Academic Programs Committee of Council

University Course Challenge

Scheduled posting: **December 2024**

Date of circulation: **December 16, 2024**

Date approval is effective if no challenge received: **December 31, 2024**

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

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

College of Agriculture and Bioresources
College of Arts and Science
College of Education
College Engineering
College of Graduate and Postdoctoral Studies
College of Nursing
Edwards School of Business

The next scheduled posting will be **January 16, 2025** with a submission deadline of **January 13, 2025**. Urgent items can be posted on request.

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

College of Agriculture and Bioresources, Submission to University Course Challenge
December 2024

The curricular revisions listed below were approved through the College of Agriculture and Bioresources Undergraduate Affairs Committee, and are now submitted to the University Course Challenge for approval.

New Course Proposal

FABS 375.3: A Practical Approach to Seed Processing

This course is a thorough introduction to various seed processing techniques, methods, and equipment often employed in the industrial manufacture of different end-products. This hybrid lecture/lab course covers the procedures, issues, and solutions for seed processing, from the selection of the seed material to the refined end-product, with a unique opportunity to conduct lab work at the college's Bioprocessing Pilot Plant.

Prerequisite(s): FABS 211.3 and FABS 315.3

Note(s): **There are additional non-refundable costs in addition to tuition fees.**

Rationale: BLE 303 is no longer being offered by Chemical and Biological Engineering. The content formerly covered in this course now presents a significant learning outcomes "gap" with respect to bioprocess engineering. We therefore developed FABS 375.3 (A Practical Approach to Seed Processing) to provide both theoretical and hands-on bioprocessing content that is both more contemporary and better suited to students entering employment in the food processing area. It provides students with the opportunity to work with bioprocessing equipment provided in the real-world context of oil seed processing, along with analytical methods and instruments for analyzing fractionated seed materials.

Revisions to Course Prerequisites

AREC 222.3: Introduction to Farm Business Management

The analysis and interpretation of farm business financial statements and the use of this information in planning future farm business decisions. Other subjects include machinery economics, individual enterprise analysis, capital investment analysis and succession planning.

Prerequisite(s): ~~Successful completion of 27 credit units of university level courses or permission of the instructor~~ ECON 111 or AGRC 113 or successful completion of 27 credit units of university level courses or permission of the instructor.

Note: Students with credit for BPBE 62, AREC 320 or BPBE 320 will not receive credit for this course.

Rationale: The change to the prerequisite reflects the academic preparation required for this course.

PLSC 234.3: Weed Control in Organic Agriculture

The principles and practices of weed control in organic agriculture will be covered. Students will learn the application of cultural, mechanical and biological techniques to control weeds within an integrated organic weed control system. Basic weed ecology and weed identification skills will also be learned.

Prerequisite(s): ~~Introductory course in BIOL or permission of the instructor.~~ AGRC 111.

Note: This course is only available in web distance format.

Rationale: The change to the prerequisite reflects the academic preparation required for this course.

RRM 215.3: Identification of Saskatchewan Plants and Soils

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

An applied land management course focused on the various landscapes and plants of Saskatchewan. Through lectures and laboratories, students will learn about the different environments, common plant species, and soils of Saskatchewan. Information will be related to the different ecological land classification schemes (forests, rangelands, and wetlands). Interactions between soils, plants, and landscapes are emphasized.

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

Rationale: The change to the prerequisite reflects the academic preparation required for this course.

Revisions to Course and Program Catalogue

Agricultural Biology

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

Minimum Requirements for Degree (120 credit units)

Completion of a B.S.A. minor (18 credit units) is required with a major in Agricultural Biology.

Year 1 (30 credit units)

- AGRC 110.3 Scientific Literacy and Communication for the Agricultural Sciences
- AGRC 111.3 Introduction to Plant and Soil Sciences
- AGRC 112.3 Animal Agriculture and Food Science
- AGRC 113.3 Introduction to Agri Food Economics

- AREC 220.3 History of Indigenous Agriculture in Canada or INDG 107.3 Introduction to Canadian Indigenous Studies
- 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
- 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.

