3 Soil Fertility and Fertilizers
- SLSC 313.3 Environmental Soil Chemistry
- SLSC 322.3 Environmental Soil Physics

- **SLSC 342.3 Agronomic Soil Microbiology**
- **SLSC ~~344.3~~ 444.3** Soil Ecology
- **SLSC 350.3** Terrestrial Restoration
- **SLSC 460.3** Forest Soils
- **SLSC 480.3** Soils and Boreal Landscapes
- **SLSC 492.3** Research and Term Paper

Soil Science

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

Year 1 - Fall Term (15 credit units)

- **AGRC 111.3** Discovery in Plant and Soil Sciences
- **BIOL 120.3** The Nature of Life
- **CHEM 112.3** General Chemistry I Structure Bonding and Properties of Materials
- **ECON 111.3** Introductory Microeconomics

Choose 3 credit units from the areas of Social Science, Humanities or Fine Arts.

Humanities

- **CHIN — 100-Level, 200-Level, 300-Level, 400-Level**
- **CLAS — 100-Level, 200-Level, 300-Level, 400-Level**
- **CREE — 100-Level, 200-Level, 300-Level, 400-Level**
- **ENG — 100-Level, 200-Level, 300-Level, 400-Level**
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- **GERM — 100-Level, 200-Level, 300-Level, 400-Level**
- **HEB — 100-Level, 200-Level, 300-Level, 400-Level**
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- **INTS — 100-Level, 200-Level, 300-Level, 400-Level**
- **JPNS — 100-Level, 200-Level, 300-Level, 400-Level**
- **LATN — 100-Level, 200-Level, 300-Level, 400-Level**
- **LIT — 100-Level, 200-Level, 300-Level, 400-Level**
- **PHIL — 100-Level, 200-Level, 300-Level, 400-Level**

- **RLST — 100-Level, 200-Level, 300-Level, 400-Level**
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- **UKR — 100-Level, 200-Level, 300-Level, 400-Level**
- **WGST — 100-Level, 200-Level, 300-Level, 400-Level**
- Certain WGST courses may be considered a Humanities and/or Social Science. Refer to the Class Search.
- MUS 111 is acceptable toward the Humanities requirement.

Social Sciences

- **ANTH — 100-Level, 200-Level, 300-Level, 400-Level**
- **ARCH — 100-Level, 200-Level, 300-Level, 400-Level**
- **ECON — 100-Level, 200-Level, 300-Level, 400-Level**
- **GEOG 130.3** Environment Health and Planning
- **INDG — 100-Level, 200-Level, 300-Level, 400-Level**
- **IS — 100-Level, 200-Level, 300-Level, 400-Level**
- **LING — 100-Level, 200-Level, 300-Level, 400-Level**
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- **SOSC — 100-Level, 200-Level, 300-Level, 400-Level**
- **WGST — 100-Level, 200-Level, 300-Level, 400-Level**

Any senior-level social science course, provided the prerequisite is met. Please note that certain GEOG courses are considered Science courses. Refer to the Class Search.

Statistics courses in social sciences are not accepted for credit toward the Social Science Requirement (eg. ECON 204, PSY 233, PSY 234, SOC 225 and SOC 325).

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

Fine Arts

- **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**

Year 1 - Winter Term (15 credit units)

- **AGRC 112.3** Animal Agriculture and Food Science
- **AGRC 113.3** Agri Food Issues and Institutions
- **BIOL 121.3** The Diversity of Life
- **CHEM 250.3** Introduction to Organic Chemistry

Choose 3 credit units from the areas of Social Science, Humanities or Fine Arts:

(continued from Term 1 if a 6 credit unit course or a new 3 credit unit course for Term 2):

Humanities

- **CHIN — 100-Level, 200-Level, 300-Level, 400-Level**
- **CLAS — 100-Level, 200-Level, 300-Level, 400-Level**
- **CREE — 100-Level, 200-Level, 300-Level, 400-Level**
- **ENG — 100-Level, 200-Level, 300-Level, 400-Level**
- **FREN — 100-Level, 200-Level, 300-Level, 400-Level**
- **GERM — 100-Level, 200-Level, 300-Level, 400-Level**
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- **PHIL — 100-Level, 200-Level, 300-Level, 400-Level**
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- **RUSS — 100-Level, 200-Level, 300-Level, 400-Level**
- **SNSK — 100-Level, 200-Level, 300-Level, 400-Level**
- **SPAN — 100-Level, 200-Level, 300-Level, 400-Level**

- **UKR — 100-Level, 200-Level, 300-Level, 400-Level**
- **WGST — 100-Level, 200-Level, 300-Level, 400-Level**
- Certain WGST courses may be considered a Humanities and/or Social Science. Refer to the Class Search.
- MUS 111 is acceptable toward the Humanities requirement.

Social Sciences

- **ANTH — 100-Level, 200-Level, 300-Level, 400-Level**
- **ARCH — 100-Level, 200-Level, 300-Level, 400-Level**
- **ECON — 100-Level, 200-Level, 300-Level, 400-Level**
- **GEOG 130.3** Environment Health and Planning
- **INDG — 100-Level, 200-Level, 300-Level, 400-Level**
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- **LING — 100-Level, 200-Level, 300-Level, 400-Level**
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Statistics courses in social sciences are not accepted for credit toward the Social Science Requirement (eg. ECON 204, PSY 233, PSY 234, SOC 225 and SOC 325).

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Fine Arts

- **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**

Year 2 (30 credit units)

- **CHEM 231.3** Inorganic Chemistry I or **BMSC 200.3** Biomolecules
- **EVSC 210.3** Environmental Physics
- **FABS 212.3** Agrifood and Resources Microbiology OR **BMSC 210.3** Microbiology
- **MATH 104.3** Elementary Calculus or **MATH 110.3** Calculus I or **MATH 125.3** Mathematics for the Life Sciences
- **PLSC 213.3** Principles of Plant Ecology
- **RCM 300.3** Effective Professional Communication
- **SLSC 240.3** Agricultural Soil Science or **EVSC 220.3** Environmental Soil Science

Choose 3 credit units from the following:

- **ENG 111.3** Literature and Composition Reading Poetry
- **ENG 112.3** Literature and Composition Reading Drama
- **ENG 113.3** Literature and Composition Reading Narrative
- **ENG 114.3** Literature and Composition Reading Culture
- **ENG 120.3** Introduction to Creative Writing

Open Electives

- Choose 6 credit units open electives

Years 3 & 4 (60 credit units)

- **AREC 330.3** Land Resource Economics
- **EVSC 380.3** Grassland Soils and Vegetation
- **GEOL 206.3** Earth Systems or **GEOG 120.3** Introduction to Global Environmental Systems
- **PLSC 214.3** Statistical Methods or **STAT 245.3** Introduction to Statistical Methods
- **SLSC 232.3** Soil Genesis and Classification
- **SLSC 312.3** Soil Fertility and Fertilizers
- **SLSC 313.3** Environmental Soil Chemistry
- **SLSC 322.3** Environmental Soil Physics
- **SLSC 342.3 Agronomic Soil Microbiology**
- **SLSC ~~344.3~~ 444.3** Soil Ecology
- **SLSC 350.3** Terrestrial Restoration
- **SLSC 460.3** Forest Soils or **SLSC 480.3** Soils and Boreal Landscapes

- **SLSC 492.3** Research and Term Paper or **SLSC 494.6** Research and Thesis (3 credit units count as restricted elective)

Choose 3 credit units from the following:

- **PLSC 222.3** Introduction to Field Crops or **PLSC 201.3** Field Crops of Western Canada
- **PLSC 412.3**
- **PLSC 423.3** Landscape Ecology and Vegetation Management
- **PLSC 425.3** Forest Ecology

Restricted Electives

- Choose ~~12~~ **9** credit units of electives, as approved by the Soil Science Program Advisor (may include 3 credit units of **SLSC 494.6** Research and Thesis)

Open Electives

- Choose 9 credit units open electives

Rationale: These changes reflect the development and inclusion of SLSC 342.3 and the re-numbering of SLSC 444.3 (approved in April 2019), as well as a decision to remove information about block transfer credit from the Course and Program Catalogue.

Changes to Course Prerequisites

EVSC 421.3 Contaminated Site Management and Remediation

This course will focus on how contaminated sites are managed and remediated for new land uses. Students will learn the theory of how sites are investigated and characterized, how toxicological information is used to estimate the risk to humans and ecosystems, how threats to groundwater are assessed and finally, methods by which these risks and threats are mitigated through remediation approaches. This course will provide students with the skill sets necessary to assess, manage and reduce human and ecological risk at a contaminated site.

Prerequisite(s): ~~EVSC 210 or 3 credit units 100-level PHYS, STAT 245 or PLSC 214, and one of EVSC 220, SLSC 240 or RRM 215.~~ **Successful completion of 72 credit units, including EVSC 210.3 or 3 credit units of 100-level PHYS or STAT 245.3 or PLSC 214.3 or GE210.3.**

~~**Prerequisite(s) or Corequisite(s):** One of TOX 321, GEOG 386, ENVE 481, SLSC 313 or SLSC 322.~~
~~**Note:** Fourth-year students in Environmental Engineering or Toxicology will be given a prerequisite waiver by the college.~~

RRM 215.3 Identification of Saskatchewan Plants and Soils

This lecture/lab course will provide training in the identification of common plants, and soils and the description and classification of soils, found in the Boreal Plain and Prairie ecozones of Saskatchewan. The principles of ecological land classification and the mapping of soil units will also be covered in both ecozones along with the application of plant and soil information to wetland classification.

Prerequisite(s): ~~BIOL 120 and 121; GEOG 120.~~ **BIOL 120 and 121 or EVSC 110; GEOG 120 or GEOL 206 or AGRC 111.**

SLSC 444.3 Soil Ecology

The course describes the role of soil organisms (bacteria, protists, fungi, nematodes, mites, other invertebrates) in the decomposition of organic matter for plant nutrition, and their response to field management. The above ground management effects on below-ground soil ecology are key to sustainable management. Community structure and ecological functional role of the biology affect ecosystem function and respond to environmental changes.

Prerequisite(s): ~~One of FABS 212.3, BMSC 210.3, SLSC 240.3, or EVSC 220.3, and successful completion of 60 credit units of university courses, or permission of the instructor.~~ **Successful completion of 60 credit units, including FABS 212.3, BMSC 210.3, or SLSC 342.3.**
Note: Must be enrolled at the undergraduate level.

Rationale: These changes reflect the academic preparation required to successfully complete the course, with an aim to make the courses more accessible to students in a wider range of programs.

Changes to Animal and Poultry Science Programs

Animal Science

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

Year 1 - Fall Term (15 credit units)

- **AGRC 111.3** Discovery in Plant and Soil Sciences
- **BIOL 120.3** The Nature of Life
- **CHEM 112.3** General Chemistry I Structure Bonding and Properties of Materials
- **ECON 111.3** Introductory Microeconomics

Choose 3 credit units from the following:

Choose 3 credit units from the areas of Social Science, Humanities or Fine Arts.

Humanities

- **CHIN — 100-Level, 200-Level, 300-Level, 400-Level**
- **CLAS — 100-Level, 200-Level, 300-Level, 400-Level**
- **CREE — 100-Level, 200-Level, 300-Level, 400-Level**
- **ENG — 100-Level, 200-Level, 300-Level, 400-Level**
- **FREN — 100-Level, 200-Level, 300-Level, 400-Level**
- **GERM — 100-Level, 200-Level, 300-Level, 400-Level**
- **HEB — 100-Level, 200-Level, 300-Level, 400-Level**

- **HIST — 100-Level, 200-Level, 300-Level, 400-Level**
- **HNDI — 100-Level, 200-Level, 300-Level, 400-Level**
- **INTS — 100-Level, 200-Level, 300-Level, 400-Level**
- **JPNS — 100-Level, 200-Level, 300-Level, 400-Level**
- **LATN — 100-Level, 200-Level, 300-Level, 400-Level**
- **LIT — 100-Level, 200-Level, 300-Level, 400-Level**
- **PHIL — 100-Level, 200-Level, 300-Level, 400-Level**
- **RLST — 100-Level, 200-Level, 300-Level, 400-Level**
- **RUSS — 100-Level, 200-Level, 300-Level, 400-Level**
- **SNSK — 100-Level, 200-Level, 300-Level, 400-Level**
- **SPAN — 100-Level, 200-Level, 300-Level, 400-Level**
- **UKR — 100-Level, 200-Level, 300-Level, 400-Level**
- **WGST — 100-Level, 200-Level, 300-Level, 400-Level**
- Certain WGST courses may be considered a Humanities and/or Social Science. Refer to the Class Search.
- MUS 111 is acceptable toward the Humanities requirement.

Social Sciences

- **ANTH — 100-Level, 200-Level, 300-Level, 400-Level**
- **ARCH — 100-Level, 200-Level, 300-Level, 400-Level**
- **ECON — 100-Level, 200-Level, 300-Level, 400-Level**
- **GEOG 130.3** Environment Health and Planning
- **INDG — 100-Level, 200-Level, 300-Level, 400-Level**
- **IS — 100-Level, 200-Level, 300-Level, 400-Level**
- **LING — 100-Level, 200-Level, 300-Level, 400-Level**
- **PLAN — 100-Level, 200-Level, 300-Level, 400-Level**
- **POLS — 100-Level, 200-Level, 300-Level, 400-Level**
- **PSY — 100-Level, 200-Level, 300-Level, 400-Level**
- **SOC — 100-Level, 200-Level, 300-Level, 400-Level**
- **SOSC — 100-Level, 200-Level, 300-Level, 400-Level**

- **WGST — 100-Level, 200-Level, 300-Level, 400-Level**

Any senior-level social science course, provided the prerequisite is met. Please note that certain GEOG courses are considered Science courses. Refer to the Class Search.

Statistics courses in social sciences are not accepted for credit toward the Social Science Requirement (eg. ECON 204, PSY 233, PSY 234, SOC 225 and SOC 325).

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

Fine Arts

- **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**

Year 1 - Winter Term (15 credit units)

- **AGRC 112.3** Animal Agriculture and Food Science
- **AGRC 113.3** Agri Food Issues and Institutions
- **BIOL 224.3** Animal Body Systems
- **CHEM 250.3** Introduction to Organic Chemistry

Choose 3 credit units from the following:

Choose 3 credit units from the areas of Social Science, Humanities or Fine Arts (continued from Term 1 if a 6 credit unit course or a new 3 credit unit course for Term 2).

Humanities

- **CHIN — 100-Level, 200-Level, 300-Level, 400-Level**
- **CLAS — 100-Level, 200-Level, 300-Level, 400-Level**
- **CREE — 100-Level, 200-Level, 300-Level, 400-Level**
- **ENG — 100-Level, 200-Level, 300-Level, 400-Level**
- **FREN — 100-Level, 200-Level, 300-Level, 400-Level**
- **GERM — 100-Level, 200-Level, 300-Level, 400-Level**
- **HEB — 100-Level, 200-Level, 300-Level, 400-Level**
- **HIST — 100-Level, 200-Level, 300-Level, 400-Level**
- **HNDI — 100-Level, 200-Level, 300-Level, 400-Level**
- **INTS — 100-Level, 200-Level, 300-Level, 400-Level**

- **JPNS — 100-Level, 200-Level, 300-Level, 400-Level**
- **LATN — 100-Level, 200-Level, 300-Level, 400-Level**
- **LIT — 100-Level, 200-Level, 300-Level, 400-Level**
- **PHIL — 100-Level, 200-Level, 300-Level, 400-Level**
- **RLST — 100-Level, 200-Level, 300-Level, 400-Level**
- **RUSS — 100-Level, 200-Level, 300-Level, 400-Level**
- **SNSK — 100-Level, 200-Level, 300-Level, 400-Level**
- **SPAN — 100-Level, 200-Level, 300-Level, 400-Level**
- **UKR — 100-Level, 200-Level, 300-Level, 400-Level**
- **WGST — 100-Level, 200-Level, 300-Level, 400-Level**
- Certain WGST courses may be considered a Humanities and/or Social Science. Refer to the Class Search.
- MUS 111 is acceptable toward the Humanities requirement.

Social Sciences

- **ANTH — 100-Level, 200-Level, 300-Level, 400-Level**
- **ARCH — 100-Level, 200-Level, 300-Level, 400-Level**
- **ECON — 100-Level, 200-Level, 300-Level, 400-Level**
- **GEOG 130.3** Environment Health and Planning
- **INDG — 100-Level, 200-Level, 300-Level, 400-Level**
- **IS — 100-Level, 200-Level, 300-Level, 400-Level**
- **LING — 100-Level, 200-Level, 300-Level, 400-Level**
- **PLAN — 100-Level, 200-Level, 300-Level, 400-Level**
- **POLS — 100-Level, 200-Level, 300-Level, 400-Level**
- **PSY — 100-Level, 200-Level, 300-Level, 400-Level**
- **SOC — 100-Level, 200-Level, 300-Level, 400-Level**
- **SOSC — 100-Level, 200-Level, 300-Level, 400-Level**
- **WGST — 100-Level, 200-Level, 300-Level, 400-Level**

Any senior-level social science course, provided the prerequisite is met. Please note that certain GEOG courses are considered Science courses. Refer to the Class Search.

Statistics courses in social sciences are not accepted for credit toward the Social Science Requirement (eg. ECON 204, PSY 233, PSY 234, SOC 225 and SOC 325).

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

Fine Arts

- **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**

Year 2 (30 credit units)

- **ANSC 212.3** Livestock and Poultry Production
- **ANSC 313.3** Animal Breeding and Genetics
- **BMSC 200.3** Biomolecules
- **BMSC 230.3** Metabolism
- **FABS 212.3** Agrifood and Resources Microbiology or **BMSC 210.3** Microbiology
- **MATH 104.3** Elementary Calculus or equivalent
- **PLSC 214.3** Statistical Methods
- **RCM 300.3** Effective Professional Communication

Choose 3 credit units from the following:

- **ENG 111.3** Literature and Composition Reading Poetry
- **ENG 112.3** Literature and Composition Reading Drama
- **ENG 113.3** Literature and Composition Reading Narrative
- **ENG 114.3** Literature and Composition Reading Culture
- **ENG 120.3** Introduction to Creative Writing

Choose 3 credit units of restricted electives

- **ANBI 320.3** Equine Science
- **ANBI 360.3** Canine and Feline Science
- **ANBI 375.3** Animals and the Environment
- **ANBI 398.3 Special Topics**
- **ANBI 411.3** Behaviour of Domestic Animals

- **ANBI 420.3** Comparative Animal Endocrinology
- **ANBI 470.3** Applied Animal Biotechnology
- **ANBI 471.3 Animal Microbiomes and Health**
- **ANBI 498.3 Special Topics**
- **ANSC 298.3** Special Topics
- **ANSC 301.3** Animal Production Tour
- **ANSC 398.3** Special Topics
- **ANSC 485.3 Swine Production and Management**
- **ANSC 494.3** Research Thesis in Animal Science
- **ANSC 498.3** Special Topics
- **AREC 320.3** Introduction to Farm Business Management
- **AREC 343.3** Grain and Livestock Marketing
- **BIOC 310.3** Proteins and Enzymes
- **BIOC 311.3** Introductory Molecular Biology
- **BIOC 436.3** Advanced Molecular Biology
- **BIOL 222.3** The Living Plant
- **BIOL 226.3** Genes to Genomics
- **BIOL 316.3** Molecular Genetics of Eukaryotes
- **BIOL 424.3** Grasses and Grasslands
- **BIOL 455.3** Mammal Diversity and Evolution
- **BIOL 472.3** Animal Behaviour
- **BLE 205.3** Agricultural Machinery Management
- **BLE 303.3** Principles of Food and Bioproducts Engineering
- **BLE 307.3**
- **COMM 101.3** Introduction to Business
- **COMM 105.3** Introduction to Organizational Behaviour
- **COMM 201.3** Introduction to Financial Accounting
- **COMM 204.3** Introduction to Marketing
- **COMM 304.3** Introduction to Business Law

- **COMM 404.3** Business Law
- **FABS 110.3** The Science of Food
- **FABS 325.3** Food Microbiology and Safety
- **FABS 450.3** Anaerobic and Rumen Microbiology
- **FABS 457.3** Meat Science and Technology
- **PLSC 213.3** Principles of Plant Ecology
- **PLSC 405.3** Genetics of Plant Populations
- **PLSC 418.3** Management of Arable Grassland
- **PLSC 420.3** Grain Chemistry and Technology
- **PLSC 422.3** Rangeland Ecology and Management
- **PLSC 423.3** Landscape Ecology and Vegetation Management
- **VBMS 314.3** Comparative Anatomy of Domestic Animals
- **VLAC 411.3** Diseases of Livestock
- **VTPA 412.3** Diseases of Poultry
- or courses approved by an Animal Science program advisor

Years 3 and 4 (60 credit units)

- **ANSC 315.3** Animal and Poultry Nutrition
- ~~**ANSC 340.3** Feeds Technology and Swine Production~~
- **ANSC 316.3 Feed Technologies**
- **ANSC 410.3** Cow Calf Management
- **ANSC 430.3** Intensive Management of Beef Cattle
- **ANSC 440.3** Poultry Production and Aquaculture
- **ANSC 460.3** Intensive Management of Dairy Cattle
- **ANSC 492.3** Thesis in Animal Science or **ANSC 494.6** Research Thesis in Animal Science (3 credit units count as Restricted Elective)
- **VBMS 324.3** Animal Physiology I
- **VBMS 325.3** Animal Physiology II

Choose 15 credit units of restricted electives from the following:

- **ANBI 320.3** Equine Science

- **ANBI 360.3** Canine and Feline Science
- **ANBI 375.3** Animals and the Environment
- **ANBI 398.3 Special Topics**
- **ANBI 411.3** Behaviour of Domestic Animals
- **ANBI 420.3** Comparative Animal Endocrinology
- **ANBI 470.3** Applied Animal Biotechnology
- **ANBI 471.3 Animal Microbiomes and Health**
- **ANBI 498.3 Special Topics**
- **ANSC 298.3** Special Topics
- **ANSC 301.3** Animal Production Tour
- **ANSC 398.3** Special Topics
- **ANSC 485.3 Swine Production and Management**
- **ANSC 494.3** Research Thesis in Animal Science
- **ANSC 498.3** Special Topics
- **AREC 320.3** Introduction to Farm Business Management
- **AREC 343.3** Grain and Livestock Marketing
- **BIOC 310.3** Proteins and Enzymes
- **BIOC 311.3** Introductory Molecular Biology
- **BIOC 436.3** Advanced Molecular Biology
- **BIOL 222.3** The Living Plant
- **BIOL 226.3** Genes to Genomics
- **BIOL 316.3** Molecular Genetics of Eukaryotes
- **BIOL 424.3** Grasses and Grasslands
- **BIOL 455.3** Mammal Diversity and Evolution
- **BIOL 472.3** Animal Behaviour
- **BLE 205.3** Agricultural Machinery Management
- **BLE 303.3** Principles of Food and Bioproducts Engineering
- **BLE 307.3**
- **COMM 101.3** Introduction to Business

- **COMM 105.3** Introduction to Organizational Behaviour
- **COMM 201.3** Introduction to Financial Accounting
- **COMM 204.3** Introduction to Marketing
- **COMM 304.3** Introduction to Business Law
- **COMM 404.3** Business Law
- **FABS 110.3** The Science of Food
- **FABS 325.3** Food Microbiology and Safety
- **FABS 450.3** Anaerobic and Rumen Microbiology
- **FABS 457.3** Meat Science and Technology
- **PLSC 213.3** Principles of Plant Ecology
- **PLSC 405.3** Genetics of Plant Populations
- **PLSC 418.3** Management of Arable Grassland
- **PLSC 420.3** Grain Chemistry and Technology
- **PLSC 422.3** Rangeland Ecology and Management
- **PLSC 423.3** Landscape Ecology and Vegetation Management
- **VBMS 314.3** Comparative Anatomy of Domestic Animals
- **VLAC 411.3** Diseases of Livestock
- **VTPA 412.3** Diseases of Poultry
- or courses approved by an Animal Science program advisor

Open Electives

- Choose 18 credit units of open electives

Animal Bioscience

Bachelor of Science in Animal Bioscience [B.Sc.(An.Biosc.)]

Year 1 (30 credit units)

- **AGRC 112.3** Animal Agriculture and Food Science
- **ANBI 110.3** Introductory Animal Bioscience
- **BIOL 120.3** The Nature of Life
- **BIOL 224.3** Animal Body Systems

- **CHEM 112.3** General Chemistry I Structure Bonding and Properties of Materials
- **CHEM 115.3** General Chemistry II Chemical Processes
- **MATH 104.3** Elementary Calculus or **MATH 110.3** Calculus I or **MATH 125.3** Mathematics for the Life Sciences

Choose 3 credit units from the following:

- **ENG 111.3** Literature and Composition Reading Poetry
- **ENG 112.3** Literature and Composition Reading Drama
- **ENG 113.3** Literature and Composition Reading Narrative
- **ENG 114.3** Literature and Composition Reading Culture
- **ENG 120.3** Introduction to Creative Writing

Choose 6 credit units from the following:

Choose 6 credit units from the areas of Social Science, Humanities or Fine Arts.

Humanities

- **CHIN — 100-Level, 200-Level, 300-Level, 400-Level**
- **CLAS — 100-Level, 200-Level, 300-Level, 400-Level**
- **CREE — 100-Level, 200-Level, 300-Level, 400-Level**
- **ENG — 100-Level, 200-Level, 300-Level, 400-Level**
- **FREN — 100-Level, 200-Level, 300-Level, 400-Level**
- **GERM — 100-Level, 200-Level, 300-Level, 400-Level**
- **HEB — 100-Level, 200-Level, 300-Level, 400-Level**
- **HIST — 100-Level, 200-Level, 300-Level, 400-Level**
- **HNDI — 100-Level, 200-Level, 300-Level, 400-Level**
- **INTS — 100-Level, 200-Level, 300-Level, 400-Level**
- **JPNS — 100-Level, 200-Level, 300-Level, 400-Level**
- **LATN — 100-Level, 200-Level, 300-Level, 400-Level**
- **LIT — 100-Level, 200-Level, 300-Level, 400-Level**
- **PHIL — 100-Level, 200-Level, 300-Level, 400-Level**
- **RLST — 100-Level, 200-Level, 300-Level, 400-Level**
- **RUSS — 100-Level, 200-Level, 300-Level, 400-Level**

- **SNSK — 100-Level, 200-Level, 300-Level, 400-Level**
- **SPAN — 100-Level, 200-Level, 300-Level, 400-Level**
- **UKR — 100-Level, 200-Level, 300-Level, 400-Level**
- **WGST — 100-Level, 200-Level, 300-Level, 400-Level**
- Certain WGST courses may be considered a Humanities and/or Social Science. Refer to the Class Search.
- MUS 111 is acceptable toward the Humanities requirement.

Social Sciences

- **ANTH — 100-Level, 200-Level, 300-Level, 400-Level**
- **ARCH — 100-Level, 200-Level, 300-Level, 400-Level**
- **ECON — 100-Level, 200-Level, 300-Level, 400-Level**
- **GEOG 130.3** Environment Health and Planning
- **INDG — 100-Level, 200-Level, 300-Level, 400-Level**
- **IS — 100-Level, 200-Level, 300-Level, 400-Level**
- **LING — 100-Level, 200-Level, 300-Level, 400-Level**
- **PLAN — 100-Level, 200-Level, 300-Level, 400-Level**
- **POLS — 100-Level, 200-Level, 300-Level, 400-Level**
- **PSY — 100-Level, 200-Level, 300-Level, 400-Level**
- **SOC — 100-Level, 200-Level, 300-Level, 400-Level**
- **SOSC — 100-Level, 200-Level, 300-Level, 400-Level**
- **WGST — 100-Level, 200-Level, 300-Level, 400-Level**

Any senior-level social science course, provided the prerequisite is met. Please note that certain GEOG courses are considered Science courses. Refer to the Class Search.

Statistics courses in social sciences are not accepted for credit toward the Social Science Requirement (eg. ECON 204, PSY 233, PSY 234, SOC 225 and SOC 325).

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

Fine Arts

- **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**

Year 2 (30 credit units)

- **ANSC 212.3** Livestock and Poultry Production
- **ANSC 313.3** Animal Breeding and Genetics
- **BMSC 200.3** Biomolecules
- **BMSC 230.3** Metabolism
- **CHEM 250.3** Introduction to Organic Chemistry
- **FABS 212.3** Agrifood and Resources Microbiology OR **BMSC 210.3** Microbiology
- **PLSC 214.3** Statistical Methods
- **RCM 300.3** Effective Professional Communication

Choose 3 credit units of open electives

Note: Open Electives may be chosen from most classes offered at the University of Saskatchewan, including classes from the Animal Biosciences Restricted Electives list.

Choose 3 credit units of restricted electives

Students must complete at least 6 credit units of courses from the Animal Species Specific Restricted Electives list in the program overall.

Animal Species Specific Restricted Electives:

- **ANBI 320.3** Equine Science
- **ANBI 360.3** Canine and Feline Science
- ~~**ANSC 340.3** Feeds Technology and Swine Production~~
- **ANSC 485.3 Swine Production and Management**
- **ANSC 410.3** Cow Calf Management
- **ANSC 430.3** Intensive Management of Beef Cattle
- **ANSC 440.3** Poultry Production and Aquaculture
- **ANSC 460.3** Intensive Management of Dairy Cattle

Discipline Specific Restricted Electives:

- **ANBI 398.3 Special Topics**
- **ANBI 471.3 Animal Microbiomes and Health**
- **ANBI 475.3** Field Studies in Arctic Ecosystems and Aboriginal Peoples

- **ANBI 494.6** Research Thesis in Animal Bioscience
- **ANBI 498.3 Special Topics**
- **ANSC 298.3** Special Topics
- **ANSC 301.3** Animal Production Tour
- **ANSC 316.3 Feed Technologies**
- **ANSC 398.3** Special Topics
- **ANSC 498.3** Special Topics
- **BINF 210.3** Introduction to Bioinformatics Applications
- **BIOC 310.3** Proteins and Enzymes
- **BIOC 311.3** Introductory Molecular Biology
- **BIOC 435.3** Human Metabolism and Disease
- **BIOC 436.3** Advanced Molecular Biology
- **BIOL 226.3** Genes to Genomics
- **BIOL 430.3** Neurobiology of Behaviour
- **BMSC 220.3** Cell Biology
- **BMSC 240.3** Laboratory Techniques
- **FABS 325.3** Food Microbiology and Safety
- **FABS 430.3**
- **FABS 450.3** Anaerobic and Rumen Microbiology
- **MCIM 308.3** Medical Bacteriology
- **MCIM 309.3** Medical Virology
- **MCIM 321.3** Principles of Immunology
- **PCOL 350.6** General Pharmacology
- **PHYS 115.3** Physics and the Universe
- **PLSC 213.3** Principles of Plant Ecology
- **PLSC 422.3** Rangeland Ecology and Management
- **RCM 404.3** Leadership as Communication
- **RRM 312.3** Natural Resource Management and Indigenous Peoples
- **TOX 300.3** General Principles of Toxicology

- **TOX 402.3** Systemic Toxicology
- **VBMS 314.3** Comparative Anatomy of Domestic Animals
- **VLAC 411.3** Diseases of Livestock or **VTPA 412.3** Diseases of Poultry

Year 3 (30 credit units)

- **ANBI 375.3** Animals and the Environment
- **ANSC 315.3** Animal and Poultry Nutrition
- **VBMS 324.3** Animal Physiology I
- **VBMS 325.3** Animal Physiology II

Choose 6 credit units of open electives

Note: Open Electives may be chosen from most classes offered at the University of Saskatchewan, including classes from the Animal Biosciences Restricted Electives list.

Choose 12 credit units of restricted electives

Students must complete at least 6 credit units of courses from the Animal Species Specific Restricted Electives list in the program overall.

Animal Species Specific Restricted Electives:

- **ANBI 320.3** Equine Science
- **ANBI 360.3** Canine and Feline Science
- ~~**ANSC 340.3** Feeds Technology and Swine Production~~
- **ANSC 485.3 Swine Production and Management**
- **ANSC 410.3** Cow Calf Management
- **ANSC 430.3** Intensive Management of Beef Cattle
- **ANSC 440.3** Poultry Production and Aquaculture
- **ANSC 460.3** Intensive Management of Dairy Cattle

Discipline Specific Restricted Electives:

- **ANBI 398.3 Special Topics**
- **ANBI 471.3 Animal Microbiomes and Health**
- **ANBI 475.3** Field Studies in Arctic Ecosystems and Aboriginal Peoples
- **ANBI 498.3 Special Topics**
- **ANBI 494.6** Research Thesis in Animal Bioscience

- **ANSC 298.3** Special Topics
- **ANSC 301.3** Animal Production Tour
- **ANSC 316.3 Feed Technologies**
- **ANSC 398.3** Special Topics
- **ANSC 498.3** Special Topics
- **BINF 210.3** Introduction to Bioinformatics Applications
- **BIOC 310.3** Proteins and Enzymes
- **BIOC 311.3** Introductory Molecular Biology
- **BIOC 435.3** Human Metabolism and Disease
- **BIOC 436.3** Advanced Molecular Biology
- **BIOL 226.3** Genes to Genomics
- **BIOL 430.3** Neurobiology of Behaviour
- **BMSC 220.3** Cell Biology
- **BMSC 240.3** Laboratory Techniques
- **FABS 325.3** Food Microbiology and Safety
- **FABS 430.3**
- **FABS 450.3** Anaerobic and Rumen Microbiology
- **MCIM 308.3** Medical Bacteriology
- **MCIM 309.3** Medical Virology
- **MCIM 321.3** Principles of Immunology
- **PCOL 350.6** General Pharmacology
- **PHYS 115.3** Physics and the Universe
- **PLSC 213.3** Principles of Plant Ecology
- **PLSC 422.3** Rangeland Ecology and Management
- **RCM 404.3** Leadership as Communication
- **RRM 312.3** Natural Resource Management and Indigenous Peoples
- **TOX 300.3** General Principles of Toxicology
- **TOX 402.3** Systemic Toxicology
- **VBMS 314.3** Comparative Anatomy of Domestic Animals

- **VLAC 411.3** Diseases of Livestock or **VTPA 412.3** Diseases of Poultry

Year 4 (30 credit units)

- **ANBI 411.3** Behaviour of Domestic Animals
- **ANBI 420.3** Comparative Animal Endocrinology
- **ANBI 470.3** Applied Animal Biotechnology
- **ANBI 492.3** Literature Thesis in Animal Bioscience or **ANBI 494.6** Research Thesis in Animal Bioscience (3 credit units count as restricted elective)
- **VLAC 411.3** Diseases of Livestock or **VTPA 412.3** Diseases of Poultry

Choose 9 credit units of open electives

Note: Open Electives may be chosen from most classes offered at the University of Saskatchewan, including classes from the Animal Biosciences Restricted Electives list.

Choose 6 credit units of restricted electives

Students must complete at least 6 credit units of courses from the Animal Species Specific Restricted Electives list in the program overall.

Animal Species Specific Restricted Electives:

- **ANBI 320.3** Equine Science
- **ANBI 360.3** Canine and Feline Science
- ~~**ANSC 340.3** Feeds Technology and Swine Production~~
- **ANSC 485.3 Swine Production and Management**
- **ANSC 410.3** Cow Calf Management
- **ANSC 430.3** Intensive Management of Beef Cattle
- **ANSC 440.3** Poultry Production and Aquaculture
- **ANSC 460.3** Intensive Management of Dairy Cattle

Discipline Specific Restricted Electives:

- **ANBI 398.3 Special Topics**
- **ANBI 471.3 Animal Microbiomes and Health**
- **ANBI 475.3** Field Studies in Arctic Ecosystems and Aboriginal Peoples
- **ANBI 494.6** Research Thesis in Animal Bioscience
- **ANBI 498.3 Special Topics**
- **ANSC 298.3** Special Topics

- **ANSC 301.3** Animal Production Tour
- **ANSC 398.3** Special Topics
- **ANSC 498.3** Special Topics
- **BINF 210.3** Introduction to Bioinformatics Applications
- **BIOC 310.3** Proteins and Enzymes
- **BIOC 311.3** Introductory Molecular Biology
- **BIOC 435.3** Human Metabolism and Disease
- **BIOC 436.3** Advanced Molecular Biology
- **BIOL 226.3** Genes to Genomics
- **BIOL 430.3** Neurobiology of Behaviour
- **BMSC 220.3** Cell Biology
- **BMSC 240.3** Laboratory Techniques
- **FABS 325.3** Food Microbiology and Safety
- **FABS 430.3**
- **FABS 450.3** Anaerobic and Rumen Microbiology
- **MCIM 308.3** Medical Bacteriology
- **MCIM 309.3** Medical Virology
- **MCIM 321.3** Principles of Immunology
- **PCOL 350.6** General Pharmacology
- **PHYS 115.3** Physics and the Universe
- **PLSC 213.3** Principles of Plant Ecology
- **PLSC 422.3** Rangeland Ecology and Management
- **RCM 404.3** Leadership as Communication
- **RRM 312.3** Natural Resource Management and Indigenous Peoples
- **TOX 300.3** General Principles of Toxicology
- **TOX 402.3** Systemic Toxicology
- **VBMS 314.3** Comparative Anatomy of Domestic Animals
- **VLAC 411.3** Diseases of Livestock or **VTPA 412.3** Diseases of Poultry

Animal Science

Minor

The Animal Science 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

- **ANSC 212.3** Livestock and Poultry Production
- **ANSC 315.3** Animal and Poultry Nutrition

Electives

Choose 12 credit units from the following:

- **ANBI 320.3** Equine Science
- **ANBI 360.3** Canine and Feline Science
- **ANBI 375.3** Animals and the Environment
- **ANBI 411.3** Behaviour of Domestic Animals
- **ANBI 470.3** Applied Animal Biotechnology
- **ANSC 301.3** Animal Production Tour
- **ANSC 313.3** Animal Breeding and Genetics
- **ANSC 316.3 Feed Technologies**
- ~~**ANSC 340.3** Feeds Technology and Swine Production~~
- **ANSC 410.3** Cow Calf Management
- **ANSC 430.3** Intensive Management of Beef Cattle
- **ANSC 440.3** Poultry Production and Aquaculture
- **ANSC 460.3** Intensive Management of Dairy Cattle
- **FABS 457.3** Meat Science and Technology
- **VBMS 314.3** Comparative Anatomy of Domestic Animals
- **VLAC 411.3** Diseases of Livestock

Rationale: These changes reflect the development and inclusion of ANSC 316.3, ANSC 485.3, and ANBI 471.3 (proposed), as well as the inclusion of special topics courses (ANBI 398 and ANBI 498) and the deletion of ANSC 340.3.

Course Deletion:

~~**ANSC 340.3 Feeds Technology and Swine Production**~~

~~The classification, characteristics and processing of concentrate feeds as well as operating and management applications relating to swine production. Laboratory exercises involve solving feeding and swine management problems. This course has a mandatory field trip that takes place one Saturday during the term.~~

~~**Prerequisite(s):** ANSC 212 and ANSC 315, or permission of the instructor~~

Rationale: ANSC 340.3 has been replaced by two new courses, ANSC 316.3 and ANSC 485.3, and there are no plans to offer ANSC 340.3 again in the future.

New Course Proposal:

Rationale: This material will be offered as an ANBI 498 "Special Topics" course for the second time in Winter Term 2020, and the department wishes to regularize this course for 2020-2021. Currently, there are no course offerings that focus on the host-microbiome interface. This course addresses a new area of scientific research related to health and wellness that is increasingly relevant for Animal Science and Animal Bioscience majors and other students.

ANBI 471.3 Animal Microbiomes and Health 2(3L)

This course will introduce students to the concepts around the microbiome of animals and its connection to health of the host animal. A specific focus will be the gut microbiome of animals. Emphasis will be on the experimental techniques currently used to study microbiomes, the metabolic pathways they mediate, and the connection the host animal. Lectures include topics on the role microbiomes play in host health, nutrition and behavior through the gut-brain axis.

Prerequisite(s): Successful completion of 75 credit units, including FABS 212.3 or BMSC 210.3.

Items For Information:

Changes to Course Number

Current Course Number: PLSC 240.3

Proposed Change to Course Number: PLSC 317.3

Rationale: This change to the course number has been approved to reflect the depth of study of the course material, as well as changes to the sequencing of courses within the Plant Science majors.

Changes to Plant Sciences Program Requirements

Horticulture Science

Minor

Students enrolled in the B.S.A degree program may take a minor. 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 B.S.A. major. The Horticulture minor cannot be combined with a major in a related area.

Requirements (18 credit units)

- **PLSC 220.3** Fundamentals of Horticulture

Choose 9 credit units from the following:

- **PLSC 235.3** Urban Agriculture
- **PLSC 330.3** Ornamental Plants
- **PLSC 333.3** Tropical Crops of the World
- **PLSC 335.3** Field Crop Disease Management
- **PLSC 435.3** Landscape Design
- **PLSC 441.3** Fruit Science
- **PLSC 451.3** Vegetable Science
- **PLSC 461.3** Post Harvest Management of Horticultural Crops
- **PLSC 470.3** Plant Propagation and Nursery Management

Choose 6 credit units from the following:

- **BIOL 345.3** Introductory Plant Pathology
- **PLSC 213.3** Principles of Plant Ecology
- **PLSC 311.3** General Apiculture
- **PLSC 340.3** Weed Biology and Ecology

- **PLSC 423.3** Landscape Ecology and Vegetation Management
- **PLSC 433.3** Greenhouse Structures and Crops
- **SLSC 240.3** Agricultural Soil Science
- ~~courses not taken from the required course choices~~ other courses as approved by the Department of Plant Sciences

Rationale: This change has been made to provide clarity about the approval of other courses that might count towards the Horticulture Science minor.

Transfer Credit Changes:

Environmental Science

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

The Environmental Science program explores the relationships between environmental constraints and sustainable development with an emphasis on prairie agriculture and forestry. The major emphasis of Environmental Science courses is on practical field experience in Prairie and Boreal Forest environments and on laboratory analysis and computer-based interpretation of results. Environmental Science courses are complemented by courses in environmental policy, environmental assessment, environmental quality, and agriculture and the environment.

~~Graduates of related diploma programs may be eligible to receive up to two years block transfer credit into the Environmental Science field of study.~~ Students transferring under an articulation agreement, or who have been granted block transfer credit must take a prescribed set of courses. For additional information, or to determine eligibility for block transfer, contact the Director of Academic and Student Services in the Dean's Office, College of Agriculture and Bioresources.

~~**Block Transfer - Lakeland College - CARE and ECR**~~

~~Graduates of the Conservation and Restoration Ecology or Environmental Conservation and Reclamation diplomas at Lakeland College are eligible to receive 60 credit units of block transfer credit towards the Bachelor of Science in Agriculture with a major in Environmental Science. Please contact the college for information.~~

~~**Block Transfer - Lakeland College - EPT**~~

~~Graduates of the Environmental Protection Technology diploma at Lakeland College are eligible to receive 60 credit units of block transfer credit towards the Bachelor of Science in Agriculture with a major in Environmental Science. Please contact the college for information.~~

Minimum Requirements for Degree (120 credit units)

……..

Resource Science

Bachelor of Science in Renewable Resource Management [B.Sc.(RRM)]

Sustainable use of our land, water and plant resources is increasingly recognized as a key societal goal in the 21st Century. Management of these resources requires a combination of applied science and management skills with an understanding of the broad societal context. Renewable Resource Management provides essential skills in resource management coupled with a broader understanding of the role of management in society. The Resource Science field of study provides students with hands-on, practical experience in field measurement and assessment.

~~Graduates of related diploma programs may be eligible to receive up to two years block transfer credit into the Resource Science field of study.~~ Students transferring under an articulation agreement, or who have been granted block transfer credit, must take a prescribed set of courses. For additional information, or to determine eligibility for block transfer, contact the Director of Academic and Student Services in the Dean's Office, College of Agriculture and Bioresources.

~~**Block Transfer - Lakeland College - CARE, ECR**~~

~~Graduates of the Conservation and Restoration Ecology or Environmental Conservation and Reclamation diploma from Lakeland College are eligible to receive 60 credit units of block transfer credit towards the Bachelor of Science in Renewable Resource Management with a major in Resource Science. Please contact the college for information.~~

~~**Block Transfer - Sask Polytechnic - IRM and FET**~~

~~For graduates of the Integrated Resource Management and Forest Ecosystem Technology programs at Sask Polytechnic.~~

~~**Year 3**~~

- ~~**BIOL 120.3** The Nature of Life~~
- ~~**BIOL 121.3** The Diversity of Life~~
- ~~**CHEM 112.3** General Chemistry I Structure Bonding and Properties of Materials~~
- ~~**ECON 111.3** Introductory Microeconomics~~
- ~~**GEOG 120.3** Introduction to Global Environmental Systems or **GEOL 206.3** Earth Systems~~
- ~~**GEOG 280.3** Environmental Geography~~
- ~~**MATH 104.3** Elementary Calculus or **MATH 110.3** Calculus I or **MATH 125.3** Mathematics for the Life Sciences~~
- ~~**RRM 114.3** Introductory Resource Economics and Policy~~
- ~~**RRM 201.1** Geographical Information Systems~~
- ~~**RRM 323.2** Resource Data and Environmental Modeling~~
- ~~**SLSC 232.3** Soil Genesis and Classification~~

Year 4

- **ENVS 401.3** Sustainability in Action
- **EVSC 203.3** Sampling and Laboratory Analysis
- **GEOG 385.3** Analysis of Environmental Management and Policy Making or **GEOG 386.3** Environmental Impact Assessment or **ENVE 381.3** Sustainability and Environmental Assessment
- **RRM 312.3** Natural Resource Management and Indigenous Peoples
- **RRM 421.6** Group Project in Renewable Resource Management

Restricted Electives

- Choose 6 credit units of restricted electives approved by an advisor

Open Electives

- Choose 6 credit units of open electives

Block Transfer - Sask Polytechnic - Resource and Environment Law

For graduates of the Resource and Environment Law program at Sask Polytechnic.

Year 3

- **BIOL 120.3** The Nature of Life
- **BIOL 121.3** The Diversity of Life
- **CHEM 112.3** General Chemistry I Structure Bonding and Properties of Materials
- **ECON 111.3** Introductory Microeconomics
- **GEOG 120.3** Introduction to Global Environmental Systems or **GEOL 206.3** Earth Systems
- **GEOG 280.3** Environmental Geography
- **MATH 104.3** Elementary Calculus or **MATH 110.3** Calculus I or **MATH 125.3** Mathematics for the Life Sciences
- **RRM 114.3** Introductory Resource Economics and Policy
- **RRM 201.1** Geographical Information Systems
- **RRM 323.2** Resource Data and Environmental Modeling
- **SLSC 232.3** Soil Genesis and Classification

Year 4

- **ENVS 401.3** Sustainability in Action

- ~~**GEOG 385.3** Analysis of Environmental Management and Policy Making or **GEOG 386.3** Environmental Impact Assessment or **ENVE 381.3** Sustainability and Environmental Assessment~~
- ~~**PLSC 213.3** Principles of Plant Ecology or **BIOL 228.3** An Introduction to Ecology and Ecosystems or **GEOG 271.3**~~
- ~~**PLSC 214.3** Statistical Methods or **STAT 245.3** Introduction to Statistical Methods~~
- ~~**RRM 312.3** Natural Resource Management and Indigenous Peoples~~
- ~~**RRM 421.6** Group Project in Renewable Resource Management~~
- ~~Choose 9 credit units of restricted electives approved by an advisor~~

Soil Science

~~Block Transfer to Soil Science~~

~~**Block Transfer - Lakeland College - Environmental Protection Technology**~~

~~Graduates of the Environmental Protection Technology diploma at Lakeland College are eligible to receive 60 credit units of block transfer credit towards the Bachelor of Science in Agriculture with a major in Soil Science. Please contact the college for information.~~

~~**Block Transfer - Lakeland College - CARE and ECR**~~

~~Graduates of the Conservation and Restoration Ecology or Environmental Conservation and Reclamation diploma at Lakeland College are eligible to receive 60 credit units of block transfer credit towards the Bachelor of Science in Agriculture with a major in Soil Science. Please contact the college for information.~~

University Course Challenge – December 2019
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)

College

Minor program revisions
All Degree Programs

Add HIST 193 and 194; and MUS 155 to the list of courses eligible to be included in the English Language Writing requirement. Remove ENG 253.6 (deleted course).