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)

- **BIOL 222.3** The Living Plant

- BIOL 224.3 Animal Body Systems
- BIOL 226.3 Genes to Genomics
- BMSC 200.3 Biomolecules
- FABS 212.3 Agrifood and Resources Microbiology or BMSC 210.3 Microbiology
- MATH 104.3 Elementary Calculus, MATH 110.3 Calculus I or MATH 125.3 Mathematics for the Life Sciences
- STAT 103.3 Elementary Probability or PHYS 115.3 Physics and the Universe

English Language Writing Requirement

Choose 3 credit units from the following:

- ANTH 302.3 The Practice of Ethnography
- ANTH 306.3 Anthropology of Disaster and Dislocation
- ANTH 310.3 Anthropology of Gender
- ANTH 421.3
- CPSJ 203.3 Cultivating Humanity
- 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
- HIST 115.3 History Matters Ideas and Culture
- HIST 125.3 History Matters Indigenous Colonial and Post Colonial Histories
- HIST 135.3 History Matters Gender Sex and Society
- HIST 145.3 History Matters War Violence and Politics
- HIST 155.3 History Matters Science and Environment
- HIST 165.3 History Matters Health and Society
- HIST 175.3 History Matters Identities and Communities in Transition
- HIST 185.3 History Matters Conflict Law Politics and the State
- HIST 193.3 History Matters Topics in Canadian History
- HIST 194.3 History Matters Topics in European History

- **PHIL 120.3** Knowledge Mind and Existence
- **PHIL 121.3** Introduction to World Philosophies
- **PHIL 133.3** Introduction to Ethics and Values
- **PHIL 208.3** Ancient Philosophy Presocratics to Plato
- **PHIL 233.3** Ethical Theory
- **POLS 245.3** Politics of Africa
- **POLS 323.3** Indigenous Policies and Programs
- **POLS 328.3** Public Policy Analysis
- **POLS 333.3** Theory and Politics of Law
- **POLS 336.3** Justice and Democracy
- **POLS 422.3** Indigenous Governance and Self Determined Sustainable Development
- **POLS 461.3** Topics in Global Politics
- **PSY 323.3** Qualitative Study of Lives and Social Practices
- **PSY 355.3** Research in Advanced Cognitive Science
- **RLST 280.3** Methodologies and Approaches to Study of Religions
- **RLST 362.3** Monsters and Mischief Makers

Choose 3 credit units from the following:

- **BIOC — 200-Level, 300-Level, 400-Level**
- **BMSC 230.3** Metabolism
- **BMSC 240.3** Laboratory Techniques

Choose 3 credit units of Restricted Electives :

Students are required to complete one of the approved minors for the Bachelor of Science in Agriculture (B.S.A.) degree within the College of Agriculture and Bioresources. Completion of the minor requirements may satisfy 18 credit units of the Restricted Electives requirement. At least 12 credit units in the minor must be chosen from courses that are not specifically listed as required for the major. The additional credit units must be chosen from:

- **ANBI 470.3** Applied Animal Biotechnology
- **ANSC 313.3** Animal Breeding and Genetics
- **ANSC 315.3** Animal and Poultry Nutrition
- **BIOL — 200-Level, 300-Level, 400-Level**

- **FABS — 200-Level, 300-Level, 400-Level**
- **PLSC — 200-Level, 300-Level, 400-Level**
- **SLSC 232.3** Soil Genesis and Classification
- **SLSC 240.3** Agricultural Soil Science
- **SLSC 312.3** Soil Fertility and Fertilizers
- **SLSC 444.3** Soil Ecology
- **SLSC 460.3** Forest Soils
- **VBMS 314.3** Comparative Anatomy of Domestic Animals
- **VBMS 324.3** Animal Physiology I
- **VBMS 325.3** Animal Physiology II
- **VLAC 411.3** Diseases of Ruminants
- **VTPA 412.3** Diseases of Poultry
- Other courses as approved by the program advisor

Years 3 and 4 (60 credit units)

- **BIOL 228.3** An Introduction to Ecology and Ecosystems or **PLSC 213.3** Principles of Plant Ecology (**BIOL 228.3** An Introduction to Ecology and Ecosystems is recommended for the Honours program in Agricultural Biology)
- **BMSC 220.3** Cell Biology or **BIOL 317.3** Fundamentals of Animal Physiology or **BIOL 331.3** Plant Physiology
- **PLSC 214.3** Statistical Methods or **STAT 245.3** Introduction to Statistical Methods

Choose 3 credit units from the following:

- **BIOL 361.3** Vertebrate Biology
- **BIOL 365.3** Insect Diversity and Evolution
- **BIOL 436.3** Animal Parasitology
- **BIOL 451.3** Ichthyology
- **BIOL 455.3** Mammal Diversity and Evolution
- **BIOL 458.3** Ornithology
- **BIOL 472.3** Animal Behaviour

Choose 6 credit units from the following:

Selection will depend upon the student's area of interest, availability of a research project, and permission of the department involved.