Add ENG 243 and HIST 195 to the list of courses eligible to be included in the Indigenous Learning requirement.

Add MATH 150 and 163 to the list of courses eligible to be included in the Quantitative Reasoning requirement.

While the following lists illustrate all courses eligible to be used in the College Requirements of "English Language Writing," "Indigenous Learning," and "Quantitative Reasoning," most fields of study will use subsets of these lists. This is necessary to account for the variety of disciplines taught across the college. Specific options for each major will be shown in the Course and Program Catalogue, and programmed in Degree Works."

English Language Writing

- ANTH 302.3
- ANTH 310.3
- ANTH 405.3
- ANTH 421.3
- ENG 110.6
- ENG 111.3
- ENG 112.3
- ENG 113.3
- ENG 114.3
- ENG 120.3
- ENG 202.6
- ENG 203.3
- ENG 204.3
- ~~ENG 253.6~~
- ENG 290.6
- ESL 116.3
- HIST 115.3
- HIST 125.3
- HIST 135.3
- HIST 145.3
- HIST 155.3
- HIST 165.3
- HIST 175.3

- HIST 185.3
- HIST 193.3
- HIST 194.3
- INTS 203.3
- MUS 155.3
- PHIL 115.3
- PHIL 120.3
- PHIL 121.3
- PHIL 133.3
- PHIL 208.3
- PHIL 233.3
- POLS 245.3
- POLS 323.3
- POLS 328.3
- POLS 333.3
- POLS 336.3
- POLS 422.3
- POLS 461.3
- PSY 323.3
- PSY 355.3
- RLST 280.3
- RLST 362.3

Indigenous Learning

- ANTH 202.3
- ANTH 480.3
- ARCH 350.3
- DRAM 111.3
- ENG 242.3
- ENG 243.3
- ENG 335.3
- HIST 195.3
- HIST 266.3
- INDG 107.3
- LING 253.3
- PLAN 445.3
- POLS 222.3
- 200-level, 300-level, and 400-level INDG courses

Quantitative Reasoning

- CMPT 140.3
- ECON 111.3
- ECON 114.3
- MATH 100.6
- MATH 101.3
- MATH 102.3
- MATH 104.3
- MATH 110.3
- MATH 121.3
- MATH 123.3
- MATH 125.3

- MATH 150.3
- MATH 163.3
- MATH 164.3
- MATH 176.3
- MATH 177.3
- STAT 103.3
- STAT 244.3
- STAT 246.3
- PHYS 115.3
- PSY 233.3
- SOC 225.3

Rationale: Each of the additional courses has been recommended for inclusion in the respective list, by the working/advisory group for that requirement.

More choice on each list will benefit students, who will have more flexibility to select a class which fits their schedule, and aligns with their areas of interest.

Biomedical Neuroscience

Minor program revision
Bachelor of Science Honours and Four-year in Biomedical Neuroscience
Replace ACB 405.3 (Current Topics in Cell Biology) with NEUR 405.3 (Current Topics in Neuroscience) as a required course in the Major Requirement (C4).

Bachelor of Science Honours (B.Sc. Honours) - Biomedical Neuroscience

C4 Major Requirement (66 credit units)

- ACB 325.3
- ACB 334.3
- ~~ACB 405.3~~
- BIOL 226.3
- BMSC 200.3
- BMSC 207.3
- BMSC 208.3
- BMSC 210.3
- BMSC 220.3
- BMSC 230.3
- BMSC 240.3
- CHEM 250.3
- NEUR 350.3
- NEUR 405.3
- NEUR 432.6
- PHPY 301.3
- PHPY 304.3
- PHPY 305.3

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

Bachelor of Science Four-year (B.Sc. Four-year) - Biomedical Neuroscience

C4 Major Requirement (60 credit units)

- ACB 325.3
- ACB 334.3
- ~~ACB 405.3~~
- BIOL 226.3
- BMSC 200.3
- BMSC 207.3
- BMSC 208.3
- BMSC 210.3
- BMSC 220.3
- BMSC 230.3
- BMSC 240.3
- CHEM 250.3
- NEUR 350.3
- NEUR 405.3
- NEUR 432.6
- PHPY 301.3
- PHPY 304.3
- PHPY 305.3

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

Rationale: ACB 405 has been deleted and NEUR 405 created for use in this program.

Biomedical Science

New course(s):
BMSC 350.3 Introduction to Epidemiology
This course will introduce students to the basic concepts, principles and methods of epidemiology. The topics covered will include basic epidemiological measures of disease frequency and association, study design and vulnerability to error, causation, and critical appraisal of an epidemiological study.
Prerequisite(s): Stat 244, 245 or 246
Note: Priority will be given to students enrolled in the Biomedical Sciences programs. The course is open to undergraduate students from all colleges, pending availability, space, and by permission of the instructor.
Instructor(s): Bonnie Janzen
Rationale: This course is being created to expand the offerings in the BMSC programs.

Business Economics

Minor program revisions:
Bachelor of Arts Honours and Four-year in Business Economics

Add MATH 121.3 and MATH 125.3 to the list of MATH course options in the College Requirement (B1). (MATH 123.3 has also been added, as an equivalent to MATH 110 and MATH 176.)

B1 College Requirement (9 credit units)

English Language Writing
Choose **3 credit units** from the following:

- Full list

If a 6 credit unit course (such as ENG 110) is chosen, 3 credit units will be used to fulfill the Breadth Requirement (B2) or the Electives Requirement (B5).

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

- Full list

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

MATH 110.3 is recommended.

- MATH 104.3
- MATH 110.3
- MATH 121.3
- MATH 123.3
- MATH 125.3
- MATH 176.3

Rationale: Each of MATH 121.3 and 125.3 cover the necessary content for a degree in Business Economics. Adding these courses to the list of options facilitates transfer into the Business Economics program or choosing Business Economics as a second degree.

Cellular, Physiological and Pharmacological Sciences

Minor program revisions
Bachelor of Science Honours and Four-year in Cellular, Physiological and Pharmacological Science
Replace ACB 405.3 (Current Topics in Cell Biology) with CPPS 405.3 (Current Topics in Cellular Physiological and Pharmacological Sciences) as an optional course in the Major Requirement (C4).

Bachelor of Science Honours (B.Sc. Honours) - Cellular, Physiological and Pharmacological Sciences

C4 Major Requirement (66 credit units)

- ACB 310.3
- ACB 325.3
- …
- PHPY 304.3
- PHPY 305.3

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

- ACB 331.3
- PHPY 308.3

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

- ACB 330.3
- CPPS 337.3
- NEUR 350.3
- PHPY 301.3

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

- ACB 400.3
- ~~ACB 405.3~~
- ACB 406.3
- CPPS 405.3
- NEUR 404.3
- PHPY 401.3
- PHPY 403.3
- PHPY 405.3

Bachelor of Science Four-year (B.Sc. Four-year) - Cellular, Physiological and Pharmacological Sciences

C4 Major Requirement (60 credit units)

- ACB 310.3
- ACB 325.3
- …
- PHPY 304.3
- PHPY 305.3

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

- ACB 331.3
- PHPY 308.3

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

- ACB 330.3
- CPPS 337.3
- NEUR 350.3
- PHPY 301.3

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

- ACB 400.3
- ~~ACB 405.3~~
- ACB 406.3
- CPPS 405.3

- NEUR 404.3
- PHPY 401.3
- PHPY 403.3
- PHPY 405.3

Rationale: ACB 405 has been deleted and NEUR 405 created for use in this program.

Classical, Medieval and Renaissance Studies

Minor program revisions
Bachelor of Arts Honours, Double Honours and Four-year in Classical, Medieval and Renaissance Studies

Add ARTH 306.3 to the “Literature, Fine Arts, Language” Areas of Concentration in the Major Requirement (A4).
Delete HIST 214.3 anywhere it appears in the Major Requirement (A4).

Bachelor of Arts Honours (B.A. Honours) - Classical, Medieval & Renaissance Studies

A4 Major Requirement (66 credit units)

Of the total 66 credit units required, at least 6 credit units must be at the 300-level and 12 credit units at the 400-level (includes CMRS 401.3 and CMRS 402.3).

…

Period Requirements (18 credit units)

…

Areas of Concentration (24 credit units)

Courses must be selected from one of the following 3 areas:

History and Archaeology

- ARCH 116.3
- ARCH 244.3
- ARCH 252.3
- …
- HIST 209.3
- HIST 211.3
- ~~HIST 214.3~~
- HIST 217.3
- HIST 218.3
- HIST 221.3
- HIST 222.3
- …
- HIST 424.3
- LATN 400.3*

* A shell course that may be taken more than once

Literature, Fine Arts, Language

- ARTH 120.3
- ARTH 260.3
- ARTH 306.3
- ARTH 308.3
- ARTH 309.3
- CLAS 225.3
- …
- RLST 254.3
- RLST 365.3

* A shell course that may be taken more than once

Classical Thought and History of Ideas

- …

* A shell course that may be taken more than once

Classical, Medieval and Renaissance Studies Electives (6 credit units)

Choose 6 credit units from the courses listed in the following 3 Areas of Concentration:

History and Archaeology

- ARCH 116.3
- ARCH 244.3
- …
- HIST 209.3
- HIST 211.3
- ~~HIST 214.3~~
- HIST 217.3
- HIST 218.3
- HIST 221.3
- HIST 222.3
- …
- HIST 424.3
- LATN 400.3*

* A shell course that may be taken more than once

Literature, Fine Arts, Language

- ARTH 120.3
- ARTH 260.3
- ARTH 306.3
- ARTH 308.3
- ARTH 309.3

- CLAS 225.3
- …
- RLST 254.3
- RLST 365.3

* A shell course that may be taken more than once

Classical Thought and the History of Ideas:

- …

* A shell course that may be taken more than once

Bachelor of Arts Four-year (B.A. Four-year) - Classical, Medieval and Renaissance Studies

A4 Major Requirement (63 credit units)

Of the total 63 credit units required, at least 3 credit units must be at the 300-level.

…

Period Requirements (18 credit units)

…

Areas of Concentration (24 credit units)

Courses must be selected from one of the following 3 areas:

History and Archaeology

- ARCH 116.3
- ARCH 244.3
- …
- HIST 209.3
- HIST 211.3
- ~~HIST 214.3~~
- HIST 217.3
- HIST 218.3
- HIST 221.3
- HIST 222.3
- …
- HIST 424.3
- LATN 400.3*

* A shell course that may be taken more than once

Literature, Fine Arts, Language

- ARTH 120.3
- ARTH 260.3

- ARTH 306.3
- ARTH 308.3
- ARTH 309.3
- CLAS 225.3
- …
- RLST 254.3
- RLST 365.3

* A shell course that may be taken more than once

Classical Thought and History of Ideas

- …

* A shell course that may be taken more than once

Classical, Medieval and Renaissance Studies Electives (12 credit units)

Courses must be selected from the Areas of Concentration:

History and Archaeology

- ARCH 116.3
- ARCH 244.3
- …
- HIST 209.3
- HIST 211.3
- ~~HIST 214.3~~
- HIST 217.3
- HIST 218.3
- HIST 221.3
- HIST 222.3
- …
- HIST 424.3
- LATN 400.3*

* A shell course that may be taken more than once

Literature, Fine Arts, Language

- ARTH 120.3
- ARTH 260.3
- ARTH 306.3
- ARTH 308.3
- ARTH 309.3
- CLAS 225.3
- ..
- RLST 254.3
- RLST 365.3

* A shell course that may be taken more than once

Classical Thought and the History of Ideas:

- …

* A shell course that may be taken more than once

Bachelor of Arts Double Honours - Classical, Medieval & Renaissance Studies - Major 1

A4 Major Requirement (30 credit units)

…

Areas of Concentration (12 credit units)

Note: 298, 299, 398, 399, 498, 499 courses may be used toward period requirements depending on course content.

Courses must be selected from one of the following 3 areas:

History and Archaeology

- ARCH 116.3
- ARCH 244.3
- …
- HIST 209.3
- HIST 211.3
- ~~HIST 214.3~~
- HIST 217.3
- HIST 218.3
- HIST 221.3
- HIST 222.3
- …
- HIST 424.3
- LATN 400.3*

* A shell course that may be taken more than once

Literature, Fine Arts, Language

- ARTH 120.3
- ARTH 260.3
- ARTH 306.3
- ARTH 308.3
- ARTH 309.3
- CLAS 225.3
- …
- RLST 254.3
- RLST 365.3

* A shell course that may be taken more than once

Classical Thought and History of Ideas

- …

* A shell course that may be taken more than once

Bachelor of Arts Double Honours - Classical, Medieval & Renaissance Studies - Major 2

Requirements (36 credit units)

…

Areas of Concentration (12 credit units)

Note: Special Topics courses may be used to fulfill the Area of Concentration requirements with the permission of the Program Director.

Courses must be selected from one of the following 3 areas:

History and Archaeology

- ARCH 116.3
- ARCH 244.3
- …
- HIST 209.3
- HIST 211.3
- ~~HIST 214.3~~
- HIST 217.3
- HIST 218.3
- HIST 221.3
- HIST 222.3
- …
- HIST 424.3
- LATN 400.3*

* A shell course that may be taken more than once

Literature, Fine Arts, Language

- ARTH 120.3
- ARTH 260.3
- ARTH 306.3
- ARTH 308.3
- ARTH 309.3
- CLAS 225.3
- …
- RLST 254.3
- RLST 365.3

* A shell course that may be taken more than once

Classical Thought and the History of Ideas

- …

* A shell course that may be taken more than once

Rationale: ARTH 306.3 (Medieval Art and Architecture) is relevant to the program of study and will provide students with greater course selection. HIST 214.3 (History in Film) does not necessarily cover the historical periods with which the CMRS programs are concerned and should therefore not be used to fulfill an A4 Major Requirement. CMRS students have a very wide range of other options with which to fulfill their A4 Major Requirements, and this program change does not prevent them from taking HIST 214.3 as an elective.

Computer Science

Minor program revisions
Bachelor of Science Double Honours in Computer Science

Students who take a double honours in Mathematics and Computer Science are currently required to complete two similar project/thesis style courses, which is unnecessarily burdensome.

After consultation with Mathematics, if a student completing a Double Honours with Major 1 in Mathematics or Statistics, we would not require CMPT 400.3, but replace it with 3cu in Computer Science numbered 410 or higher.

Double Honours - Computer Science - Major 2

Requirements (42 credit units)

- CMPT 214.3
- CMPT 215.3 or CME 331.3
- CMPT 260.3
- CMPT 270.3
- CMPT 280.3
- CMPT 360.3
- CMPT 364.3
- CMPT 400.3

Note: For students whose Double Honours Major 1 requirements include MATH 402.0, the requirement for CMPT 400.3 is waived, and 3 additional credit units of CMPT courses with number 410 or higher are required.

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

- CMPT 141.3 or CMPT 116.3
- CMPT 145.3 or CMPT 117.3

Choose **9 credit units** from the following:

- CMPT 317.3

- CMPT 332.3
- CMPT 340.3
- CMPT 353.3
- CMPT 370.3
- CMPT 381.3

Choose **3 credit units** of CMPT courses with number 410 or higher:

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

- CMPT — 400-Level

Rationale: Students who take a double honours in Mathematics or Statistics and Computer Science are currently required to complete two similar project/thesis style courses, which is unnecessarily burdensome.

New course(s):
CMPT 489.3 Deep Learning and Applications
2 (3L) A survey of Deep Learning techniques and their application to problems in computer vision and data science. Deep learning techniques may include Deep Neural Networks, Convolutional Neural Networks, Recurrent Networks, Deep Generative Models and Reinforcement Learning. Application domains will focus on computer vision problems, including image classification, object detection and image segmentation. Additional application domains in natural language processing and robotics control will be introduced. Software tools will be introduced for practical application.
Prerequisite(s): MATH 164, MATH 266, EE 216, or CE 318; and STAT 245; and CMPT 317 or CMPT 487.
Note: Students with credit for CMPT 498.3 Deep Learning and Applications may not take this course for credit.
Instructor(s): Ian Stavness
Rationale: Machine learning is a rapidly expanding area of Computer Science and within the past five years a new sub-discipline, broadly called "Deep Learning," has emerged as the dominant technique in a large class of data science problems. Most notably in computer vision, deep learning approaches, including convolutional neural networks, have demonstrated state-of-the-art task performance across many categories of tasks. Deep learning is quickly expanding in related application domains. The demand for trainees who have experience with deep learning methods is also rapidly growing. This course will serve the needs of soon to graduate undergraduate students, as well as the research demands of graduate students within the Dept. of Computer Science and related data science disciplines on campus.

Crime, Law and Justice Studies

Minor program revisions
Minor in Crime, Law and Justice Studies
1) Add Sociology 200 and 347 as restricted electives in the minor in Crime, Law and Justice Studies (for both Sociology and non-Sociology majors), and SOC 400 (for Sociology majors only).
2) Move Sociology 415.3 and 418.3; from being required 3 cu elective to the other categories of restricted electives (under the minor for Sociology majors only)
3) Remove Sociology 334 and Sociology 439.3 from the choice of restricted electives
4) Remove the statement for Sociology majors that stipulates that this minor is only 'open to B.A. Four Year Only. Adding a statement that this is for B.A. three-year, B.A. four-year, and B.A. Honours students in Sociology.
5) Rearrange program requirements for clarity (as detailed below)

Crime, Law and Justice Studies

Minor

The minor in Crime, Law and Justice Studies may be completed in conjunction with any degree in the College of Arts & Science ~~in a discipline other than Sociology~~. Students enrolled in the Bachelor of Arts Honours, Four-year or Three-year programs in Sociology may receive credit for this Minor by following the requirements for Sociology Majors below. Students in the Honours or Three-year programs in Sociology will be required to complete more than the 120 or 90 credit units, respectively, required for their degree. ~~Students in the B.A. Four-year program in Sociology may receive credit this Minor by following the requirements for Sociology Majors below. Students in the B.A. Three-year or Honours programs in Sociology may receive credit for this minor by following the requirements for Sociology Majors below, but will be required to take more than the required 90 or 120 credit units, respectively, for their degree.~~ Such students must consult with an advisor in the Undergraduate Student Office.

The Minor average in …

Requirements

Non-Sociology Majors (21 credit units)

~~Students must complete 21 credit units Sociology:~~

- ~~SOC 212.3 Introduction to Criminology~~
- ~~SOC 214.3 Social Control or SOC 219.3 Indigenous Peoples and Justice in Canada~~
- ~~SOC 232.3 Methods of Social Research~~
- ~~SOC 233.3 Introduction to Sociological Theory~~
- ~~SOC 234.3 Sociology of Law~~

Required courses:

- SOC 212.3 Introduction to Criminology
- SOC 232.3 Methods of Social Research
- SOC 233.3 Introduction to Sociological Theory
- SOC 234.3 Sociology of Law

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

- SOC 214.3 Social Control
- SOC 219.3 Indigenous Peoples and Justice in Canada

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

- SOC 200.3 Surveillance and Society
- SOC 310.3 White Collar and Corporate Crime in the Global Context
- SOC 311.3 Youth Crime Justice and Social Control
- SOC 312.3 Current Issues in Criminal Justice
- SOC 329.3 Penology and Corrections
- ~~SOC 334.3 or~~ SOC 341.3 Institutional Racism and Indigenous People
- SOC 347.3 Studies in Addictions

In addition to the courses required for the Minor in Crime, Law and Justice Studies, students are encouraged to complete 3 credit units from the following:

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

- SOC 203.3 Race and Ethnic Relations in Canada
- SOC 205.3 Comparative Race and Ethnic Relations
- SOC 206.3 Sociology of Communities and Community Development

Sociology Majors (18 credit units)

In addition to the requirements for a Sociology degree, students must complete 18 credit units Sociology. Students may not count the same courses towards the requirements for both a major and this minor subject area. A maximum of 60 credit units are allowed in one subject for the B.A. Four-year or Honours programs; a maximum of 42 credit units are allowed in one subject for the B.A. Three-year program.

~~Choose **15 credit units** from the following:~~

- ~~SOC 212.3 Introduction to Criminology~~
- ~~SOC 214.3 Social Control or SOC 219.3 Indigenous Peoples and Justice in Canada~~
- ~~SOC 234.3 Sociology of Law~~
- ~~two of:~~
  - ~~SOC 310.3 White Collar and Corporate Crime in the Global Context~~
  - ~~SOC 311.3 Youth Crime Justice and Social Control~~
  - ~~SOC 312.3 Current Issues in Criminal Justice~~
  - ~~SOC 329.3 Penology and Corrections~~
  - ~~SOC 334.3 or SOC 341.3 Institutional Racism and Indigenous People~~

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

- ~~SOC 415.3 Selected Problems in Social Control~~
- ~~SOC 418.3 Advanced Criminology~~
- ~~SOC 439.3~~
- ~~or another 400-level SOC class approved by the department.~~

Required courses:

- SOC 212.3 Introduction to Criminology
- SOC 234.3 Sociology of Law

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

- SOC 214.3 Social Control
- SOC 219.3 Indigenous Peoples and Justice in Canada

Choose **9 credit units** from the following:

- SOC 200.3 Surveillance and Society
- SOC 310.3 White Collar and Corporate Crime in the Global Context
- SOC 311.3 Youth Crime Justice and Social Control
- SOC 312.3 Current Issues in Criminal Justice
- SOC 329.3 Penology and Corrections

- ~~SOC 334.3 or~~ SOC 341.3 Institutional Racism and Indigenous People
- SOC 347.3 Studies in Addictions
- SOC 400.3 Surveillance and Power
- SOC 415.3 Selected Problems in Social Control
- SOC 418.3 Advanced Criminology
- ~~SOC 439.3~~
- ~~or another 400-level SOC class approved by the department.~~

In addition to the courses required for the Minor in Crime, Law and Justice Studies, students are encouraged to complete:

- SOC 203.3 Race and Ethnic Relations in Canada
- SOC 205.3 Comparative Race and Ethnic Relations
- SOC 206.3 Sociology of Communities and Community Development

Rationale: The additional courses provide greater course selection. The courses being removed are no longer offered by the department. The revision of the Minor requirements for Sociology students will allow students a greater choice of courses relevant to this field.

Drama

Minor program revisions
Bachelor of Arts Double Honours in Drama

Major 1:

- Remove 3cu of 100-Level ENG from D1
- Add 3cu of Language to D2 to balance breadth requirements
- Revise Option 1 to require 3cu of 100-level ENG
- Revise Option 2 to require 3cu of courses in Theatre History

Major 2

- Remove ENG 112 as a required course
- Revise Option 1 to require 3cu of 100-level ENG
  Revise Option 2 to require 3cu of courses in Theatre History

Bachelor of Arts Double Honours (B.A. Honours) - Drama - Major 1

D1 College Requirement (~~9~~ 6 credit units)

The **Indigenous Learning** Requirement for this program is met in the Major Requirement (D4).

English Language Writing

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

- ~~ENG 110.6; or~~
- ~~ENG 112.3 and one of ENG 111.3, ENG 113.3, ENG 114.3, ENG 120.~~3
- 100-level ENG courses (ENG 112 preferred)

Quantitative Reasoning

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

- CMPT 140.3
- …
- STAT 246.3

D2 Breath Requirement (~~15~~ 18 credit units)

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

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

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

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

D4 Major Requirement (~~39~~ 42 credit units)

- DRAM 110.3
- DRAM 111.3
- DRAM 113.3
- DRAM 118.3
- DRAM 119.3
- DRAM 210.3 or DRAM 213.3

Choose **one** of the following options:

Option 1: Theatre History (~~21~~ 24 credit units)

- DRAM 203.3
- DRAM 204.3
- DRAM 303.3
- DRAM 304.3
- DRAM 309.3
- DRAM 401.3
- DRAM 402.3

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

- 100-Level ENG courses

Option 2: Acting (~~21~~ 24 credit units)

- DRAM 218.3
- DRAM 219.3
- DRAM 324.3

- DRAM 325.3
- DRAM 362.3
- DRAM 366.3
- Choose 3 credit units from the following: DRAM 363.3, DRAM 368.3, or DRAM 418.3
- Choose 3 credit units from the following: DRAM 203.3 History of Theatre from 600 BCE to 1850 CE, or DRAM 204.3 History of Theatre from 1850 to Present

D5 Electives Requirement (~~48~~ ~~51~~ credit units)

Major 2 (36 - 42 credit units)

- Double Honours requirements in second discipline

Open Electives (~~6~~-12 ~~9~~-~~15~~ 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 Double 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.

Bachelor of Arts Double Honours (B.A. Honours) - Drama - Major 2

Requirements (42 credit units)

- DRAM 110.3
- DRAM 111.3
- DRAM 113.3
- DRAM 118.3
- DRAM 119.3
- DRAM 210.3 or DRAM 213.3
- ~~ENG 112.3~~

Choose **one** of the following options

Option 1: Theatre History (~~21~~ 24 credit units)

- DRAM 203.3
- DRAM 204.3
- DRAM 303.3
- DRAM 304.3
- DRAM 309.3
- DRAM 401.3
- DRAM 402.3

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

- 100-Level ENG courses (ENG 112 preferred)

Option 2: Acting (~~21~~ 24 credit units)

- Choose 3 credit units from the following: DRAM 363.3, DRAM 367.3, or DRAM 418.3
- DRAM 218.3
- DRAM 219.3
- DRAM 318.3
- DRAM 319.3
- DRAM 362.3
- DRAM 366.3
- Choose 3 credit units from the following: DRAM 203.3 History of Theatre from 600 BCE to 1850 CE, or DRAM 204.3 History of Theatre from 1850 to Present

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

Rationale: This change ensures that students in the Acting option are required to take a theatre history course. Students in this option will now only be required to take 0 or 3 credit units of 100-level English, but are not prevented from taking more, either as part of the other major or as part of the distribution requirements.

Economics

New course(s):
ECON 351.3 Public Economics
1/2 (3L) A survey of the principles of resource allocation in the public sector in relation to the role and effect of taxation and expenditure policies on the achievement of the major economic objectives. Topics include the major taxes, fiscal federalism, public debt, public choice, cost-benefit analysis and major expenditure programs.
Prerequisite(s): ECON 211 or ECON 273; and one of MATH 104, MATH 110, MATH 121, MATH 123, MATH 125, or MATH 176.
Note: Students with credit for ECON 350 or ECON 352 cannot take this course for credit. Students may receive credit for ECON 351 and ECON 350 and/or ECON 352 only if ECON 351 is taken first.
Instructor(s): D. Gilchrist, A. Pollak
Rationale: There are two reasons for introducing this course. First, it improves our offerings from a student's perspective, as it will be possible to learn about all aspects of public economics without committing to taking two 3CU courses. This may be a welcome change particularly for non-Econ majors with an interest in policy. Second, with increasingly stretched teaching resources, it has become difficult for the department to consistently offer two separate public economics courses every year. This change will increase the flexibility regarding senior undergraduate course offerings.
The department currently offers two 300-level courses in the field of public economics, ECON 350 (Public Expenditures) and ECON 352 (Taxation). The proposed course combines elements of these two courses, giving students an overview to the whole field of public economics in a single course. There is no plan to discontinue the existing courses ECON 350 and 352 at this point, and students will only be allowed to take all 3 if they take ECON 351 first.

English

New course(s):
ENG 243.3 Introduction to Indigenous Literatures
1/2 (3L) A broad introduction to the study of Indigenous literatures in the Canadian context, preparing students for more advanced study of Indigenous literatures in the discipline of English. Students will read and listen to a diversity of First Nations, Metis and Inuit texts and oral stories, and learn to understand them as part of Indigenous literary traditions and histories. They will learn key concepts and approaches in Indigenous literary study, including learning about the processes of settler colonialism past and

present. A focus will be placed on students understanding the literatures in terms of their own position and context.
Prerequisite(s): 6 credit units of 100-level ENG.
Note: This course is particularly recommended for students who plan to take ENG 335.3 or ENG 338.3.
Instructor(s): Kristina Bidwell, Jenna Hunnef
Rationale: The Department of English does not currently have an introductory Indigenous literatures course that will serve as a relatively broad base for more advanced study, including our 300-level courses in the field (335.3-Emergence of Indigenous Literatures in Canada and 338.3-Contemporary North American Indigenous Literatures). The one Indigenous literature course at the 200-level has a fairly narrow, regional focus: 242.3-Indigenous Storytelling of the Prairies. In addition, with the implementation of the Indigenous Learning Requirement, the department anticipates significantly increased demand for Indigenous literature courses, and aims to offer more choice, as well as more spaces.

Global Studies

Minor program revisions
Degree-level Certificate in Global Studies
Add note for students in Edwards School of Business, with the option to count COMM 306, COMM 340, COMM 456, COMM 466, COMM 485, and COMM 495 toward Cluster B requirements.

Important Notes

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Note: Students admitted to Edwards Business School may use the following courses in Cluster B, only. Students admitted to Arts & Science will not receive credit for these courses, toward this certificate, nor for other Arts & Science programs.

- COMM 306.3
- COMM 340.3
- COMM 456.3
- COMM 466.3
- COMM 485.3 (closed course)
- COMM 495.3

These courses all have an international component and will meet the goals of the Global Studies Certificate.

1. Their inclusion will allow students from Edwards School of Business to more easily add the Global Studies Certificate to their degrees
2. Students benefit from having students from other colleges in the common classes, by introducing different perspectives to the global issues introduced and discussed
3. Both of the preceding points will contribute to the over-arching goal of the Global Studies Certificate: contributing to the internationalization of our student body

History

Minor program revisions:
Bachelor of Arts Honours, Double Honours, Four-year and Three-year in History

Add requirement to take one of the course on the Indigenous Learning list as part of the Major requirement (A4). Students may now count up to 9 credit units of 100-level HIST courses in the Major requirement.

Bachelor of Arts Honours (B.A. Honours) - History

A4 Major Requirement (~~60~~ 63 credit units)

- HIST 397.3
- HIST 494.0

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

- HIST — 100-Level

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

- ANTH 202.3
- ANTH 480.3
- ARCH 350.3
- DRAM 111.3
- ENG 242.3
- ENG 243.3
- ENG 335.3
- HIST 195.3
- HIST 266.3
- INDG 107.3
- LING 253.3
- PLAN 445.3
- POLS 222.3
- 200-level, 300-level, and 400-level INDG courses

Choose **9 credit units** from the following:

- 300-Level HIST Courses

Choose **12 credit units** from the following:

- 400-Level HIST Courses

Choose **30 credit units** from the following:

Students may count up to a total of 12 credit units of senior CLAS courses, 400-level GRK, and 400-level LATN in partial fulfillment of the Major Requirement.

No more than 60 credit units of HIST courses may be taken to fulfill the degree requirements.

- 200-Level , 300-Level or 400-Level HIST Courses
- 200-Level , 300-Level or 400-Level CLAS Courses
- 100-Level , 200-Level , 300-Level or 400-Level CMRS Courses
- 400-Level GRK Courses
- 400-Level LATN Courses
- INCC 310.3

Bachelor of Arts Four-year (B.A. Four-year) - History

A4 Major Requirement (~~42~~ 45 credit units)

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

- HIST — 100-Level

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

- ANTH 202.3
- ANTH 480.3
- ARCH 350.3
- DRAM 111.3
- ENG 242.3
- ENG 243.3
- ENG 335.3
- HIST 195.3
- HIST 266.3
- INDG 107.3
- LING 253.3
- PLAN 445.3
- POLS 222.3
- 200-level, 300-level, and 400-level INDG courses

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

- 300-Level HIST Courses

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

- 400-Level HIST Courses

Choose **24 credit units** from the following:

Students may count up to a total of 12 credit units of senior CLAS courses, 400-level GRK, and 400-level LATN in partial fulfillment of the Major Requirement.

- 200-Level , 300-Level or 400-Level HIST Courses
- 200-Level , 300-Level or 400-Level CLAS Courses
- 100-Level , 200-Level , 300-Level or 400-Level CMRS Courses
- 400-Level GRK Courses
- 400-Level LATN Courses
- INCC 310.3

Bachelor of Arts Three-year (B.A. Three-year) - History

A4 Major Requirement (~~30~~ 33 credit units)

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

- HIST — 100-Level

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

- ANTH 202.3
- ANTH 480.3
- ARCH 350.3
- DRAM 111.3
- ENG 242.3
- ENG 243.3
- ENG 335.3
- HIST 195.3
- HIST 266.3
- INDG 107.3
- LING 253.3
- PLAN 445.3
- POLS 222.3
- 200-level, 300-level, and 400-level INDG courses

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

- 300-Level HIST Courses

- 400-Level HIST Courses

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

Students may count up to a total of 9 credit units of senior CLAS courses, 400-level GRK, and 400-level LATN in partial fulfillment of the Major Requirement.

- 200-Level , 300-Level or 400-Level HIST Courses
- 200-Level , 300-Level or 400-Level CLAS Courses
- 100-Level , 200-Level , 300-Level or 400-Level CMRS Courses
- 400-Level GRK Courses
- 400-Level LATN Courses
- INCC 310.3

Bachelor of Arts Double Honours - History - Major 1

A4 Major Requirement (~~36~~ 39 credit units)

- HIST 397.3
- HIST 494.0

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

- HIST — 100-Level

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

- ANTH 202.3

- ANTH 480.3
- ARCH 350.3
- DRAM 111.3
- ENG 242.3
- ENG 243.3
- ENG 335.3
- HIST 195.3
- HIST 266.3
- INDG 107.3
- LING 253.3
- PLAN 445.3
- POLS 222.3
- 200-level, 300-level, and 400-level INDG courses

Choose **27 credit units** from the following, such that at least 3 credit units are at the 300-level and 6 credit units are at the 400-level:

Students may count up to a total of 12 credit units of senior CLAS courses, 400-level GRK, and 400-level LATN in partial fulfillment of the Major Requirement.

- 200-Level , 300-Level or 400-Level HIST Courses
- 200-Level , 300-Level or 400-Level CLAS Courses
- 100-Level , 200-Level , 300-Level or 400-Level CMRS Courses
- 400-Level GRK Courses
- 400-Level LATN Courses
- INCC 310.3

Double Honours - History - Major 2

Requirements (~~36~~ 39 credit units)

- HIST 397.3
- HIST 494.0

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

- HIST — 100-Level

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

- ANTH 202.3
- ANTH 480.3
- ARCH 350.3
- DRAM 111.3
- ENG 242.3
- ENG 243.3
- ENG 335.3
- HIST 195.3
- HIST 266.3
- INDG 107.3
- LING 253.3
- PLAN 445.3

- POLS 222.3
- 200-level, 300-level, and 400-level INDG courses

Choose **27 credit units** from the following, such that at least 3 credit units are at the 300-level and 6 credit units are at the 400-level:

Students may count up to a total of 12 credit units of senior CLAS courses, 400-level GRK, and 400-level LATN in partial fulfillment of the Major Requirement.

- 200-Level , 300-Level or 400-Level HIST Courses
- 200-Level , 300-Level or 400-Level CLAS Courses
- 100-Level , 200-Level , 300-Level or 400-Level CMRS Courses
- 400-Level GRK Courses
- 400-Level LATN Courses
- INCC 310.3

Rationale: Adding the requirement to take on of the courses in the Indigenous Learning list as part of the major will ensure that students meet this requirement, and provide them the option to take either a HIST or non-HIST course to do so. The change to allow up to 9 credit units of 100-level HIST in A4 accommodates students who wish to fulfill the Indigenous Learning requirement by taking HIST 195.

Hydrology

Minor course revisions
GEOG 233.3 Introduction to Weather and Climate
Change course hours from “3 lecture hours” to “3 lecture hours and 2 practicum/lab hours”.
Rationale: These changes are made in response to student requests and instructor preference. Students have requested a dedicated lab period in order to gain a better understanding of the mechanics of completing each assignment, e.g. examples of mathematical problem solving, as well as more contact opportunity with instructor to connect theory presented in lecture to practical exercises presented in the assignments. The instructor will use this practicum period to enhance learning at the practical level. The practicum time will give the instructor more flexibility in teaching content and to add new content where needed. The addition of the lab time will provide a given time for class to be held in a computer lab or laboratory as needed. Currently, a single laboratory session is embedded in the lecture time.

Indigenous Studies

New course(s):
INDG 201.3 Introduction to the Health and Well Being of Indigenous Peoples
1/2 (3L)This course introduces students to the broad issues relating to Indigenous People’s Health & Well-Being in Canada and internationally through a decolonizing lens. It will cover foundational historical, political, social, economic, cultural and contemporary determinants of health. These will include, but not limited to, issues relating to treaties & health, Indigenous health traditions of healing and care, Indigenous cultural values on health & well-being, traditional medicines, colonialism and decolonization, Indigenous health status, Indigenous health services, impacts of social determinants of health, mental health issues including intergenerational trauma, environment related issues of food, water security and climate change, and impacts of Indigenous social movements, international cooperation, UNDRIP and TRC, and emerging Indigenous health research.
Prerequisite(s): 3 credit units 100-level INDG and 3 credit units from ANTH, ARCH, ECON, GEOG, INDG, LING, NS, POLS, PSY, SOC, or WGST.
Instructor(s): Bonita Beatty, Michelle Johnson-Jennings, Robert Henry
Rationale: Students in our upper level health-oriented classes have little to no knowledge of Indigenous health issues, history, and culture, both in Canada and at the international level. We therefore felt that we

needed an introductory base health course to provide a broad foundational overview in Indigenous health issues in Canada specifically with an introduction to international health issues.

Mathematics

Minor program revisions
Bachelor of Science Double Honours in Mathematics
MATH 238 becomes a required course; MATH 211 becomes an optional course. In Major 2, MATH 402 is waived for students who students who are using Computer Science as Major 1.

Bachelor of Science Double Honours - Mathematics - Major 1

C4 Major Requirement (42 credit units)

- MATH 163.3
- MATH 164.3
- ~~MATH 211.3~~
- MATH 238.3
- MATH 266.3
- MATH 276.3
- MATH 277.3
- MATH 361.3
- MATH 362.3
- MATH 371.3
- MATH 379.3
- MATH 402.0
- STAT 241.3

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

- MATH 110.3
- MATH 176.3

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

- MATH 116.3
- MATH 177.3

Choose the remaining **3 credit units** from the following, using the following rules:

- 300-Level or 400-Level MATH Courses
- 300-Level or 400-Level STAT Courses
- MATH 211.3
- ~~MATH 238.3~~

Double Honours - Mathematics - Major 2

Requirements (42 credit units)

- MATH 110.3 or MATH 176.3
- MATH 116.3 or MATH 177.3

- MATH 163.3
- MATH 164.3
- ~~MATH 211.3~~
- MATH 238.3
- MATH 266.3
- MATH 276.3
- MATH 277.3
- MATH 361.3
- MATH 362.3
- MATH 371.3
- MATH 379.3
- MATH 402.0
- STAT 241.3

MATH 402.0 is not required for students completing CMPT 400.3 as part of their Major 1 requirements.

Choose the remaining **3 credit units** from the following, using the following rules:

- 300-Level or 400-Level MATH Courses
- 300-Level or 400-Level STAT Courses
- MATH 211.3
- ~~MATH 238.3~~

Recommended Electives

Computer Science

- CMPT 141.3 or CMPT 116.3 (recommended options)
- CMPT 145.3 or CMPT 117.3 (recommended options)

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

Rationale: MATH 238 replaces MATH 211 as a required course, as the former is required as a prerequisite for MATH 379, which is also required. Students who take a double honours in Mathematics or Statistics and Computer Science are currently required to complete two similar project/thesis style courses, which is unnecessarily burdensome.

New course(s):
MATH 150.3 Mathematics for Early and Middle Years Teachers
1/2 (3L-1.5P) An introductory course in mathematics specifically designed for students enrolled in the Early/Middle Years route of the Bachelor of Education program. A broad survey of mathematical topics aligned with the Saskatchewan mathematics curriculum, including logical and set-theoretic reasoning, number theory and numerical operations, algebraic expressions and modelling, functions and their graphs, planar and solid geometry, probability and statistics. Collaborative group work in labs and reflective journaling ensure that mathematical communication and appreciation are emphasized alongside quantitative proficiency throughout the course.
Prerequisite(s): Precalculus 30; or Foundations of Mathematics 30; or Math A30 or Math B30 or Math C30
Note: Intended for students enrolled in the Early/Middle Years route of the Bachelor of Education program. Students who excel at mathematics and/or have chosen mathematics as one of their teaching areas should speak to an advisor about alternate mathematics and statistics course recommendations. Does not fulfill requirements of a major or honours in either mathematics or statistics, or any other Arts & Science degree program. This course may not be taken for credit concurrently with or

after any other 100-level MATH course or any course in statistics. Students may have credit for only one of MATH 100, MATH 101 or MATH 150.
Instructor(s): Any regular faculty in Dept. of Math & Stats
Rationale: The adoption of Banner 9 makes six-credit courses logistically difficult to implement. Because of this, the department has been advised to eliminate MATH 100.6 and replace it with three-credit courses. Traditionally, six-credit courses are split into two three-credit courses. However, B.Ed. students in the Early/Middle Years route currently only require three CUs of math or stats for their program and the College of Education has expressed interest in replacing MATH 100.6 with a single three-credit course for some time now. Therefore, we do not think that there would be sufficient interest and enrollment to warrant the creation of a second three-credit course.
MATH 100.6 has undergone minimal revisions since it was introduced in 1991. During this time, many changes have been made to the department's first year offerings, to programs at the College of Education, and to the Saskatchewan K to 12 math curricula. The creation of MATH 150 provides an opportunity to renovate and refine the mathematical content we offer to pre-service Early and Middle Years teachers.

MATH 425.3 Numerical Optimization
1/2 (3L) An introductory course on numerical optimization. Topics include unconstrained optimization, descent methods, constrained optimization, penalty, barrier, and augmented Lagrangian methods, and applications to inverse problems and deep learning.
Prerequisite(s): MATH 211; and MATH 277, MATH 224 or MATH 226; and MATH 313.
Instructor(s): Rotating mathematics faculty, as part of regular assignment of duties
Rationale: As part of the on-going revisions to the mathematics undergraduate curriculum, we aim to give students the options of completing a suite of upper year courses in *Computational Mathematics* as a means to prepare students to utilize skills learned in the mathematics degree in the workplace. A course in numerical optimization an ideal inclusion in such a suite of courses.

Course deletion(s):
MATH 100.6 Mathematics for Elementary School Teachers
See MATH 150 above.

Modern Languages

Minor program revisions:
Bachelor of Arts Four-year and Three-year in Modern Languages
Add FREN 212.3 to list of introductory French courses.
Remove requirement that courses in the primary language be taught in the primary language.
Make explicit required SPAN courses (if Spanish is primary language).
Revise the Major Requirement to require (rather than allow) 3 credit units of 100-level ENG courses.
Remove unnecessary course lists and reorganize requirements for clarity.

Bachelor of Arts Four-year (B.A. Four-year) - Modern Languages

A4 Major Requirement (63 credit units)

Primary Language (30 credit units):

French

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

- FREN 103.3
- FREN 106.3

- FREN 122.3
- FREN 125.3
- FREN 212.3
- FREN 218.3

Choose **24 credit units** ~~of language, culture, or literature courses~~ FREN courses ~~taught in the chosen primary language~~:

~~**Cultural Courses**~~

- ~~FREN 251.3~~
- ~~FREN 252.3~~
- ~~FREN 272.3~~
- 200-Level, 300-Level or 400-Level FREN Courses

Spanish

~~Students who have chosen Spanish as their primary language MUST take Spanish 314 and 317 as part of their major.~~

- SPAN 114.3
- SPAN 117.3
- SPAN 214.3
- SPAN 217.3
- SPAN 314.3
- SPAN 317.3

Choose **12 credit units** from the following:

- 200-Level, 300-Level or 400-Level SPAN Courses

Linguistics (9 credit units):

- LING 111.3

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

- 100-Level , 200-Level , 300-Level or 400-Level LING Courses

Comparative Literature (6 credit units):

- LIT 110.3
- LIT 111.3

Secondary Language (6 credit units):

Choose **6 credit units** in a single language from the following:

- ARBC 114.3
- ARBC 117.3
- CHIN 114.3
- CHIN 117.3

- CREE 101.6
- GRK 112.3
- GRK 113.3
- HEB 114.3
- HEB 117.3
- JPNS 114.3
- JPNS 117.3
- LATN 112.3
- LATN 113.3

French

- 100-Level , 200-Level , 300-Level or 400-Level FREN Courses

German

- 100-Level , 200-Level , 300-Level or 400-Level GERM Courses

Spanish

- 100-Level , 200-Level , 300-Level or 400-Level SPAN Courses

Ukrainian

- 100-Level , 200-Level , 300-Level or 400-Level UKR Courses

The department may also recognize language courses taken at other institutions on a case by case basis.

General requirement (12 credit units):

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

- ENG 110.6
- ENG 111.3
- ENG 112.3
- ENG 113.3
- ENG 114.3

Choose **6-9 credit units** from any of the following areas:

English

- 100-Level , 200-Level , 300-Level or 400-Level ENG Courses

French

- 200-Level , 300-Level or 400-Level FREN Courses

German

- 200-Level , 300-Level or 400-Level GERM Courses

Japanese

- 200-Level , 300-Level or 400-Level JPNS Courses

Linguistics

- 200-Level , 300-Level or 400-Level LING Courses

Spanish

- 200-Level , 300-Level or 400-Level SPAN Courses

Ukrainian

- 200-Level , 300-Level or 400-Level UKR Courses

~~Literature and/or cultural courses taught in the primary language or in English.~~

~~**Cultural Courses**~~

- ~~FREN 251.3~~
- ~~FREN 252.3~~
- ~~FREN 272.3~~
- ~~SPAN 202.3~~
- ~~SPAN 204.3~~

~~**French**~~

- ~~200-Level , 300-Level or 400-Level FREN Courses~~

~~**German**~~

- ~~200-Level , 300-Level or 400-Level GERM Courses~~

~~**Spanish**~~

- ~~200-Level , 300-Level or 400-Level SPAN Courses~~

~~**English**~~

- ~~100-Level , 200-Level , 300-Level or 400-Level ENG Courses~~

~~**Senior course in a secondary language**~~

~~**French**~~

- ~~200-Level , 300-Level or 400-Level FREN Courses~~

~~**German**~~

- ~~200-Level , 300-Level or 400-Level GERM Courses~~

~~**Japanese**~~

- ~~200-Level , 300-Level or 400-Level JPNS Courses~~

~~**Spanish**~~

- ~~200-Level , 300-Level or 400-Level SPAN Courses~~

~~**Ukrainian**~~

- ~~200-Level , 300-Level or 400-Level UKR Courses~~

~~**Linguistics**~~

- ~~200-Level , 300-Level or 400-Level LING Courses~~

Literary/Critical Theory

Courses in Literary/Critical Theory can be taken from other departments in the College but require Department of Languages, Literatures, and Cultural Studies approval prior to registering.