- ANSC 494.6 Research Thesis in Animal Science
- EVSC 494.6 Research and Thesis
- FABS 494.6 Research Thesis
- PLSC 494.6 Research Thesis in Plant Sciences
- SLSC 494.6 Research and Thesis

Or one of ANSC 492.3 Thesis in Animal Science, EVSC 492.3 Research and Term Paper, FABS 492.3 Literature Thesis, PLSC 492.3 Project Thesis in Plant Sciences, or SLSC 492.3 Research and Term Paper and 3 credit units at the 300-level or higher from Restricted Electives.

Choose 9 credit units from the following:

- BIOL 323.3 Plant Systematics and Evolution
- BIOL 324.3 Plants and Human Affairs
- BIOL 342.3 Fungi Environment and People
- BIOL 345.3 Introductory Plant Pathology
- BIOL 365.3 Insect Diversity and Evolution
- BIOL 420.3 Molecular Biology of Plants
- ~~BIOL 421.3~~
- BIOL 436.3 Animal Parasitology
- BIOL 470.3 Conservation Biology
- BIOL 475.3 Ecological Toxicology

Restricted Electives (24 credit units)

Students are required to complete one of the approved minors for the Bachelor of Science in Agriculture (B.S.A.) degree within the College of Agriculture and Bioresources. Completion of the minor requirements may satisfy 18 credit units of the Restricted Electives requirement. At least 12 credit units in the minor must be chosen from courses that are not specifically listed as required for the major. The additional credit units must be chosen from:

- ANBI 470.3 Applied Animal Biotechnology
- ANSC 313.3 Animal Breeding and Genetics
- ANSC 315.3 Animal and Poultry Nutrition
- BIOL — 200-Level, 300-Level, 400-Level

- **FABS — 200-Level, 300-Level, 400-Level**
- **PLSC — 200-Level, 300-Level, 400-Level**
- **SLSC 232.3** Soil Genesis and Classification
- **SLSC 240.3** Agricultural Soil Science
- **SLSC 312.3** Soil Fertility and Fertilizers
- **SLSC 444.3** Soil Ecology
- **SLSC 460.3** Forest Soils
- **VBMS 314.3** Comparative Anatomy of Domestic Animals
- **VBMS 324.3** Animal Physiology I
- **VBMS 325.3** Animal Physiology II
- **VLAC 411.3** Diseases of Ruminants
- **VTPA 412.3** Diseases of Poultry
- other courses as approved by the program advisor

Open Electives

Choose 9 credit units of open electives

Rationale: BIOL 421.3 is no longer offered so it has been removed.

Agricultural Biology

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

Minimum Requirements for Degree (120 credit units)

Completion of a B.S.A. minor is required with a major in Agricultural Biology.

Year 1 (30 credit units)

- **AGRC 110.3** Scientific Literacy and Communication for the Agricultural Sciences
- **AGRC 111.3** Introduction to Plant and Soil Sciences
- **AGRC 112.3** Animal Agriculture and Food Science
- **AGRC 113.3** Introduction to Agri Food Economics
- **AREC 220.3** History of Indigenous Agriculture in Canada or **INDG 107.3** Introduction to Canadian Indigenous Studies
- **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
- 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.

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)

- BIOL 222.3 The Living Plant
- BIOL 224.3 Animal Body Systems
- BIOL 226.3 Genes to Genomics
- BMSC 200.3 Biomolecules

- FABS 212.3 Agrifood and Resources Microbiology or BMSC 210.3 Microbiology
- MATH 104.3 Elementary Calculus, MATH 110.3 Calculus I or MATH 125.3 Mathematics for the Life Sciences
- STAT 103.3 Elementary Probability or PHYS 115.3 Physics and the Universe

English Language Writing Requirement

Choose 3 credit units from the following:

- ANTH 302.3 The Practice of Ethnography
- ANTH 306.3 Anthropology of Disaster and Dislocation
- ANTH 310.3 Anthropology of Gender
- ANTH 421.3
- CPSJ 203.3 Cultivating Humanity
- 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
- HIST 115.3 History Matters Ideas and Culture
- HIST 125.3 History Matters Indigenous Colonial and Post Colonial Histories
- HIST 135.3 History Matters Gender Sex and Society
- HIST 145.3 History Matters War Violence and Politics
- HIST 155.3 History Matters Science and Environment
- HIST 165.3 History Matters Health and Society
- HIST 175.3 History Matters Identities and Communities in Transition
- HIST 185.3 History Matters Conflict Law Politics and the State
- HIST 193.3 History Matters Topics in Canadian History
- HIST 194.3 History Matters Topics in European History
- PHIL 120.3 Knowledge Mind and Existence
- PHIL 121.3 Introduction to World Philosophies
- PHIL 133.3 Introduction to Ethics and Values