Bachelor of Arts Three-year (B.A. Three-year) - Modern Languages

A4 Major Requirement (48 credit units)

Primary Language (24 credit units):

French

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

- FREN 103.3
- FREN 106.3
- FREN 122.3
- FREN 125.3
- FREN 212.3
- FREN 218.3

Choose 18 **credit units** ~~of language, culture, or literature~~ FREN courses taught in the chosen primary language.

~~**Cultural Courses**~~

- ~~FREN 251.3~~
- ~~FREN 252.3~~
- ~~FREN 272.3~~
- ~~SPAN 202.3~~

- ~~SPAN 204.3~~

~~**French**~~

- 200-Level , 300-Level or 400-Level FREN Courses

Spanish

~~Students who have chosen Spanish as their primary language MUST take Spanish 314 and 317 as part of their major.~~

- SPAN 114.3
- SPAN 117.3
- SPAN 214.3
- SPAN 217.3
- SPAN 314.3
- SPAN 317.3

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

- 200-Level , 300-Level or 400-Level SPAN Courses

Linguistics (6 credit units):

- LING 111.3

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

- 100-Level , 200-Level , 300-Level or 400-Level LING Courses

Comparative Literature (6 credit units):

- LIT 110.3
- LIT 111.3

General requirement (12 credit units):

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

- ENG 110.6
- ENG 111.3
- ENG 112.3
- ENG 113.3
- ENG 114.3

Choose **6-9 credit units** from any of the following areas:

- ARBC 114.3
- ARBC 117.3
- CHIN 114.3
- CHIN 117.3

- CREE 101.6
- GRK 112.3
- GRK 113.3
- HEB 114.3
- HEB 117.3
- JPNS 114.3
- JPNS 117.3
- LATN 112.3
- LATN 113.3

English

- 100-Level , 200-Level , 300-Level or 400-Level ENG Courses

French

- 100-Level , 200-Level , 300-Level or 400-Level FREN Courses

German

- 100-Level , 200-Level , 300-Level or 400-Level GERM Courses

Linguistics

- 200-Level , 300-Level or 400-Level LING Courses

Spanish

- 100-Level , 200-Level , 300-Level or 400-Level SPAN Courses

Ukrainian

- 100-Level , 200-Level , 300-Level or 400-Level UKR Courses

The department may also recognize language courses taken at other institutions on a case by case basis.

~~Literature and/or cultural courses taught in the primary language or in English.~~

~~**Cultural Courses**~~

- ~~FREN 251.3~~
- ~~FREN 252.3~~
- ~~FREN 272.3~~
- ~~SPAN 202.3~~
- ~~SPAN 204.3~~

~~**French**~~

- ~~200-Level , 300-Level or 400-Level FREN Courses~~

~~**Spanish**~~

- ~~200-Level , 300-Level or 400-Level SPAN Courses~~

~~**English**~~

- ~~100-Level , 200-Level , 300-Level or 400-Level ENG Courses~~

~~**Secondary Language**~~

- ~~ARBC 114.3~~
- ~~ARBC 117.3~~
- ~~CHIN 114.3~~
- ~~CHIN 117.3~~
- ~~CREE 101.6~~
- ~~GRK 112.3~~
- ~~GRK 113.3~~
- ~~HEB 114.3~~
- ~~HEB 117.3~~
- ~~JPNS 114.3~~
- ~~JPNS 117.3~~
- ~~LATN 112.3~~
- ~~LATN 113.3~~

~~**French**~~

- ~~100-Level , 200-Level , 300-Level or 400-Level FREN Courses~~

~~**German**~~

- ~~100-Level , 200-Level , 300-Level or 400-Level GERM Courses~~

~~**Spanish**~~

- ~~100-Level , 200-Level , 300-Level or 400-Level SPAN Courses~~

~~**Ukrainian**~~

- ~~100-Level , 200-Level , 300-Level or 400-Level UKR Courses~~

~~The department may also recognize language courses taken at other institutions on a case by case basis.~~

~~**Linguistics**~~

- ~~200-Level , 300-Level or 400-Level LING Courses~~

Rationale:

- FREN 212.3 is the first university-level FREN course open to students who graduated from an immersion program.
- Courses in Spanish, taught in English, have been approved for use in the Minor and Recognition programs in Spanish. This change aligns these programs.

- SPAN 214.3 and 217.3 are the prerequisites for SPAN 314.3 and 317.3. As the latter courses are required, it is clearer to show that the former are required as well.
- Students were previously allowed to take ENG courses as part of the Major Requirement. It therefore makes sense for Modern Language students to complete the English Language Writing requirement as part of this requirement, and therefore have more room for electives.
- The program currently has repetition of lists and course recommendations combined with requirements. The reorganization shown above will make it easier for students to understand the requirements.

Music

Minor program revisions:
Bachelor of Arts Honours, Four-year and Three Year in Music
Bachelor of Music – Individualized and Performance Honours
Replace MUS 150 and MUS 151 with MUS 155 and MUS 156.

Bachelor of Arts Honours (B.A. Honours) - Music

D4 Major Requirements (48 credit units)

- 1 credit unit MUAP Ensemble
- MUS 120.2
- MUS 121.2
- MUS 133.3
- MUS 134.3
- ~~MUS 150.3~~
- ~~MUS 151.3~~
- MUS 155.3
- MUS 156.3
- MUS 180.0
- MUS 220.2
- MUS 221.2
- MUS 233.3
- MUS 234.3
- MUS 250.3

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

Bachelor of Arts Four-year (B.A. Four-year) - Music

D4 Major Requirements (48 credit units)

- 1 credit unit MUAP Ensemble
- MUS 120.2
- MUS 121.2
- MUS 133.3
- MUS 134.3
- ~~MUS 150.3~~
- ~~MUS 151.3~~
- MUS 155.3
- MUS 156.3

- MUS 180.0
- MUS 220.2
- MUS 221.2
- MUS 233.3
- MUS 234.3
- MUS 250.3

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

Bachelor of Arts Three-year (B.A. Three-year) - Music

D4 Major Requirements (42 credit units)

- 1 credit unit MUAP Ensemble
- MUS 120.2
- MUS 121.2
- MUS 133.3
- MUS 134.3
- ~~MUS 150.3~~
- ~~MUS 151.3~~
- MUS 155.3
- MUS 156.3
- MUS 180.0
- MUS 220.2
- MUS 221.2
- MUS 233.3
- MUS 234.3
- MUS 250.3

Choose **12 credit units** from the following:

…

Bachelor of Music Individualized (B.Mus. Individualized)

G2 Music (62 credit units)

- MUS 120.2
- MUS 121.2
- MUS 133.3
- MUS 134.3
- ~~MUS 150.3~~
- ~~MUS 151.3~~
- MUS 155.3
- MUS 156.3
- MUS 160.0 (Piano and organ majors are exempt from this requirement)
- MUS 180.0
- MUS 220.2
- MUS 221.2
- MUS 233.3
- MUS 234.3

- MUS 250.3

Theory/Analysis Electives

…

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

G2 Music (65 credit units)

- MUS 120.2
- MUS 121.2
- MUS 133.3
- MUS 134.3
- ~~MUS 150.3~~
- ~~MUS 151.3~~
- MUS 155.3
- MUS 156.3
- MUS 160.0
- MUS 160.0 (Piano and organ majors are exempt from this requirement)
- MUS 180.0
- MUS 220.2
- MUS 221.2
- MUS 233.3
- MUS 234.3
- MUS 250.3
- MUS 325.3

Music History Electives

…

Rationale: The sequence of music history courses (MUS 150 and MUS 151) is being redesigned and replaced by the new sequence (MUS 155, MUS 156).

New course(s):
MUS 155.3 Music in History and the Present
1/2 (3L) This course is an introductory study of music in history and the present. Although the course emphasizes Western art music, it integrates other musical traditions, including popular music, film music, and Indigenous music (the latter primarily in the Canadian context). The weekly units in this course alternate between examining a period from music history and exploring the interdisciplinary connections of music across traditions. Throughout the course, we will relate our studies to our present experiences as performers and/or listeners. Regular workshops will allow students to build academic research and writing skills.
Instructor(s): Amanda Lalonde
Rationale: This course is being created to meet the needs of music majors and non-music majors. This course is an introductory study of music history and culture. Although the course emphasizes Western art music, it integrates other musical traditions including popular music, film music, and Indigenous music (the latter primarily in the Canadian context). It is the first stage of the redesign of the music history sequence, and it is intended to precede a two-semester survey of music history.
Reflecting the research orientation of the instructor, it introduces some of the interdisciplinary connections of music though units such as "Dance," "Nature," and "Politics and Power." Furthermore, by integrating the study of Western art music with other traditions it both reflects the broad research interests of the

instructor (whose two main research areas and 19th-20th century art music and late 20th-century popular music) and improves the department's offerings in the field.
The needs and interests of music majors that this course will address include:

1) The integration of a broader scope of traditions (including popular music, jazz, film music, and Indigenous music in the Canadian context) into students' introduction to musical culture and history
2) The relevance and interdisciplinary connections of music in history and the present
3) The opportunity to devote attention to academic research and writing and to complete the English Language Writing Requirement through their musical studies
4) An introductory study of music history and listening-based analysis (the previous course was an advanced starting point that was too challenging for the knowledge and abilities of many of our incoming students)

The needs and interests of non-music majors that it will address include:

1) The opportunity to take a music history course that does not require specialized musical knowledge
2) Preparation for upper-year music courses with interdisciplinary connections that may be of interest to students from other programs, such as Canadian Music.
3) The opportunity to complete the English Language Writing Requirement in another discipline that strikes their interest

The objectives and content of MUS 155 ensure that it fulfills the definition of both a fine arts and a humanities course. As it stresses the interdisciplinary connections of music from antiquity to the present day, it is limiting to classify this course in only the fine arts stream. This material has many intersections with other areas of the humanities. This classification would allow for an increase in the outreach and engagement activities of the Department of Music, as it will allow us to interact with a larger number of students who would be able to take the course.

MUS 155.3 will be mutually exclusive with MUS 150.3 (deleted below). This course will be included in the “Fine Arts” list in Arts & Science programs.

MUS 156.3 Music History I Compositions Cultures and Connections from Antiquity to the High Classical Period
1/2 (3L) This course surveys Western art music history from antiquity to the high Classical period. In its examination of composers, works, and musical cultures, the course is attentive to both historical context (including the relationships between music and other disciplines, such as politics, philosophy, literature, and visual art) and connections with repertoire across musical traditions and eras.
Prerequisite(s): MUS 155
Note: Rudimentary music theory knowledge and a basic ability to read music are recommended. Students with credit for MUS 150 or MUS 250 may not take MUS 156 for credit.
Rationale: This course is being created to meet the needs of students. It is the second course in the redesign of the three-course music history sequence. It follows MUS 155, which has also been submitted for this course challenge process. MUS 255, the final course in the sequence, will go through the challenge process next year and will be introduced in the following academic year (2021-2022), such that new courses are introduced as students flow through the course sequence. Accomodating measures can be taken for students who are unable to progress through the sequence of courses in the typical time frame.
The specification in the description that the course "is attentive to both historical context (including the relationships between music and other disciplines, such as politics, philosophy, literature, and visual art) and connections with repertoire across musical traditions and eras" reflects the research interests of the instructor, who works on both "art" and popular music from an interdisciplinary perspective.
The needs and interests of students that this course will address include:

1) The relation of a broader scope of musical repertoire across traditions to Western art music history
2) Consideration of the interdisciplinary connections of music
3) Compression of the antiquity through the Renaissance portion of the survey in order to devote more attention to the music that is most relevant to music performance and music education

MUS 156.3 is equivalent to MUS 150.3 (deleted below). This course will be included in the “Fine Arts” list in Arts & Science programs.

Course deletion(s):
MUS 150.3 History of Music I Western Art Music 1600 to 1830
MUS 151.3 History of Music II Western Art Music 1815 to the Present
In order to meet the needs of students, improve departmental course offerings, and bring the course into alignment with the research interests of the instructor, the current sequence of three history courses (MUS 150, MUS 151, MUS 250) is being redesigned and replaced by MUS 155, MUS 156, and by MUS 2XX (200-level changes to be submitted at a later date).
The Bachelor of Education (B.Ed.), Early/Middle Years Program lists MUS 151 as an option in the "Arts Education" area. The deletion of MUS 151, and replacement with MUS 156, will not impact students in the program, since they are still provided with an appropriate music history course option. The College of Education has been consulted.

Music Education

Minor program revisions
Bachelor of Music Honours and Four-year in Music Education (Early/Middle Years and Secondary)
Replace MUS 150 and MUS 151 with MUS 155 and MUS 156.

Bachelor of Music Honours (Music Education) (B.Mus.(Mus.Ed.)) - Early/Middle Years
Bachelor of Music Honours (Music Education) (B.Mus.(Mus.Ed.)) - Secondary
Bachelor of Music (Music Education) (B.Mus.(Mus.Ed.)) - Early/Middle Years
Bachelor of Music (Music Education) (B.Mus.(Mus.Ed.)) - Secondary

G2 Music (41 credit units)

- MUS 120.2
- MUS 121.2
- MUS 133.3
- MUS 134.3
- ~~MUS 150.3~~
- ~~MUS 151.3~~
- MUS 155.3
- MUS 156.3
- MUS 160.0 (Piano and organ majors are exempt from this requirement)
- MUS 180.0
- MUS 220.2
- MUS 221.2
- MUS 233.3
- MUS 234.3
- MUS 250.3
- MUS 325.3
- MUS 428.3

Music Theory or Music History Elective

…

Rationale: The sequence of music history courses (MUS 150 and MUS 151) is being redesigned and replaced by the new sequence (MUS 155, MUS 156).

New course(s):
EMUS 335.3 Woodwind Techniques
1/2 An intensive study of playing and teaching techniques of woodwind instruments, including equipment and materials. Special topics in elementary and secondary school woodwind pedagogy are also included.
Prerequisite(s): MUS 134
Note: Students with credit for EMUS 330.6 may not take this course for credit.
Instructor(s): Glen Gillis
Rationale: Woodwind Techniques is being deleted as a 6 credit unit course (EMUS 330.6), and re-launched as a 3 credit unit course. The other instrumental techniques courses (Brass, Percussion) within the Music Education program are both 3 credit unit courses. This change will make the department less reliant on sessional instruction, and increase faculty teaching capacity in other courses. In addition, reducing the credit requirements from 6 to 3 allows students to take more electives in their degree.

MUS 335.3 will replace MUS 330.6 in program requirements, but will only count as 3 credit units toward the total credit units required for the degree.

Course deletion(s):
EMUS 330.6 Woodwind Techniques
See new course EMUS 335.3 above.

Sociology

New course(s):
SOC 406.3 The Lived Experience of Workers in the New Economy
1/2 (3L)The course examines the changing world of work through classical and contemporary sociological texts. Consideration will be given to the real-world application of core theoretical concepts and methodological approaches drawn from the texts. In this course we will explore topics such as work organization in the new 'gig' economy, robotics and other forms of technology in the workplace, emotional labour, and collective forms of workers' resistance.
Prerequisite(s): 18 credit units SOC including SOC 216
Instructor(s): Elizabeth Quinlan
Rationale: The structure of paid work is undergoing rapid change with profound effects on workers' experience. Relatedly, a renaissance in the sociology of work is evidenced by a proliferation of recent theoretical and empirical literature. Both trends recommend a sociology of work course to be integrated in the Department of Sociology's graduate and undergraduate offerings. The creation of this course is part of an effort by the department to strengthen the specialization in the sociology of work. Such courses are commonly offered by sociology departments across the U15. Our review of their offerings indicates over 30 comparable undergraduate courses – e.g. "Globalization & Work", "Work and Well-Being in the New Economy", "Schools, Employment, and Transitions", and "Technology, Work, and Society".

The proposed course complements the recent addition to the Department's undergraduate course offering in the subject (*SOC 216: Challenges and Promises of the Changing World of Work*). We perceive a need for higher-level courses that extend this second-year course in the area. The new course will provide undergraduate students looking towards a degree in sociology with another course that makes focused use of the knowledge they acquired from SOC.

We expect this new course to better prepare sociology undergraduate students for a wide-range of new and emerging employment opportunities in the private and public sectors. This unique course recognizes the increasing demand for employees with expertise in pernicious workplace problems such as discrimination and harassment. Sociology graduates will benefit from this course with widened career options that seek to satisfy this demand.

The University of Saskatchewan offers several courses on labour relations, workers' health and safety, and management. For instance, Edwards School of Business, for example, offers professional training programs linked to the considerations of its applied orientation (e.g. *COMM 211.3 Human Resource Management, COMM 381.3 Industrial Relations, COMM 384.3 Workplace Health & Safety, and COMM 387.3 Labour Law*). Similarly, the College of Nursing offers applied courses such as *NURS 422.3*

Issues in Leadership and Management for Transformative Practice in Health Care Organizations. These offerings reflect the mandates of the colleges and are entirely appropriate.

The course closest in content to the proposed course is *POLS 302.3, The Politics and Law of Work and Employment*. This political studies course focuses on the legalistic regimes governing employment in Canada. In contrast, the proposed course applies distinctively sociological concepts and methods to critically examine the rapidly changing nature of work, workplaces, and workers' experiences, of which employment regimes is only a component. Other components of the proposed course that set it squarely within the discipline of sociology include emotional labour, the organization of work, and workers' lived experience. Students enrolled in the political studies course will likely find the proposed course complementary with recognizable disciplinary differences in orientation and content and will be welcomed in the proposed course.

Statistics

Minor program revisions
Bachelor of Science Double Honours in Statistics
In Major 2, MATH 402 is waived for students who students who are using Computer Science as Major 1.

Requirements (42 credit units)

- MATH 110.3 or MATH 176.3
- MATH 116.3 or MATH 177.3
- MATH 276.3
- MATH 402.0
- STAT 241.3
- STAT 242.3
- STAT 341.3
- STAT 342.3
- STAT 442.3
- STAT 443.3

MATH 402.0 is not required for students completing CMPT 400.3 as part of their Major 1 requirements.

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

- MATH 164.3 (formerly MATH 264.3)
- MATH 266.3
- MATH 277.3

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

- STAT 344.3
- STAT 345.3
- STAT 348.3

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

- STAT 346.3
- STAT 349.3

Recommended Electives

- CMPT 141.3
- CMPT 145.3

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

Rationale: Students who take a double honours in Mathematics or Statistics and Computer Science are currently required to complete two similar project/thesis style courses, which is unnecessarily burdensome.

Study of Indigenous Storytelling

Minor program revision
Certificate in the Study of Indigenous Storytelling
Add ENG 243.3 to the list of courses which credit toward the certificate.

Requirements (21 credit units)

- ENG 242.3
- INDG 107.3

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

- ENG — 100-Level

Choose **12 credit units** from the following:

- DRAM 111.3
- DRAM 231.3
- ENG 243.3
- ENG 335.3
- ENG 338.3
- INDG 215.3
- INDG 270.6

Rationale: ENG 243.3 Introduction to Indigenous Literatures is being added to the Department of English offerings as a way of providing students with general background in Indigenous Literatures in preparation for third-year classes in the area. The course was designed by Dr. Kristina Bidwell through the College of Arts and Science initiative to support development of courses that fulfill the Indigenous Learning Requirement.
The course is an ideal addition to the certificate, since it specifically addresses the goals of the certificate, to provide students with expertise in the study of oral and written forms of Indigenous storytelling in Canada. The course is a broad introduction to the study of Indigenous literatures in the Canadian context. In the course, students will read and listen to a diversity of First Nations, Metis, and Inuit texts and oral stories, and learn to understand them as part of Indigenous literary traditions and histories, as well as in terms of their own positions and contexts.
The addition of ENG 243.3 provides students taking the certificate with a greater course selection, making it more possible for them to complete the certificate in a timely manner. The way the certificate is designed, however, students will still have an interdisciplinary experience, since they will be required to take courses from Indigenous Studies and/or Drama in order to complete the certificate.

Items for Information
The curricular revisions listed below were approved through the Arts & Science College Course and Program Challenge and are now submitted to the University Course Challenge for information.

Economics

Minor course revisions
ECON 356.3 International Monetary Economics
Prerequisite change:
Old prerequisite(s): ECON 214 or ECON 274; and one of MATH 104, MATH 110, MATH 121, MATH 123, MATH 125, or MATH 176.
New prerequisite(s): ECON 114; ECON 211 or ECON 273; and one of MATH 104, MATH 110, MATH 121, MATH 123, MATH 125, or MATH 176.
Rationale: ECON 214 or ECON 274 were listed as prerequisites because ECON 356 uses the IS-LM model, usually covered in ECON 214 or 274. However, the IS-LM model is controversial and many intermediate macroeconomics textbooks do not cover it, meaning that some students are seeing it in these courses, while others are not, depending on the book selected by the instructor. Since the coverage is not uniform, the IS-LM model must be covered in ECON 356. Given that, there is no longer an academic need for ECON 214 or ECON 274 as prerequisites, and the lower-level course in area can serve as well.

Health Studies

Corrections to November 2019 UCC:
Remove GEOG 235 from Disasters cluster in Major Requirement (J4) section D2.
The rationale asked for GEOG 235 and INDG 496 to be added to List 6 for all streams. GEOG 235 cannot be added to this list as it is a Science course. INDG 496 cannot be added as it does not exist.

Bachelor of Arts and Science Honours (B.A.&Sc. Honours) - Health Studies - Changing Climates and Health
Bachelor of Arts and Science Four-year (B.A.&Sc. Four-year) - Health Studies - Changing Climates and Health

J4 Major Requirement
…

D2. Choose one of the following Arts clusters (12 credit units):

Additional requirement across all clusters:

- **GEOG 364.3** Geography of Environment and Health

Choose **9 credit units** from **one** of the following clusters:

At least 3 credit units must be at the 300-level or higher.

i. Changing Indigenous Environments:

…

ii. Disasters:

- **ANTH 405** Anthropology of Disaster
- **INDG 321** Indigenous Disaster Risk Reduction
- **GEOG 280.3** Environmental Geography
- **PSY 207.3** Psychology of Death and Dying OR **PSY 261.3** Community Psychology
- **PLAN 445.3** Planning with Indigenous Communities
- ~~**GEOG 235** Earth Processes and Natural Hazards A Canadian Perspective~~

iii. Assessing and Planning:

…

Rationale: Climate change …

Lists 5 and 6 in the Major Requirement for each stream are comprised of all of the Science and Arts courses, respectively, from all streams. With the addition of new courses in the proposed stream, BIOL 314.3 and GEOG 233.3, 235.3, and 333.3 will be added to List 5 for the Biology, Development & Health; Individual, Society & Health; and Culture, Environment & Health streams. ANTH 405.3; GEOG 222.3, ~~235.3,~~ 280.3, 322.3, 348.3, 385.3, 386.3, and 420.3; INDG 210.3, 241.3, 321.3, ~~and 496.3~~; and PLAN 445.3 will be added to List 6 for each of these streams.

Hydrology

Minor course revisions
GEOG 328.3 Groundwater Hydrology
Change course hours from "3 lecture hours" to "3 lecture hours and 3 practicum/lab hours".
Rationale: This change is needed to provide students with greater opportunity for experiential learning. The three-hour laboratory time allows for more involved hands-on time and opportunities to conduct field work. A field site located in Saskatoon has been developed for this purpose. Current assignments that focus on the theory of groundwater properties and flow will be improved to include hands-on activities and practical experience.
Through course evaluations, students have expressed a desire for more hands-on activities in this class. Currently, 3 hours of lecture time is spent working in the laboratory; a dedicated laboratory time frees up the lecture time for lecture material. Additional resources in the form of a Teaching Assistant are not required for this change as a TA is already assigned annually to this course.

Music

Minor course revisions:
MUAP 343.3 Applied Music Private Study V
Prerequisite change:
Old prerequisite(s): MUAP 245; MUS 220 or MUS 221; MUS 233 or MUS 234; and one of MUS 150, MUS 151, or MUS 250.
New prerequisite(s): MUAP 245; MUS 220 or MUS 221; MUS 233 or MUS 234; and one of MUS 150 or MUS 155.
Rationale: Content covered in MUS 155 will be adequate for students to be successful in this course.

MUS 250.3 History of Music III Western Art Music Antiquity to High Renaissance
Prerequisite change:
Old prerequisite(s): MUS 151 or permission of the department.
New prerequisite(s): MUS 151 or MUS 155 or permission of the department.
Rationale: Content covered in MUS 155 will be adequate for students to be successful in this course.

MUS 311.3 History of Opera
MUS 365.3 Music of Romantic Period
MUS 464.3 Research Seminar in Musicology I
Prerequisite change:
Old prerequisite(s): MUS 151
New prerequisite(s): MUS 151 or MUS 156
Rationale: Content covered in MUS 156 will be adequate for students to be successful in this course.

MUS 312 Vocal Literature
Prerequisite change:
Old prerequisite(s): Two years of applied voice training, MUS 151 (formerly MUS 141/240) and 234 (formerly MUS 214).
New prerequisite(s): Two years of applied voice training; MUS 233; and MUS 151 or MUS 156.
Rationale: Content covered in MUS 156 will be adequate for students to be successful in this course. MUS 233 provides sufficient music theory knowledge to understand the materials covered in this course.

MUS 354.3 Survey of Keyboard Literature
Prerequisite change:
Old prerequisite(s): MUS 134 and MUS 151
New prerequisite(s): MUS 234; and MUS 151 or MUS 156.
Rationale: Content covered in MUS 156 will be adequate for students to be successful in this course. This course requires a basic knowledge of musical materials covered in the MUS 234.3 music theory core course.

MUS 363.3 Music of Baroque Period
Prerequisite change:
Old prerequisite(s): MUS 151 (formerly MUS 141/240).
New prerequisite(s): MUS 151 or MUS 156
Rationale: Content covered in MUS 156 will be adequate for students to be successful in this course.

MUS 368.3 Canadian Music
New title: **Music in Canada**
New course description: This course examines the development of music and musical cultures in Canada, including art, folk, popular, Indigenous, and film music.
Prerequisite change:
Old prerequisite(s): MUS 151 or permission of the department.
New prerequisite(s): MUS 151 or MUS 155 or permission of the department.
Rationale: Content covered in MUS 155 will be adequate for students to be successful in this course. The course title and description have been changed in order to be more inclusive of a variety of musical traditions and cultures, and to eliminate the term "Aboriginal" from the previous course description.

MUS 371.3 Performance Practices Twentieth Century
Prerequisite change:
Old prerequisite(s): MUS 134; MUAP 145; and one of MUS 150, MUS 151, or MUS 250 or permission of the department.
New prerequisite(s): MUS 134; MUAP 145; and one of MUS 150, MUS 151, MUS 155, MUS 156, MUS 250 or permission of the department.
Rationale: Content covered in MUS 155 or 156 will be adequate for students to be successful in this course.

MUS 457.3 Music since 1950
Prerequisite change:
Old prerequisite(s): MUS 234 and MUS 151.
New prerequisite(s): MUS 234; and MUS 151 or MUS 156.
Rationale: Content covered in MUS 156 will be adequate for students to be successful in this course.

MUS 463.3 Seminar in Wind Literature and Materials
Prerequisite change:
Old prerequisite(s): MUS 134 and MUS 151.
New prerequisite(s): MUS 134; and MUS 151 or 156.
Rationale: Content covered in MUS 156 will be adequate for students to be successful in this course.

College of Graduate and Postdoctoral Studies, December 2019 University Course Challenge Proposal

The following changes have been approved by the College of Graduate and Postdoctoral Studies and are now being submitted for approval:

Minor Program Modifications

Master of Water Security

Degree Requirements

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

Students must complete a total of 3~~0~~6 credit units~~, including the following~~ as follows:

- GEOG 826.3
- ENVS 805.3
- ENVS 806.3
- ENVS 815.3
- ENVS 816.3
- ENVS 817.3
- ENVS 820.3
- ENVS 821.3
- ~~ENVS 827.3~~
- ENVS 829.3
- ENVS 990.0
- ENVS 992.6
- ~~GEOG 427.3~~
- JSGS 870.3
- ~~a minimum 3 credit units chosen in consultation with and with approval from the Program Director~~
- ~~a minimum of 6 credit units of restricted electives from a single concentration (see below)~~

~~Concentrations~~

~~Hydrology~~

- ~~CE 415.3~~
- ~~CE 464.3~~
- ~~CE 834.3~~
- ~~CE 840.3~~
- ~~ENVS 805.3~~

- ~~ENVS 813.3~~
- ~~ENVS 823.3~~
- ~~ENVS 824.3~~
- ~~ENVS 825.3~~
- ~~ENVS 826.3~~
- ~~GEOG 827.3~~
- ~~TOX 843.3~~

~~Hydrogeology~~

- ~~CE 834.3~~
- ~~CE 850.3~~
- ~~ENVS 805.3~~
- ~~ENVS 813.3~~
- ~~ENVS 826.3~~
- ~~GEOE 375.3~~
- ~~GEOE 412.3~~
- ~~GEOL 413.3~~
- ~~SLSC 821.3~~

~~Socio-hydrology~~

- ~~AREC 430.3~~
- ~~CHEP 802.3~~
- ~~ENVS 805.3~~
- ~~ENVS 807.3~~
- ~~ENVS 811.3~~
- ~~ENVS 823.3~~
- ~~ENVS 832.3~~
- ~~JSGS 807.3~~
- ~~JSGS 863.3~~
- ~~PUBH 815.3~~
- ~~RRM 312.3~~

ENVS 815.3: Modelling for Water Security
An overview of the fundamentals of hydrologic modelling from our perceptions of the behaviour of watershed systems to developing and testing watershed simulation models. Theory and numerical implementation of model calibration approaches are taught. Includes an introduction to multi-objective optimization and different approaches to sensitivity and uncertainty analysis of hydrologic models.
Instructor: Saman Razavi, PhD

ENVS 816.3: Chemicals in Aquatic Systems

The movement of chemicals in aquatic systems has major implications for water policy and management. A wide variety of man-made contaminants reach aquatic systems. Case studies will investigate the properties that determine where chemicals will go in the environment and whether they will pose risks when they get there.
Prerequisite: Registration in the MWS program, or permission of the instructor.
Note: ENVS 823.3 and TOX 843.3 are equivalent
Instructor: Paul Jones, PhD

ENVS 817.3: Fundamentals of Hydrogeology
Groundwater flow; connections between groundwater and the rest of the hydrologic cycle; well hydraulics; groundwater chemistry; solute and contaminant transport in groundwater systems.
Prerequisite: Registration in the MWS program
Instructor: Grant Ferguson, PhD

ENVS 820.3: Water and Human Health and Wellbeing
Students examine critical water-health issues through a distinctly interdisciplinary lens. Water and wellbeing connections from individual to chromosphere scales are explored via case study, epidemiological modeling, GIS, media fact-checking and assignments. Students deepen knowledge about roles of water in preserving social, cultural, economic and political resilience to health.
Prerequisite: Registration in the MWS program
Instructor: Lori Bradford, PhD

ENVS 829.3: River Lake and Wetland Science
This course introduces river, land and wetland science in the context of water security to students. This course will explore many of the physical, chemical and biological factors that characterize these water bodies. Students will learn, through case studies, many of the issues facing rivers, lakes and wetlands including dam and dam removal, eutrophication, wetland drainage, and invasive species.
Prerequisite: Registration in the MWS program or permission of the instructor
Instructor: Tim Jardine, PhD

Rationale for MWS program changes
This modification builds both disciplinary expertise, and awareness of and capability for interdisciplinary work. The Master of Water Security (M.W.S.) is a vital program to the university as water security is one of its six signature areas. The M.W.S. provides an alternative for students who are seeking professional degrees; the proposed changes to the program better prepare students with professional skills and experiences necessary to be successful in the workforce.
Approved by CGPS December 9, 2019

Community and Population Health Sciences

Master of Science

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.~~as set by department~~

A minimum of 18 credit units, including the following:

- 3 credit units of elective graduate-level courses. A 400 level undergraduate course may be taken with approval of the Graduate Program Chair.
- CHEP 800.3
- CHEP 802.3
- CHEP 805.3 or a qualitative methods course (ERES 845.3, NURS 893.3, PSY 809.3, JSGS 851.3 or equivalent)
- CHEP 811.3
- CHEP 813.3
- CHEP 990.0
- CHEP 994.0

Ph.D. Direct Entry

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
- At least 9 credit units of course work at the graduate level must be successfully completed in the first year of the program.
- Within the first year of the program, successfully complete a Ph.D. Qualifying Examination that is at least as rigorous as the defence for a Master's thesis in the program area.
- Write and successfully defend a thesis based on original investigation.
- comprehensive examination
- residency requirement: Ph.D. students are required to live locally until core program requirements have been met, including thesis committee approval of pre-proposal, completion of required courses, and completion of the comprehensive exam.~~as set by department~~

A minimum of 21 credit units:

- CHEP 800.3
- CHEP 802.3
- CHEP 805.3 or a qualitative methods course (ERES 845.3, NURS 893.3, PSY 809.3, JSGS 851.3 or equivalent)
- CHEP 811.3
- CHEP 813.3
- CHEP 817.3
- CHEP 990.0
- CHEP 996.0
- Complete an advanced* research methods course, i.e. quantitative (e.g. CHEP ~~806~~808.3 or equivalent) or qualitative (CHEP 818.3 or equivalent). Approval by the Graduate Program Chair is required for other advanced research courses.

  *By advanced course we mean a methods course that is not typically taken to meet the MSc degree requirement (e.g. CHEP 805). Consult with Graduate Program Chair if there is a question about suitability of a course to meet this requirement.

Ph.D. non-direct Entry

Degree Requirements

Students who have not taken courses that represent an adequate introduction to community and population health at the Master's level will be required to take CHEP 813.3 and possibly other courses, depending on academic preparation. The courses will be in addition to the regular Ph.D. course load, and may be followed by a qualifying examination to ensure that the student is ready to be considered 'fully qualified'. 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 12 credit units, including the following:

- CHEP 817.3
- 6 credit units of elective graduate-level courses
- An advanced* research methods course, i.e. quantitative (e.g. CHEP 80~~8~~6.3 or equivalent) or qualitative (e.g. CHEP 818 or equivalent). ~~Approval by the Graduate Program Chair required.~~

  *By advanced course we mean a methods course that is not typically taken to meet the MSc degree requirement (e.g. CHEP 805). Consult with Graduate Program Chair if there is a question about suitability of a course to meet this requirement

- ~~CHEP 817.3~~
- CHEP 990.0

- CHEP 996.0
- qualifying examination, as required
- comprehensive examination
- oral thesis defense
- ~~qualifying examination, as required~~
- residency requirement: Ph.D. students are required to live locally until core program requirements have been met, including thesis committee approval of pre-proposal, completion of required courses, and completion of the comprehensive exam.
- ~~as set by department~~

Transfer from Master's to Ph.D.

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
- CHEP 990.0
- a minimum of 21 credit units, depending on previous course work (defined as course work that may have been taken in previous Master's level program), including:
  - prior to transfer, a minimum 9 credit units total from CHEP 800.3, CHEP 802.3, CHEP 813.3, CHEP 811.3
  - an additional 12 credit units at the graduate-level after transfer including:
    - CHEP 817.3
    - an advanced* research methods course, i.e. quantitative (e.g. CHEP 8086.3 or equivalent) qualitative (e.g. CHEP 818 or equivalent). ~~Approval by Graduate Program Chair required~~
      . *By advanced course we mean a methods course that is not typically taken to meet the MSc degree requirement (e.g. CHEP 805). Consult with Graduate Program Chair if there is a question about suitability of a course to meet this requirement.
- CHEP 996.0
- qualifying examination prior to transfer
- comprehensive examination
- oral thesis defense
- Residency Requirement: Ph.D. students are required to live locally until core program requirements have been met, including thesis committee approval of pre-proposal, completion of required courses, and completion of the comprehensive exam.

Rationale: Housekeeping/clarification of expectations
Approved by CGPS September 30, 2019

Psychology – Clinical Psychology

Master of Arts

Degree Requirements

Students must maintain continuous registration in PSY 994

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

A minimum of ~~30~~ 24 credit units of course work, including the following:

- PSY 805.3
- PSY 807.3 or PSY 809.3
- PSY 811.3
- PSY 813.3
- PSY 814.3
- PSY 831.3
- PSY 850.3
- PSY 858.3
- PSY 900.0
- PSY 902.0
- PSY 903.0
- PSY 994.0
- ~~a minimum of 6 credit units of restricted electives as approved by the Director of Clinical Psychology Training~~
- thesis defence

Ph.D.

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
- IMPORTANT: Students entering the program without an M.A. in Clinical Psychology from the University of Saskatchewan (or equivalent degree) may be required to complete additional credit units in order to obtain the Ph.D. in Clinical Psychology, including PSY 805.3, PSY 807.3 or PSY 809.3, PSY 811.3, PSY 813.3, PSY 814.3, PSY 831.3, PSY 850.3, PSY

858.3~~, and credit units of graduate foundational courses in each of biological, cognitive, and social/cultural foundations of behaviour. (Requirements for foundational coursework will be determined in accordance with individual student background preparation in the foundational areas).~~

- Thesis Defence
- comprehensive examination

~~Normally,~~ a minimum of 15 credit units, including:

- PSY 841.3
- PSY 845.3
- PSY 852.3
- PSY 860.3
- PSY 900.0
- PSY 902.0
- PSY 903.0
- PSY 904.0
- PSY 996.0
- a minimum of 3 credit units of restricted electives as approved by the Director of Clinical Psychology Training

Transfer from Master's to Ph.D.

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
- comprehensive examinations
- thesis defence

A minimum of ~~45~~ 36 credit units of course work, including the following:

- PSY 805.3
- PSY 807.3 or PSY 809.3
- PSY 811.3
- PSY 813.3
- PSY 814.3
- PSY 831.3
- PSY 841.3
- PSY 845.3
- PSY 850.3

- PSY 852.3
- PSY 858.3
- PSY 860.3
- PSY 900.0
- PSY 902.0
- PSY 903.0
- PSY 904.0
- PSY 996.0
- ~~a minimum of 9 credit units of approved electives~~additional foundation area coursework may be assigned by the Director of Clinical Training to satisfy accreditation requirements

Rationale: Reducing the minimum credit unit requirements will improve student program progress, without any negative impact on outcomes. Where necessary, students will be assigned additional coursework in foundational areas of clinical psychology.

Approved by CGPS October 21, 2019

Adding Selection Criteria to Catalogue

Teaching English to Speakers of Other Languages

Admission Requirements

- Language Proficiency Requirements: Proof of English proficiency may be required for international applicants and for applicants whose first language is not English.
- a cumulative weighted average of at least a 70% (U of S grade system equivalent) in the last two years of study (i.e. 60 credit units)
- a four-year honours degree, or equivalent, from a recognized college or university in an academic discipline relevant to the proposed field of study (such as Linguistics, Applied Linguistics, Education, English, etc.)
- a minimum of 9 credit units of undergraduate Linguistics courses, such as LING 111.3, LING 110.3, or LING 112.3, or any structural Linguistics course, such as Phonetics, Phonology, Lexicology, Morphology, Syntax, Semantics, Discourse, or their equivalents. Students not satisfying the 9 credit units of Linguistics or equivalent requirement can be accepted on a probationary~~l~~ admission basis. These students will be required to complete the requirement within their first year of studies.
- Additional selection criteria includes:
    - A Curriculum Vitae (CV) including a brief written description of previous relevant course work, grades, employment, and relevant training and life experience

- Statement/Letter of Intent: Provide a 2-3 page self-written statement, detailing relevant academic background, prior teaching experience and your teaching philosophy. Also, include why you have chosen the University of Saskatchewan and your expectations of the program.
- Writing Sample: Provide an 8-10 page writing sample, preferably in the form of a paper that had previously been submitted for a university level course.

Rational: Clarification of selection criteria documentation.

Approved by CGPS September 9, 2019

New Course Proposals

VSAC 876.3: Principles and Practice of Anticancer Chemotherapy and Molecular Targeted Therapies
The aim of this course is to provide veterinary medical oncology residents with knowledge of anticancer chemotherapy and targeted therapies for clinical practice and preparation for the ACVIM specialty examination.
Instructors: Jerome Gagnon, DVM DACVIM; Valerie MacDonald-Dickinson, DVM DACVIM
Rationale: This course is offered to improve the training of the veterinary medical oncology residents/MSc students. Chemotherapy is the main treatment modality used in the clinical practice of medical oncology. A Thorough understanding of drug mechanisms of action, mechanisms of resistance, drug interactions, toxicity profile, and indications is of major importance when training veterinary medical oncologists. Targeted therapies represent the future of oncology treatment and the medical oncology residents need to develop a good understanding of this emerging topic. This course would also help the trainees for the preparation of the ACVIM specialty examination.
Approved by CGPS November 6, 2019

VLAC 862.3: Field Epidemiology for Veterinarians
This class will give students theory and experience in the practical application of epidemiological methods in the investigation and control of outbreaks of disease and other animal-health related events.
Instructors: Tasha Epp, PhD, DVM; Cheryl Waldner, PhD, DVM; John Campbell, DVSc, DVM; Sarah Parker, PhD, MVSc, DVM; Nathan Erickson, MVSc, DVM
Note: Students with credit for PUBH 809.3 may not take this course for credit.
Rationale: With the creation of the recent MSc in Field Epidemiology within the WCVM, there is a need to ensure that the students have access to the required courses that are specifically relevant for veterinarians. The dissolution of the SPH will require a re-evaluation of some course delivery. In order to provide consistency and relevant epidemiology training in the WCVM it was deemed necessary to ensure students would have uninterrupted access to required epidemiology courses with specific reference to veterinary-specific aspects.
Approved by CGPS December 4, 2019

VLAC 863.3 Advanced Veterinary Epidemiology
This course will provide advanced training in the design and analysis of observational research in veterinary epidemiology and the application and assessment of veterinary diagnostics to manage disease in populations. The course will also introduce the statistical challenges and basic tools for analyzing data from groups of animals.
Prerequisites: VLAC 808 or equivalent, VLAC 812, VLAC 813 or equivalent, and permission of the instructor.
Instructors: Cheryl Waldner, DVM; PhD; Tasha Epp, DVM, PhD
Rationale: This course will cover advanced topics of epidemiology and build on materials that are covered at an introductory level within VLAC 808. This course is necessary for most PhD students in the population medicine program. This course will be based on veterinary examples and will contain materials specific to veterinary medicine that are not included in any other course on campus. For example, the course will provide a strong foundation in application of diagnostic tests to manage disease at the head level and analysis of observational data that is clustered at the herd level.
Approved by CGPS December 4, 2019

HIST 885.6: Themes in East Asian History
This course is designed to provide an overview of the major approaches, methodologies and historiographical debates in the field of East Asian history.
Prerequisite: Enrolment in a PhD program in History, or permission of the department
Instructors: Mirela David, PhD; George Keyworth, PhD
Rationale: With two recent hires in East Asian history, the department is renewing its offerings of PhD courses in the area. This is also a response to renewed student interest in pursuing the PhD specializing in East Asian History.
Approved by CGPS December 4, 2019

SOC 806.3: Advanced Readings in the Sociology of Work: Workers' Lived Experience in the New Economy
The course examines the changing world of work through classical and contemporary sociological texts. Consideration will be given to the real-world application of core theoretical concepts and methodological approaches drawn from the texts. In this course we will explore topics such as work organization in the new 'gig' economy, robotics and other forms of technology in the workplace, emotional labour, and collective forms of workers' resistance.
Instructor: Elizabeth Quinlan, PhD
Note: Students with credit for SOC 406.3 may not take this course for credit.
Rationale: We expect this new course to better prepare sociology students for a wide-range of new and emerging employment opportunities in the public and private sectors. This unique course recognizes the increasing demand for employees with expertise in pernicious workplace problems such as discrimination and harassment. Sociology graduates will benefit from this course with widened career options that seek to satisfy this demand.
Approved by CGPS December 4, 2019

College of Education – December 2019 University Course Challenge

The curricular revisions listed below were approved by the College of Education Faculty Council on Friday, December 6, 2019 and are now submitted to the University Course Challenge for approval.

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

Minor program revision:

- Revision of course requirements for the Mathematics Teaching Areas 1 and 2 for the following Bachelor of Education Secondary program routes:
  - Direct Entry Secondary program route (EDSY)
  - Technical Vocational Stream (TV)
  - Indian Teacher Education Program (ITEP) – Secondary concentration
  - Saskatchewan Urban Native Teacher Education Program – Saskatoon (SUNTEP – SK) – Secondary concentration
  - Bachelor of Science Kinesiology/Bachelor of Education Combined Program

Secondary – Teaching Area 1

Mathematics

Note: Students must complete the following as prerequisites for this Teaching Area: Mathematics B30 and C30 and a 60% score in the Math Placement Test; or Pre-Calculus 30 and a 60% score in the Math Placement Test; or MATH 102 or MATH 104.

Of the following 24 credit units, at least 12 credit units must be Mathematics courses (MATH). A maximum of 12 credit units of Statistics courses (STAT) are allowed.

~~**Complete the following 3 credit units of junior level Mathematics:**~~

- **MATH 110.3 Calculus I or MATH 176.3: Advanced Calculus I**

~~**Choose 3 credit units from the following junior level Mathematics or Statistics courses:**~~

- **MATH 116.3 Calculus II or MATH 177.3: Advanced Calculus II**
- ~~STAT 103.3 Elementary Probability~~

Choose 3 credit units from the following Statistics courses:

- STAT – 100-Level, 200-Level, 300-Level or 400-Level
- PLSC 214.3
- PSY 233.3
- PSY 234.3

- SOC 225.3
- SOC 325.3

**The Statistics Course Regulations as determined by the College of Arts and Science are followed for the B.Ed. program.*

Choose 12 credit units from the following ~~senior level~~ Mathematics or Statistics courses:

- MATH — 200-Level, 300-Level or 400-Level
- STAT — 200-Level, 300-Level or 400-Level
- MATH 163.3: Introduction to Mathematical Reasoning
- MATH 164.3 Introduction to Linear Algebra

Choose ~~6~~ 3 credit units from the following Mathematics or Statistics courses:

- MATH — 300-Level or 400-Level
- STAT — 300-Level or 400-Level

Secondary – Teaching Area 2

Mathematics

Note: Students must complete the following as prerequisites for this Teaching Area: Mathematics B30 and C30 and a 60% score in the Math Placement Test; or Pre-Calculus 30 and a 60% score in the Math Placement Test; or MATH 102 or MATH 104.

~~Complete the following 3 credit unit junior level Mathematics course:~~

- **MATH 110.3 Calculus I or MATH 176.3: Advanced Calculus I**

~~Choose 3 credit units from the following junior level Mathematics or Statistics courses:~~

- **MATH 116.3 Calculus II or MATH 177.3: Advanced Calculus II**
- ~~STAT 103.3 Elementary Probability~~

Choose 3 credit units from the following Statistics courses:

- STAT – 100-Level, 200-Level, 300-Level or 400-Level
- PLSC 214.3
- PSY 233.3
- PSY 234.3
- SOC 225.3
- SOC 325.3

**The Statistics Course Regulations as determined by the College of Arts and Science are followed for the B.Ed. program.*

Choose 6 credit units from the following Mathematics or Statistics courses:

- MATH — 200-Level, 300-Level or 400-Level
- STAT — 200-Level, 300-Level or 400-Level
- MATH 163.3: Introduction to Mathematical Reasoning
- MATH 164.3 Introduction to Linear Algebra

~~**Choose 3 credit units from the following senior level Mathematics or Statistics courses:**~~

- ~~MATH — 300-Level or 400-Level~~
- ~~STAT — 300-Level or 400-Level~~

Minor program revision:

- **To include ARTH 323.3: European Colonialism in Visual Arts 1880 to 1920 and ARTH 345.3: Saskatchewan Aboriginal Art History as acceptable courses to meet the Indigenous Studies component of the Social Sciences/Social Studies Teaching Areas for all B.Ed. program routes.**

Early/Middle Years

Teaching Area 1 – Social Sciences/Social Studies

Teacher candidates may choose Social Sciences/Social Studies OR Indigenous Studies as a Teaching Area, but cannot choose both. Any 100-level course taken after the first 6 credit units will be counted as a senior course.

Note: ECON 450.3 Strategic Choice, PSY 233.3 Statistical Methods in Behavioural Sciences, PSY 234.3 Statistical Methods in Behavioural Sciences, SOC 225.3 An Introduction to Survey Research and Data Analysis in Sociology and SOC 325.3 Applied Quantitative Research in Sociology cannot be used to fulfill this requirement.

Choose 6 credit units from the following Indigenous Studies courses:

- INDG — 100-Level, 200-Level, 300-Level or 400-Level
- ARTH 323.3: European Colonialism in Visual Arts 1880 to 1920
- ARTH 345.3: Saskatchewan Aboriginal Art History
- HIST 193.3: History Matters Topics in Canadian History*
  *with the topic *Turtle Island: A History of North America's Ancient Civilizations*
- HIST 264.3: Native Newcomer Relations in Canada to 1880
- HIST 265.3: Native Newcomer Relations in Canada 1880 to Present
- HIST 315.3: Indigenous Health History
- KIN 306.3: Introduction to Indigenous Wellness

- POLS 222.3 Indigenous Governance and Politics
- POLS 322.3: First Nations Management and Administrative Systems
- POLS 323.3: First Nations Policies and Programs
- 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

Choose 6 credit units from the following History courses:

- HIST — 100-Level, 200-Level, 300-Level or 400-Level
- INDG 212.3 Nehiyaw Tapsinowin Cree Cultural Histories
- INDG 262.3 Aboriginal Narratives of Historical Memory
- INDG 280.6 Metis History in Western Canada
- INDG 281.3 First Nations History in Western Canada

Choose 6 credit units from the following Social Sciences/Social Studies courses:

- ANTH — 100-Level, 200-Level, 300-Level or 400-Level
- CMRS — 100-Level, 200-Level, 300-Level or 400-Level
- CTST — 100-Level, 200-Level, 300-Level or 400-Level
- ECON — 100-Level, 200-Level, 300-Level or 400-Level
- HIST — 100-Level, 200-Level, 300-Level or 400-Level
- INDG — 100-Level, 200-Level, 300-Level or 400-Level
- IS — 100-Level, 200-Level, 300-Level or 400-Level
- PHIL — 100-Level, 200-Level, 300-Level or 400-Level
- POLS — 100-Level, 200-Level, 300-Level or 400-Level
- PSY — 100-Level, 200-Level, 300-Level or 400-Level
- RLST — 100-Level, 200-Level, 300-Level or 400-Level
- SOC — 100-Level, 200-Level, 300-Level or 400-Level
- WGST — 100-Level, 200-Level, 300-Level or 400-Level
- CLAS 110.3 Greek Civilization
- CLAS 111.3 Roman Civilization
- CLAS 220.3 Daily Life in Ancient Greece and Rome
- CLAS 225.3 Women in Antiquity
- CLAS 240.3 Ancient Art and Architecture I Bronze Age to Classical Greece
- CLAS 242.3 Ancient Art and Architecture II Graeco Roman World
- CLAS 247.3
- CLAS 248.3
- GEOG 130.3 Environment Health and Planning
- GEOG 202.3 Regional Geography of Canada
- GEOG 204.3 Geography of the Prairie Region
- GEOG 208.3 World Regional Development
- GEOG 240.3 Sustainable Cities and Regions
- GEOG 340.3
- GEOG 364.3 Geography of Environment and Health
- 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
- GEOG 491.3 Research Topics in Human Geography
- PLAN 341.3 Urban Planning
- PLAN 342.3 Demographic Analysis in Planning
- PLAN 343.3 Legal Issues in Planning
- PLAN 346.3 Introduction to Urban Design
- PLAN 350.3 Transportation Planning and Geography
- PLAN 392.3 Early History of Geographic and Planning Thought
- PLAN 442.3 Regional Planning
- PLAN 446.3 Advanced Urban Design Studio

Early/Middle Years

Teaching Area 2 – Social Sciences/Social Studies

Choose 3 credit units from the following Indigenous Studies courses:

- INDG — 100-Level, 200-Level, 300-Level or 400-Level
- ARTH 323.3: European Colonialism in Visual Arts 1880 to 1920
- ARTH 345.3: Saskatchewan Aboriginal Art History
- HIST 193.3: History Matters Topics in Canadian History*
  *with the topic *Turtle Island: A History of North America's Ancient Civilizations*
- HIST 264.3: Native Newcomer Relations in Canada to 1880
- HIST 265.3: Native Newcomer Relations in Canada 1880 to Present
- HIST 315.3: Indigenous Health History
- KIN 306.3: Introduction to Indigenous Wellness
- POLS 222.3 Indigenous Governance and Politics
- POLS 322.3: First Nations Management and Administrative Systems
- POLS 323.3: First Nations Policies and Programs
- 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

Choose 3 credit units from the following History courses:

- HIST — 100-Level, 200-Level, 300-Level or 400-Level
- INDG 212.3 Nehiyaw Tapsinowin Cree Cultural Histories
- INDG 262.3 Aboriginal Narratives of Historical Memory
- INDG 280.6 Metis History in Western Canada
- INDG 281.3 First Nations History in Western Canada

Choose 6 credit units from the following Social Sciences/Social Studies courses:

- ANTH — 100-Level, 200-Level, 300-Level or 400-Level
- CMRS — 100-Level, 200-Level, 300-Level or 400-Level
- CTST — 100-Level, 200-Level, 300-Level or 400-Level
- ECON — 100-Level, 200-Level, 300-Level or 400-Level

- HIST — 100-Level, 200-Level, 300-Level or 400-Level
- INDG — 100-Level, 200-Level, 300-Level or 400-Level
- IS — 100-Level, 200-Level, 300-Level or 400-Level
- PHIL — 100-Level, 200-Level, 300-Level or 400-Level
- POLS — 100-Level, 200-Level, 300-Level or 400-Level
- PSY — 100-Level, 200-Level, 300-Level or 400-Level
- RLST — 100-Level, 200-Level, 300-Level or 400-Level
- SOC — 100-Level, 200-Level, 300-Level or 400-Level
- WGST — 100-Level, 200-Level, 300-Level or 400-Level
- CLAS 110.3 Greek Civilization
- CLAS 111.3 Roman Civilization
- CLAS 220.3 Daily Life in Ancient Greece and Rome
- CLAS 225.3 Women in Antiquity
- CLAS 240.3 Ancient Art and Architecture I Bronze Age to Classical Greece
- CLAS 242.3 Ancient Art and Architecture II Graeco Roman World
- CLAS 247.3
- CLAS 248.3
- GEOG 130.3 Environment Health and Planning
- GEOG 202.3 Regional Geography of Canada
- GEOG 204.3 Geography of the Prairie Region
- GEOG 208.3 World Regional Development
- GEOG 240.3 Sustainable Cities and Regions
- GEOG 340.3
- GEOG 364.3 Geography of Environment and Health
- 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
- GEOG 491.3 Research Topics in Human Geography
- PLAN 341.3 Urban Planning
- PLAN 342.3 Demographic Analysis in Planning
- PLAN 343.3 Legal Issues in Planning
- PLAN 346.3 Introduction to Urban Design
- PLAN 350.3 Transportation Planning and Geography
- PLAN 392.3 Early History of Geographic and Planning Thought
- PLAN 442.3 Regional Planning
- PLAN 446.3 Advanced Urban Design Studio

Secondary

Teaching Area 1 – Social Sciences/Social Studies

Choose 6 credit units from the following Indigenous Studies courses:

- INDG — 100-Level, 200-Level, 300-Level or 400-Level
- ARTH 323.3: European Colonialism in Visual Arts 1880 to 1920
- ARTH 345.3: Saskatchewan Aboriginal Art History
- HIST 193.3: History Matters Topics in Canadian History*
  *with the topic *Turtle Island: A History of North America's Ancient Civilizations*
- HIST 264.3: Native Newcomer Relations in Canada to 1880
- HIST 265.3: Native Newcomer Relations in Canada 1880 to Present
- HIST 315.3: Indigenous Health History
- KIN 306.3: Introduction to Indigenous Wellness
- POLS 222.3 Indigenous Governance and Politics
- POLS 322.3: First Nations Management and Administrative Systems
- POLS 323.3: First Nations Policies and Programs
- 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

Choose 6 credit units from the following History courses:

- HIST — 100-Level, 200-Level, 300-Level or 400-Level
- INDG 212.3 Nehiyaw Tapsinowin Cree Cultural Histories
- INDG 262.3 Aboriginal Narratives of Historical Memory
- INDG 280.6 Metis History in Western Canada
- INDG 281.3 First Nations History in Western Canada

Choose 12 credit units from the following Social Sciences/Social Studies courses:

- ANTH — 100-Level, 200-Level, 300-Level or 400-Level
- CMRS — 100-Level, 200-Level, 300-Level or 400-Level
- CTST — 100-Level, 200-Level, 300-Level or 400-Level
- ECON — 100-Level, 200-Level, 300-Level or 400-Level
- HIST — 100-Level, 200-Level, 300-Level or 400-Level
- INDG — 100-Level, 200-Level, 300-Level or 400-Level
- IS — 100-Level, 200-Level, 300-Level or 400-Level
- PHIL — 100-Level, 200-Level, 300-Level or 400-Level
- POLS — 100-Level, 200-Level, 300-Level or 400-Level
- PSY — 100-Level, 200-Level, 300-Level or 400-Level
- RLST — 100-Level, 200-Level, 300-Level or 400-Level
- SOC — 100-Level, 200-Level, 300-Level or 400-Level
- WGST — 100-Level, 200-Level, 300-Level or 400-Level
- CLAS 110.3 Greek Civilization
- CLAS 111.3 Roman Civilization
- CLAS 220.3 Daily Life in Ancient Greece and Rome

- CLAS 225.3 Women in Antiquity
- CLAS 240.3 Ancient Art and Architecture I Bronze Age to Classical Greece
- CLAS 242.3 Ancient Art and Architecture II Graeco Roman World
- CLAS 248.3
- GEOG 130.3 Environment Health and Planning
- GEOG 202.3 Regional Geography of Canada
- GEOG 204.3 Geography of the Prairie Region
- GEOG 208.3 World Regional Development
- GEOG 240.3 Sustainable Cities and Regions
- GEOG 340.3
- GEOG 364.3 Geography of Environment and Health
- 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
- GEOG 491.3 Research Topics in Human Geography
- PLAN 341.3 Urban Planning
- PLAN 342.3 Demographic Analysis in Planning
- PLAN 343.3 Legal Issues in Planning
- PLAN 346.3 Introduction to Urban Design
- PLAN 350.3 Transportation Planning and Geography
- PLAN 392.3 Early History of Geographic and Planning Thought
- PLAN 442.3 Regional Planning
- PLAN 446.3 Advanced Urban Design Studio

Secondary

Teaching Area 2 – Social Sciences/Social Studies

Choose 6 credit units from the following Indigenous Studies courses:

- INDG — 100-Level, 200-Level, 300-Level or 400-Level
- ARTH 323.3: European Colonialism in Visual Arts 1880 to 1920
- ARTH 345.3: Saskatchewan Aboriginal Art History
- HIST 193.3: History Matters Topics in Canadian History*
  *with the topic *Turtle Island: A History of North America's Ancient Civilizations*
- HIST 264.3: Native Newcomer Relations in Canada to 1880
- HIST 265.3: Native Newcomer Relations in Canada 1880 to Present
- HIST 315.3: Indigenous Health History
- KIN 306.3: Introduction to Indigenous Wellness
- POLS 222.3 Indigenous Governance and Politics
- POLS 322.3: First Nations Management and Administrative Systems
- POLS 323.3: First Nations Policies and Programs
- SOC 203.3 Race and Ethnic Relations in Canada
- 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

Choose 6 credit units from the following History courses:

- HIST — 100-Level, 200-Level, 300-Level or 400-Level
- INDG 212.3 Nehiyaw Tapsinowin Cree Cultural Histories
- INDG 262.3 Aboriginal Narratives of Historical Memory
- INDG 280.6 Metis History in Western Canada
- INDG 281.3 First Nations History in Western Canada

Choose 3 credit units from the following Social Sciences/Social Studies courses:

- ANTH — 100-Level, 200-Level, 300-Level or 400-Level
- CMRS — 100-Level, 200-Level, 300-Level or 400-Level
- CTST — 100-Level, 200-Level, 300-Level or 400-Level
- ECON — 100-Level, 200-Level, 300-Level or 400-Level
- HIST — 100-Level, 200-Level, 300-Level or 400-Level
- INDG — 100-Level, 200-Level, 300-Level or 400-Level
- IS — 100-Level, 200-Level, 300-Level or 400-Level
- PHIL — 100-Level, 200-Level, 300-Level or 400-Level
- POLS — 100-Level, 200-Level, 300-Level or 400-Level
- PSY — 100-Level, 200-Level, 300-Level or 400-Level
- RLST — 100-Level, 200-Level, 300-Level or 400-Level
- SOC — 100-Level, 200-Level, 300-Level or 400-Level
- WGST — 100-Level, 200-Level, 300-Level or 400-Level
- CLAS 110.3 Greek Civilization
- CLAS 111.3 Roman Civilization

- CLAS 220.3 Daily Life in Ancient Greece and Rome
- CLAS 225.3 Women in Antiquity
- CLAS 240.3 Ancient Art and Architecture I Bronze Age to Classical Greece
- CLAS 242.3 Ancient Art and Architecture II Graeco Roman World
- CLAS 247.3
- CLAS 248.3
- GEOG 130.3 Environment Health and Planning
- GEOG 202.3 Regional Geography of Canada
- GEOG 204.3 Geography of the Prairie Region
- GEOG 208.3 World Regional Development
- GEOG 240.3 Sustainable Cities and Regions
- GEOG 340.3
- GEOG 364.3 Geography of Environment and Health
- 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
- GEOG 491.3 Research Topics in Human Geography
- PLAN 341.3 Urban Planning
- PLAN 342.3 Demographic Analysis in Planning
- PLAN 343.3 Legal Issues in Planning
- PLAN 346.3 Introduction to Urban Design
- PLAN 350.3 Transportation Planning and Geography
- PLAN 392.3 Early History of Geographic and Planning Thought
- PLAN 442.3 Regional Planning
- PLAN 446.3 Advanced Urban Design Studio

College of Engineering Submission to University Course Challenge

December 2019

The following changes have been approved by the College of Engineering Undergraduate Academic Programs Committee and are now being submitted to the UCC for further review and approval.

Contact: Aleksandra Pajic (Aleksandra.pajic@usask.ca)

New Course Proposals:

New Course: EE 466.3 Image Processing
This course introduces the fundamental concepts and techniques of digital image processing, concentrating on aspects of image processing in which both the inputs and outputs are images. Topics include image sampling and quantization, intensity transformation, spatial filtering, frequency domain filtering, image restoration and image reconstruction. The laboratory component focuses on the digital hardware implementation of image acquisition and image manipulation.
Prerequisite: EE 365
Corequisite: EE 467

New Course: EE 467.3 Computer Vision
This course focuses on aspects of digital image processing/computer vision where the inputs are images and the outputs are attributes extracted from those images. Topics include color image processing, image compression, basic morphological image processing, edge detection, thresholding, region detection, feature extraction and image pattern classification. The laboratory component focuses on the digital hardware implementation of attribute extraction algorithms.
Prerequisite: EE 365
Corequisite: EE 466

New Course: EE 468.3 Design of a Computer Vision System
This course falls into the category of "guided design". The students will be guided through the design and implementation, in digital hardware, of a complex computer vision system. The course covers the application specific theory as well as the application specific implementation issues for a specific computer vision system. The specific computer vision system that is designed in this course will change from time to time as necessary to maintain relevancy. The current design problem is a parking lot license plate recognition system. The students will be guided through the design of the system, design of one or more circuits suitable for detection and segmentation of the license plate, design of one or more circuits suitable for license plate character extraction and normalization, and design of one or more circuits suitable for license plate character recognition.
Prerequisite: EE 466, EE 467

Rationale for introducing these courses: The courses compile a three-course digital image processing/computer vision package being proposed as an option in the ECE Digital Signal Processing and

Applications (DSPA) Focus Area. This package of courses is introduced, in part, to satisfy the continuous improvement requirements of our licensing body, the Canadian Engineering Accreditation Board (CEAB). The DSPA Focus Area is one of three focus areas in the EE/CME program, each consisting of a package of 6 courses. Students select 2 out of the 3 focus areas at the start of third year. Currently, the DSPA Focus Area consists of a package of 6 courses that concentrate on one-dimension digital signal processing. The three digital image processing/computer vision courses proposed will expand our DSPA Focus Area into two-dimension digital signal processing. Two-dimensional image processing/computer vision is playing an increasing role in industry automation, and thus this package of courses will provide additional opportunity for our students.

Currently in the DSPA area, two of the third-year courses focus on learning the digital circuit hardware that is used in all three of the fourth-year course labs. The remaining third year courses introduce the basics of digital signal processing. The current third year courses are necessary prerequisites for the proposed image processing/computer vision courses (EE362 is a prerequisite for the theoretical component and CME341 and EE365 are a prerequisite for the practical component). In fourth year, the package of three digital image processing/computer vision courses will be offered as an option the students could select for their three fourth year courses, instead of the current set of three fourth year courses (EE456, EE461 and EE465).

Bachelor of Science (B.E.) - Electrical Engineering

Year 1 (34 credit units)
Year 2 (34 credit units)
Year 3 (33 credit units)
Year 4 (33 credit units)

Focus Areas

Power and Energy

Year 3 - Fall Term

- **EE 341.3**
- **EE 343.3**

Year 3 - Winter Term

- **EE 342.3**

Year 4 - Fall Term

- **EE 441.3**
- **EE 444.3**

Year 4 - Winter Term

- **EE 442.3**

Digital Signal Processing and Applications

Year 3 - Fall Term

- **CME 341.3** Logic Design Using FPGAs
- **EE 362.3** Digital Signal Processing

Year 3 - Winter Term

- **EE 365.3** Algorithms and Circuits with Finite Precision Arithmetics

Year 4 - Fall Term

- **EE 456.3** Digital Communication
- **EE 461.3** Digital Filter Design

Or if choosing Two-dimensional image processing/computer vision courses:

- **EE 466.3** Image Processing
- **EE 467.3** Computer Vision

Year 4 - Winter Term

- **EE 465.3** Design of a DSP System

Or if choosing Two-dimensional image processing/computer vision courses:

- **EE 468.3** Design of a Computer Vision System

Sensors, Circuits and Devices

Year 3 - Fall Term

- **EE 301.3**
- **EE 321.3**

Year 3 - Winter Term

- **EE 322.3**

Year 4 - Fall Term

- **EE 471.3**

- **EE 473.3**

Year 4 - Winter Term

- **EE 472.3**

Bachelor of Science (B.E.) - Computer Engineering

Year 1 (34 credit units)
Year 2 (34 credit units)
Year 3 (33 credit units)
Year 4 (33 credit units)

Focus Areas

Focus Areas – Students must complete Digital Systems Focus Area and one of the Digital Signal Processing and Applications Focus Area or Computer Software Focus Area.

Digital Systems

Year 3 - Fall Term

- **CME 342.3** Introduction to Digital Integrated Circuits and System on Chip

Year 3 - Winter Term

- **CME 332.3** Real Time Computing

Year 4 - Fall Term

- **CME 433.3** Digital Systems Architecture
- **CME 435.3** Verification of Digital Systems

Year 4 - Winter Term

- **CME 466.3** Design of an Advanced Digital System

Digital Signal Processing and Applications

Year 3 - Fall Term

- **EE 362.3** Digital Signal Processing

Year 3 - Winter Term

- **EE 365.3** Algorithms and Circuits with Finite Precision Arithmetics

Year 4 - Fall Term

- **EE 456.3** Digital Communication
- **EE 461.3** Digital Filter Design

Or if choosing Two-dimensional image processing/computer vision courses:

- **EE 466.3** Image Processing
- **EE 467.3** Computer Vision

Year 4 - Winter Term

- **EE 465.3** Design of a DSP System

Or if choosing Two-dimensional image processing/computer vision courses:

- **EE 468.3** Design of a Computer Vision System

Computer Software

Year 3 - Fall Term

- **CMPT 270.3** Developing Object-Oriented Systems

Year 3 - Winter Term

- **CMPT 280.3** Intermediate Data Structures and Algorithms

Year 4 - Fall Term

- 6 credit units Group B Elective

Year 4 - Winter Term

- 3 credit units Group C Elective

Edwards School of Business, December, 2019 University Course Challenge

The following changes were approved by the Edwards School of Business and are being submitted here for approval:

Global Business Stream (GBS)

The Global Business Stream (GBS) and the Advanced Global Business Stream (GBSA) provide business students with an opportunity to increase their awareness of the international business environment and global business affairs and better prepare them for a career in global business. Enrollment in the GBS and GBSA is open to students in the Bachelor of Commerce (B.Comm.) program.

The GBS requires students to complete three business courses and attend three Forum for International Trade Training (FITT) ~~Going Global~~ Skills Workshops taught by globally trained experts.

Program Requirements (9 credit units)

- COMM 340.3
- Choose 3 non-credit FITT ~~Going Global~~ Skills Workshops (see list below)
- Choose 6 credits of Global Business Stream Courses (see list below)

Upon completion of the GBS, business students can further their international business knowledge and pursue the Advanced Stream by attending an additional FITT Workshop and completing one of the following: additional courses; studying abroad for a term; or completing an honours project related to international business.

Advanced Global Business Stream (GBSA)

Program Requirements (minimum 15 credit units)

- Completion of the 9 credit unit Global Business Stream (GBS)
- Minimum of 1 additional non-credit FITT ~~Going Global~~ Skills Workshops (see list below)

Choose one of the following 3 options:

- 6 credits of Global Business Stream Courses (see list below)
- Completion of at least 6 credit units through the U of S Study Abroad program
- Completion of one of the following honours projects related to international business: ACC 400.6, FIN 400.6, HRM 400.6, MGT 400.6, MKT 400.6 or OM 400.6

Course List

Global Business Stream Courses

- COMM 456.3
- COMM 466.3
- COMM 485.3
- COMM 495.3
- COMM 498.3 (Global Strategy & Organizational Design or Edwards International Study Tour)
- ECON 254.3 *
- ECON 256.3 *
- ECON 270.3 *
- ECON 354.3 *
- ECON 356.3 *
- ECON 376.3 *
- IS 110.3
- IS 201.3
- IS 401.3 *
- IS 402.3 *
- Non-COMM taught abroad class, subject to approval by the Edwards School of Business
- One of IS 200.3 *, IS 211.3 *, or IS 212.3
- POLS 245.3 *
- POLS 341.3 *
- POLS 349.3 *
- POLS 362.3 *
- POLS 375.3 *
- POLS 446.3 *
- POLS 471.3

*** Prerequisites Apply**

Workshops

FITT ~~Going Global~~ Skills Workshops

Possible workshops are broken down into six categories and include:

- Feasibility of International Trade
  - Situational Analysis
  - Cost and Pricing Analysis
  - Risk Analysis and Management
- International Market Entry Strategies
  - Planning for International Market Entry
  - Implementation of Market Entry Strategies
  - Law and Ethics
  - Intercultural Competence
- Global Value Chain:
  - Document Management
  - International Procurement
  - Inventory Management
  - International Distribution
- International Trade Finance
- Products and Services for a Global Market
  - Product Development
  - Service Development
  - International Marketing
  - Marketing Products and Services
  - Selling to International Markets
  - E-Commerce

- ~~FITT Importing into Canada~~
- ~~FITT Introduction to Cultural Aspects of International Trade~~
- ~~FITT Introduction to Global Supply Management~~
- ~~FITT Introduction to International Marketing~~
- ~~FITT Introduction to International Trade Finance~~
- ~~FITT Introduction to International Trade Research~~
- ~~FITT Introduction to Trade Compliance for Exporters~~
- ~~FITT Introduction to Trade Compliance for Importers~~

College of Law – December, 2019 University Course Challenge

The following new courses have been approved by the College of Law and are being submitted here for approval:

New Course **LAW 482.3 Criminal Intensive Seminar** **1/2 (2S-1R)**

The Intensive Criminal Law Seminar supplements the Intensive Criminal Law Practicum by providing students with an opportunity to reflect on their experiences in the practicum, and to engage with the Criminal Law literature in order to critically reflect on the law and systemic issues. A series of seminars will be held in the first week of term prior to the students beginning their practicum, and then on Fridays throughout the remainder of the term. Many of the seminars will be delivered by practicing lawyers or judges. In particular, students learn about several advanced criminal law, ethical, evidence, trial advocacy and criminal procedure issues, and will study the *Charter of Rights and Freedoms* legal rights and procedural issues in depth. Students will be assigned readings relating to most topics and will be expected to engage actively in the seminars, in some cases leading the seminar themselves. The seminar will provide an opportunity for advanced research in the form of a major research paper.

Prerequisite: Law 351, Law 423

Co-requisite: Law 484.12

Rationale The College of Law views reflection as an important aspect of experiential learning. The Intensive Criminal Law Seminar provides students with the opportunity to reflect upon their experiences in the practicum, and to critically examine criminal law and surrounding systemic issues. Finally, this course will give students an opportunity to build their research and writing skills through writing a major research paper.

Contact Person Tamara Larre (306) 966-1966

Consultation Consultation within the College

Approval Date **November 25, 2019**

New Course **LAW 484.12 Criminal Intensive Practicum** **1/2 (12CL)**

The Intensive Criminal Law Practicum is designed to provide students with real-world practical exposure to the practice of criminal law. In addition to working on at least 1 major actual criminal file jointly (usually with the program coordinator's law firm). Students will also be placed in the office of a criminal lawyer for 32 hours a week (Monday to Thursday) for ten weeks where the students will become intimately involved in the practice of criminal law under the supervision of a practicing criminal lawyer. In some situations, students may also be placed under the supervision of a judge for part of the placement. While the focus of the practicum will be on criminal law and the related areas of law and practice mentioned above, students will likely be exposed to other areas of law intersecting with criminal law (for example, insurance or property law). Students in this practicum must simultaneously enroll in the Intensive Criminal Law Seminar.

Prerequisite: Law 351, Law 423

Co-requisite: Law 482.3

Contact Person Tamara Larre (306) 966-1966

Rationale There is an increasing demand for experiential learning in the criminal law area. The College has in recent years increased its offerings in criminal law and has a seen a corresponding increase in demand for a practicum course. While students at CLASSIC get some exposure to criminal files Classic's file load is varied and the criminal law files

handled are those not covered by legal aid meaning that they are of lesser level of seriousness and do not include indictable matters. The practicum will expose the involved students to serious criminal matters including murders, sexual assaults and impaired driving. Through the practicum, students will be able to build upon the substantive knowledge learned in the classroom in their prior studies, and to build skills critical to criminal legal practice.

Consultation Consultation within the College
Approval Date **November 25, 2019**

Academic Programs Committee of Council

University Course Challenge

Scheduled posting: December, 2019

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 Education
College of Engineering
Edwards School of Business
College of Graduate and Postdoctoral Studies
College of Law
College of Medicine
College of Nursing
School of Environment and Sustainability

Approval: Date of circulation: December 12, 2019
Date of effective approval if no challenge received: December 31, 2019

Next scheduled posting:

The next scheduled posting will be January 16, 2020, with a submission deadline **January 14, 2020.** 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 Office of the University Secretary.

College of Medicine, December, 2019 University Course Challenge

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

Please note the following minor program revision to the Doctor of Medicine (M.D.) program:

Doctor of Medicine (248 credit units)

Students entering the College of Medicine will take a four-year medical program consisting of two years pre-clerkship and two years clerkship. Admission requirements are detailed on the **College of Medicine website**.

A unique opportunity exists for students to complete the M.B.A. and M.D. degrees concurrently. This opportunity is available to students accepted into the College of Medicine, allowing them to apply to and if accepted, complete an M.B.A. degree in addition to the M.D. degree. For further information on the M.B.A. admission and program requirements, please visit the **M.B.A. program page**.

For further information on the College of Medicine admission and program requirements please see the information below and the **College of Medicine website.**

First Year Pre-Clerkship (33 weeks)

- **MEDC 100.0** Extra Curricular Medical Experience I (optional)
- **MEDC 101.0** Basic Life Support for Health Care Providers
- **MEDC 111.0** Success in Medical School I
- **MEDC 112.3** Medicine and Society I
- **MEDC 113.8** Clinical Skills I
- **MEDC 114.4** Clinical Integration I
- **MEDC 115.18** Principles of Medical Science
- **MEDC 122.3** Medicine and Society II
- **MEDC 123.8** Clinical Skills II
- **MEDC 124.4** Clinical Integration II
- **MEDC 126.18** Foundations of Clinical Medicine I

Second Year Pre-Clerkship (33 weeks)

- **MEDC 200.0** Extra Curricular Medical Experience II (optional)
- **MEDC 211.0** Success in Medical School II
- **MEDC 212.3** Medicine and Society III
- **MEDC 213.8** Clinical Skills III
- **MEDC 214.4** Clinical Integration III
- **MEDC 216.18** Foundations of Clinical Medicine II
- **MEDC 222.3** Medicine and Society IV
- **MEDC 223.8** Clinical Skills IV

- **MEDC 224.4** Clinical Integration IV
- **MEDC 226.18** Foundations of Clinical Medicine III

Third Year Clerkship (Core Rotations) (~~52~~ 46 weeks)

- **MEDC 307.50** Core Clinical Rotations or **MEDC 306.50** Saskatchewan Longitudinal Integrated Clerkship SLIC
- **MEDC 308.16** Selected Topics in Medicine
- ~~**MEDC 309.8** Selective Clinical Rotations~~
- **MEDC 311.0** Success in Medical School Clerkship III

Fourth Year Clerkship (Electives and Capstone Course) (33 weeks)

- **MEDC 407.34** Elective Clinical Rotations
- MEDC 408.8 Selective Clinical Rotations
- **MEDC 409.8** Preparation for Residency

Optional Fifth Year Clerkship (33 weeks)

The following is a clerkship extension course, offered ~~over two~~ both terms. It allows students the option of participating in an additional year of undergraduate medical training.

- **MEDC 505.15** Clerkship Extension Course

Rationale:

Year three will begin two weeks earlier and the six-week Selective course will move out of year three to year four. The Selective course has been reduced by two weeks. The program was originally designed with no break between year three and four. This shift will create a three-week break between year three & four benefitting administrative staff, faculty, and students that are transitioning to year four. Administrative staff will have time to collect and calculate final grades; allowing student's full promotion to year four prior to beginning year 4. It will also create the capacity for those students that require remediation and/or supplemental activity prior to full promotion. The break will mean that faculty time to complete assessments at the end of the final rotation and submit grades to allow for full promotion. Lastly, students transitioning to twenty-four weeks of two week, Canadian-based electives will have time to adjust their housing if necessary, prepare for travel, and have a mental break from their studies.

The program does have a year four course, MEDC 408 on the books, that describes the Selective course in the capacity that the College of Medicine has approved it now be offered.

College of Nursing, December, 2019 University Course Challenge

The following changes have been approved by the College of Nursing Faculty Council and are being proposed here for approval**:**

Course Deletion

NURS 328.3: Therapeutic Interventions for Individuals and Groups (PDBSN)

Focuses on therapeutic nursing interventions with individuals and groups. Participants will explore an array of evidence informed concepts, theories, and interventions related to nursing in a variety of clinical settings, within the context of community and society. Ethically competent and culturally safe care will be explored through various nursing roles including counseling, advocating, teaching, leading, and supporting. Experiences in individual counseling and group facilitation will be provided through case simulation, labs, and course assignments.

Restriction(s): Restricted to students in the College of Nursing who are registered in the Post-Degree B.S.N. Option.
Prerequisite(s): NURS 204.3
Note: Students with credit for NURS 321.3 or NEPS 327.3 will not receive credit for this course.

Rationale: The College of Nursing will no longer be offering NURS 328.3 (a class taken by the Post Degree). Instead, going forward we will only offer NURS 321.3

Resulting Program Changes are as follows:

The Post-Degree Bachelor of Science in Nursing curriculum is delivered over two years, as follows:

Year 1 (51 credit units)

- **NURS 200.3** Nursing Foundations Perspectives and Influences
- **NURS 201.3** Perspectives on Health Wellness and Diversity in a Global Context
- **NURS 202.3** Assessment and Components of Care I
- **NURS 203.3** Assessment and Components of Care II
- **NURS 204.3** Communication and Professional Relationships
- **NURS 205.3** Research for Evidence Informed Practice
- **NURS 220.3** Concepts of Patient and Family Centered Care
- **NURS 221.3** Patient and Family Centered Care in Clinical Practice*
- **NURS 305.6** Core Competencies for the Management of Complex Patient Care
- **NURS 306.3** Exploring Chronicity and Aging
- **NURS 307.3** Integrating Mental Health and Addiction into Nursing
- **NURS 308.3** Integrating Mental Health and Addiction Within Nursing Practice*
- ~~**NURS 328.3**~~ 321.3 Therapeutic Interventions for Individuals and Groups
- **NURS 332.3** Exploring Complexity and Acuity
- **NURS 333.3** Complex Nursing Care Practice*
- **PHAR 250.3** Pharmacology for Nursing

* Students are expected to have at least one clinical experience outside of Saskatoon.

Year 2 (42 credit units)

- **NURS 304.3** Family Nursing
- **NURS 322.3** Leadership in Education and Care
- **NURS 330.3** Maternal Child and Adolescent Family Centered Nursing
- **NURS 331.3** Maternal Child and Adolescent Family Centered Nursing Practice*
- **NURS 422.3** Issues in Leadership and Management Transformative Practice in Health Care Organizations
- **NURS 430.3** Community Health Nursing Building Partnerships
- **NURS 431.6** Community Nursing Practice*
- **NURS 440.3** Interprofessional Perspectives Health Systems and Policy Development within a Global Context
- **NURS 441.3** Transitioning to Professional Practice
- **NURS 450.9** Practice Integration*
- Restricted elective (3 credit units). Students will choose one of the eligible electives from the Restricted Electives List below, or other courses with approval from the College of Nursing. Students must complete the Restricted Elective at the same time or before **NURS 431.6** Community Nursing Practice and **NURS 450.9** Practice Integration.

* Students are expected to have at least one clinical experience outside of Saskatoon.

Restricted Electives List

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Program Revision

Bachelor of Science in Nursing (B.S.N.)

Remove the requirement to complete a First Aid Certificate as part of the B.S.N., as follows**:**

Bachelor of Science in Nursing (B.S.N.) (132 credit units)

The College of Nursing offers three years of nursing education that builds upon a pre-professional year leading to the Bachelor of Science in Nursing (B.S.N.) degree. Students in the pre-professional year study courses in the humanities, natural, social and health sciences, all of which are foundational for the nursing program. The complete program is offered at the College of Nursing campuses in Saskatoon, Regina, Prince Albert, or through distributed learning at sites in Ile-a-la-Crosse, La Ronge, and Yorkton.

Part-time study is an option, but all courses must be completed within six years of commencing the first nursing course.

For additional information on the B.S.N. and other nursing educational programming, please contact the College of Nursing at 306-966-6221 or visit the **College of Nursing website**.

In order to be eligible for licensure with the Saskatchewan Registered Nurses' Association (SRNA) graduates must pass a national council licensure examination (NCLEX) and pay the required fees.

Pre-Professional Year 1 (30 credit units)

The following high school courses are required as prerequisites for the pre-professional year of study: English A30 and B30, Biology 30, Chemistry 30 and Foundations of Math 30 or Pre-Calculus 30 or Math B30. Math C30 is recommended.

The pre-professional year of study at a post-secondary level consists of 30 credit units of courses. A minimum weighted average of 60% in these pre-professional courses is required for admission. Admission to Year 2 of Nursing is competitive. The average for admission to Year 2 is normally higher than 60%. Please contact the College of Nursing for details.

English Language Proficiency: All students whose first language is not English must present evidence of English proficiency. Details on acceptable examinations and minimum requirements that must be attained are available under Information for Students. For information, please visit the **English Language Requirements**.

After receiving admission to the B.S.N., the following program requirements must be completed. Please check the following website for completion dates: **https://nursing.usask.ca/clinical/health-and-safety.php**

- CPR-C Certification and AED*
- ~~A Standard First Aid Certificate *~~
- Workplace Hazardous Materials Information System (WHMIS)
- Transferring Lifting Repositioning (TLR) course*
- Respiratory Protection Fit Testing
- Immunizations
- Criminal Record Check and Vulnerable Sector Search: Students who fail to submit the results will be excluded from contact with clients and may be required to withdraw from the program. Updated criminal record checks may be required later in the program based on clinical agency requirements. Criminal record checks can sometimes take a few months to process, so it is important you arrange for this as soon as possible.
- Workers Compensation Board (WCB) forms
- Uniforms
- Other supplies and resources

Please visit the **College of Nursing website** for information on costs for the above requirements.

Nursing Year 2 (36 credit units)
Nursing Year 3 (36 credit units)
Nursing Year 4 (30 credit units)

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Rationale: Approved by UEC on August 15, 2019 and at Faculty Council on September 25, 2019. An unnecessary cost for students and is not a requirement of our Clinical Placement Agreement, nor is it a requirement of the SRNA.

School of Environment and Sustainability, December, 2019 University Course Challenge

The following changes are being proposed for approval:

Rationale for changes to the Undergraduate Certificate in Sustainability

We request to make two changes to the Certificate in Sustainability program description. We propose to

1. add five undergraduate courses to the Natural Resources and Sustainability Focus.

    - SLSC 350.3 Terrestrial Restoration
    - GEOG 333.3 Global Climate Changes
    - EVSC 380.3 Grassland Soils and Vegetation
    - CHEM 375.3 Environmental Chemistry
    - ANBI 375.3 Animals and the Environment

    All of these classes were approved and added on a case by case basis to the certificate program. These courses were approved by the Undergraduate Certificate Committee to alleviate a bottleneck that was occurring in the third year of the Natural Resources and Sustainability Focus. Student's degree programs were changing in the Renewable Resource Management, Environmental Sciences and Geography's Environment and Society programs by adding these courses to their degree programs, and we did not have them in our certificate line up. We did not have them in our certificate line up because either the course evolved to include more sustainability when the certificate was made, or they just started to be taught by new instructors at the University, and so were not in place when the certificate was initially developed. In short, we adapted to other changes happening in other departments on campus.

2. Remove two courses that have been deleted from the course catalogue
    a. EVSC 430.3
    b. HIST 459.3

Program Description (changes indicated in **red**)

The Certificate in Sustainability is intended to give students theoretical, methodological, strategic, and substantive exposure to sustainability-related concepts and practice. Students will choose either a natural resources, community, or food systems focus for their sustainability studies towards the certificate. The certificate will allow students to engage in problem-based, experiential learning across a broad range of sustainability topics. The program will begin in the student's second year with ENVS 201.

Certificate in Sustainability (21 credit units)

Required Courses (9 credit units):

- ENVS 201.3 Foundations of Sustainability

- ENVS 401.3 Sustainability in Action
- INDG 107.3 Introduction to Canadian Indigenous Studies

Techniques and Tools for Sustainability (3 credit units)

Choose 3 credit units from the following elective courses:

- ENVE 381.3 Sustainability and Environmental Assessment
- EVSC 203.3 Sampling and Laboratory Analysis
- GEOG 290.3 Field Methods and Laboratory Analysis
- GEOG 385.3 Analysis of Environmental Management and Policy Making
- GEOG 386.3 Environmental Impact Assessment
- INDG 210.3 Indigenous Ways of Knowing
- RRM 323.2 Resource Data and Environmental Modeling and RRM 201.1 Geographical Information Systems
- SOC 225.3 An Introduction to Survey Research and Data Analysis in Sociology
- SOC 232.3 Methods of Social Research

Areas of Focus (9 credit units)

Students must choose one of the following three areas of focus, in consultation with an advisor:

Please note in each area of focus there are thesis and/or research course options listed. If a student chooses to use one of these courses towards the completion of the certificate it must be demonstrated to the certificate coordinator that the thesis pursued has a focus on sustainability and the theme of the chosen area of focus.

Natural Resources and Sustainability Focus

Elective Courses (9 credit units):

Choose one of:

- BIOL 228.3 An Introduction to Ecology and Ecosystems
- ECON 275.3 Economics of Natural Resources
- ECON 277.3 Economics of the Environment
- ENVE 201.3 Principles of Environmental Engineering
- ENVE 212.3 Physical Principles of Plant Biosystems
- EVSC 210.3 Environmental Physics
- EVSC 220.3 Environmental Soil Science
- GEOG 280.3 Environmental Geography
- PHIL 226.3 Environmental Philosophy
- PHIL 231.3 Moral Problems
- PHIL 236.3 Ethics and Technology
- PLSC 213.3 Principles of Plant Ecology

- TOX 200.3 Poisons and Pollutants

Choose one of:

- AREC 330.3 Land Resource Economics
- BIOL 373.3 Community Ecology
- ECON 376.3 Energy Economics
- GEOG 351.3 Northern Environments
- PLAN 329.3 Integrated Water Resource Planning
- RRM 312.3 Natural Resource Management and Indigenous Peoples
- TOX 301.3 Environmental Toxicology
- SLSC 350.3 Terrestrial Restoration (https://catalogue.usask.ca/SLSC-350)
- GEOG 333.3 Global Climate Changes (https://catalogue.usask.ca/GEOG-333)
- EVSC 380.3 Grassland Soils and Vegetation (https://catalogue.usask.ca/EVSC-380)
- CHEM 375.3 Environmental Chemistry (https://catalogue.usask.ca/CHEM-375)
- ANBI 375.3 Animals and the Environment (https://catalogue.usask.ca/ANBI-375)

Choose one of:

- AREC 430.3 Natural Resource Economics
- BIOL 410.3 Current Perspectives in Environmental Biology
- BIOL 412.3 Limnology
- BIOL 470.3 Conservation Biology
- BIOL 475.3 Ecological Toxicology
- ENVE 432.3 Land Management and Reclamation
- EVSC 421.3 Contaminated Site Management and Remediation
- ~~EVSC 430.3~~
- EVSC 492.3 Research and Term Paper
- EVSC 494.3 Research and Thesis
- GEOG 490.3 Selected Topics in Physical Geography
- PLSC 413.3 Advanced Plant Ecology
- PLSC 422.3 Rangeland Ecology and Management
- PLSC 423.3 Landscape Ecology and Vegetation Management
- PLSC 425.3 Forest Ecology
- PLSC 492.3 Project Thesis in Plant Sciences
- PLSC 494.6 Research Thesis in Plant Sciences
- SLSC 492.3 Research and Term Paper
- SLSC 494.6 Research and Thesis

Community and Sustainability Focus

Elective Courses (9 credit units):

Choose one of:

- ANTH 240.3 Cultural Landscapes and Environments
- ANTH 244.3 Political Ecology Anthropology and Global Environmental Issues

- ECON 275.3 Economics of Natural Resources
- ECON 277.3 Economics of the Environment
- GEOG 208.3 World Regional Development
- GEOG 240.3 Sustainable Cities and Regions
- GEOG 280.3 Environmental Geography
- HIST 257.3 The Canadian Prairie to 1905
- HIST 258.3 The Canadian Prairies since 1905
- HIST 263.3
- HIST 290.3 Topics in Environmental History
- INTS 203.3 Cultivating Humanity
- PHIL 226.3 Environmental Philosophy
- PHIL 231.3 Moral Problems
- PHIL 236.3 Ethics and Technology
- POLS 226.3 Canadian Public Policy
- RLST 210.3 Religion and Ecology
- SOC 202.3 Environmental Sociology
- SOC 204.3 Rural Sociology
- SOC 206.3 Sociology of Communities and Community Development
- SOC 227.6 Critical Issues in Canadian Society
- WGST 210.3 Gendered Perspectives on Current Events

Choose one of:

- ANTH 329.3 Environmental Anthropology
- ARCH 357.3 The Archaeology of Prairie Settlement
- AREC 330.3 Land Resource Economics
- GEOG 340.3
- GEOG 352.3 Contemporary Issues of the Circumpolar World I
- GEOG 364.3 Geography of Environment and Health
- GEOG 380.3 Environmental Geography of the Circumpolar North
- GEOG 381.3 Development in the Canadian North Issues and Challenges
- PLAN 342.3 Demographic Analysis in Planning
- PLAN 346.3 Introduction to Urban Design
- POLS 326.3 Comparative Public Policy
- POLS 328.3 Public Policy Analysis
- SOC 344.3 Sociology of Women Gender and Development

Choose one of:

- ANBI 475.3 Field Studies in Arctic Ecosystems and Aboriginal Peoples
- ANTH 401.3 Independent Research in Anthropology
- AREC 430.3 Natural Resource Economics
- AREC 432.3 Rural Development Theory and Applications
- CHEP 402.3 Global Health and Local Communities Issues and Approaches
- GEOG 464.3 Geography of Health
- GEOG 491.3 Research Topics in Human Geography
- ~~HIST 459.3~~
- INDG 451.6 Advanced Research Paper

- INTS 400.3 Critical Perspectives on Social Justice and the Common Good
- PLAN 445.3 Planning with Indigenous Communities
- PLAN 446.3 Advanced Urban Design Studio
- POLS 403.3 Advanced Topics in Public Law and Public Policy
- POLS 422.3 First Nations Governance
- SOC 409.3 Sociology of Development
- SOC 421.3 Interpretive Studies in Health
- WGST 411.3 Situated Transnational Feminisms

Food Systems and Sustainability Focus

Elective Courses (9 credit units):

Choose one of:

- AGRC 211.3 Global Food Security
- AREC 251.3 Introduction to Agricultural Policy
- PLSC 235.3 Urban Agriculture

Choose one of:

- ANBI 375.3 Animals and the Environment
- ANSC 301.3 Animal Production Tour
- AREC 330.3 Land Resource Economics
- EVSC 380.3 Grassland Soils and Vegetation
- FABS 371.3 Food Biotechnology
- PLSC 345.3 Pesticides and Crop Protection
- RRM 312.3 Natural Resource Management and Indigenous Peoples
- SLSC 313.3 Environmental Soil Chemistry

Choose one of:

- AREC 432.3 Rural Development Theory and Applications
- AREC 451.3 Agricultural Problems and Policies
- EVSC 492.3 Research and Term Paper
- EVSC 494.6 Research and Thesis
- FABS 401.3 Dairy Science and Technology
- FABS 432.3
- FABS 436.3 Biofuels Production
- FABS 450.3 Anaerobic and Rumen Microbiology
- FABS 492.3 Literature Thesis
- FABS 494.6 Research Thesis
- GEOG 491.3 Research Topics in Human Geography
- PLSC 401.3 Sustainable Crop Production
- PLSC 413.3 Advanced Plant Ecology
- PLSC 418.3 Management of Arable Grassland
- PLSC 422.3 Rangeland Ecology and Management

- PLSC 492.3 Project Thesis in Plant Sciences
- PLSC 494.6 Research Thesis in Plant Sciences
- SLSC 492.3 Research and Term Paper
- SLSC 494.6 Research and Thesis
- SOC 402.3 Sociology of Agriculture and Food