- **PHIL 208.3** Ancient Philosophy Presocratics to Plato
- **PHIL 233.3** Ethical Theory
- **POLS 245.3** Politics of Africa
- **POLS 323.3** Indigenous Policies and Programs
- **POLS 328.3** Public Policy Analysis
- **POLS 333.3** Theory and Politics of Law
- **POLS 336.3** Justice and Democracy
- **POLS 422.3** Indigenous Governance and Self Determined Sustainable Development
- **POLS 461.3** Topics in Global Politics
- **PSY 323.3** Qualitative Study of Lives and Social Practices
- **PSY 355.3** Research in Advanced Cognitive Science
- **RLST 280.3** Methodologies and Approaches to Study of Religions
- **RLST 362.3** Monsters and Mischief Makers

Choose 3 credit units from the following:

- **BIOC — 200-Level, 300-Level, 400-Level**
- **BMSC 230.3** Metabolism
- **BMSC 240.3** Laboratory Techniques

Choose 3 credit units of Restricted Electives

Students are required to complete one of the approved minors for the Bachelor of Science in Agriculture (B.S.A.) degree within the College of Agriculture and Bioresources. Completion of the minor requirements may satisfy 18 credit units of the Restricted Electives requirement. At least 12 credit units in the minor must be chosen from courses that are not specifically listed as required for the major. The additional credit units must be chosen from:

- **ANBI 470.3** Applied Animal Biotechnology
- **ANSC 313.3** Animal Breeding and Genetics
- **ANSC 315.3** Animal and Poultry Nutrition
- **BIOL — 200-Level, 300-Level, 400-Level**
- **FABS — 200-Level, 300-Level, 400-Level**
- **PLSC — 200-Level, 300-Level, 400-Level**
- **SLSC 232.3** Soil Genesis and Classification

- SLSC 240.3 Agricultural Soil Science
- SLSC 312.3 Soil Fertility and Fertilizers
- SLSC 444.3 Soil Ecology
- SLSC 460.3 Forest Soils
- VBMS 314.3 Comparative Anatomy of Domestic Animals
- VBMS 324.3 Animal Physiology I
- VBMS 325.3 Animal Physiology II
- VLAC 411.3 Diseases of Ruminants
- VTPA 412.3 Diseases of Poultry
- Other courses as approved by the program advisor

Years 3 and 4 (60 credit units)

- BIOL 228.3 An Introduction to Ecology and Ecosystems or PLSC 213.3 Principles of Plant Ecology (BIOL 228.3 An Introduction to Ecology and Ecosystems is recommended for the Honours program in Agricultural Biology)
- BMSC 220.3 Cell Biology or BIOL 317.3 Fundamentals of Animal Physiology or BIOL 331.3 Plant Physiology
- PLSC 214.3 Statistical Methods or STAT 245.3 Introduction to Statistical Methods

Choose 3 credit units from the following:

- BIOL 361.3 Vertebrate Biology
- BIOL 365.3 Insect Diversity and Evolution
- BIOL 436.3 Animal Parasitology
- BIOL 451.3 Ichthyology
- BIOL 455.3 Mammal Diversity and Evolution
- BIOL 458.3 Ornithology
- BIOL 472.3 Animal Behaviour

Choose 3 credit units from the following:

Selection will depend upon the student's area of interest.

- ANSC 492.3 Thesis in Animal Science
- EVSC 492.3 Research and Term Paper
- FABS 492.3 Literature Thesis

- PLSC 492.3 Project Thesis in Plant Sciences
- SLSC 492.3 Research and Term Paper

Restricted Electives (30 credit units)

Direct entry students are required to select a minor in one of the fields of specialization within the College of Agriculture and Bioresources or an approved cross-college minor. Completion of the minor requirements will satisfy 18 credit units of the Restricted Electives requirement. At least 12 credit units in the minor must be courses that are not specifically listed as required for the major. The additional credit units must be chosen from:

- ANBI 470.3 Applied Animal Biotechnology
- ANSC 313.3 Animal Breeding and Genetics
- ANSC 315.3 Animal and Poultry Nutrition
- BIOL — 200-Level, 300-Level, 400-Level
- FABS — 200-Level, 300-Level, 400-Level
- PLSC — 200-Level, 300-Level, 400-Level
- SLSC 232.3 Soil Genesis and Classification
- SLSC 240.3 Agricultural Soil Science
- SLSC 312.3 Soil Fertility and Fertilizers
- SLSC 444.3 Soil Ecology
- SLSC 460.3 Forest Soils
- VBMS 314.3 Comparative Anatomy of Domestic Animals
- VBMS 324.3 Animal Physiology I
- VBMS 325.3 Animal Physiology II
- VLAC 411.3 Diseases of Ruminants
- VTPA 412.3 Diseases of Poultry
- other courses as approved by the program advisor

Open Electives

Choose 15 credit units of open electives

Agronomy

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

Year 1 (30 credit units)

- AGRC 110.3 Scientific Literacy and Communication for the Agricultural Sciences
- AGRC 111.3 Introduction to Plant and Soil Sciences
- AGRC 112.3 Animal Agriculture and Food Science
- AGRC 113.3 Introduction to Agri Food Economics
- AREC 220.3 History of Indigenous Agriculture in Canada or INDG 107.3 Introduction to Canadian Indigenous Studies
- 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
- MATH 104.3 Elementary Calculus, MATH 110.3 Calculus I, or MATH 125.3 Mathematics for the Life Sciences

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 Science

- 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)

- BIOL 222.3 The Living Plant
- BIOL 226.3 Genes to Genomics
- CHEM 250.3 Introduction to Organic Chemistry
- **PLSC 202.3** Introductory Precision Agriculture
- One of PLSC 213.3 Principles of Plant Ecology or BIOL 228.3 An Introduction to Ecology and Ecosystems (PLSC 213.3 Principles of Plant Ecology is preferred); or PLSC 220.3 Fundamentals of Horticulture
- PLSC 214.3 Statistical Methods or STAT 245.3 Introduction to Statistical Methods
- PLSC 222.3 Introduction to Field Crops
- PLSC 260.3 Principles of Plant Protection
- SLSC 240.3 Agricultural Soil Science
- ~~Choose 3 credit units of open electives~~

English Language Writing Requirement

Choose 3 credit units from the following:

- ANTH 302.3 The Practice of Ethnography
- ANTH 306.3 Anthropology of Disaster and Dislocation
- ANTH 310.3 Anthropology of Gender
- ANTH 421.3
- CPSJ 203.3 Cultivating Humanity
- 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
- **HIST 115.3** History Matters Ideas and Culture
- **HIST 125.3** History Matters Indigenous Colonial and Post Colonial Histories
- **HIST 135.3** History Matters Gender Sex and Society
- **HIST 145.3** History Matters War Violence and Politics
- **HIST 155.3** History Matters Science and Environment
- **HIST 165.3** History Matters Health and Society
- **HIST 175.3** History Matters Identities and Communities in Transition
- **HIST 185.3** History Matters Conflict Law Politics and the State
- **HIST 193.3** History Matters Topics in Canadian History
- **HIST 194.3** History Matters Topics in European History
- **PHIL 120.3** Knowledge Mind and Existence
- **PHIL 121.3** Introduction to World Philosophies
- **PHIL 133.3** Introduction to Ethics and Values
- **PHIL 208.3** Ancient Philosophy Presocratics to Plato
- **PHIL 233.3** Ethical Theory
- **POLS 245.3** Politics of Africa
- **POLS 323.3** Indigenous Policies and Programs
- **POLS 328.3** Public Policy Analysis
- **POLS 333.3** Theory and Politics of Law
- **POLS 336.3** Justice and Democracy
- **POLS 422.3** Indigenous Governance and Self Determined Sustainable Development
- **POLS 461.3** Topics in Global Politics
- **PSY 323.3** Qualitative Study of Lives and Social Practices
- **PSY 355.3** Research in Advanced Cognitive Science
- **RLST 280.3** Methodologies and Approaches to Study of Religions
- **RLST 362.3** Monsters and Mischief Makers

Years 3 and 4 (60 credit units)

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

- AREC 222.3 Introduction to Farm Business Management
- ~~**AREC 343.3** Grain and Livestock Marketing~~
- PLSC 317.3 Plant Metabolism or BIOL 331.3 Plant Physiology
- PLSC 401.3 Sustainable Crop Production
- PLSC 417.3 Crop Physiology
- ~~**PLSC 492.3** Project Thesis in Plant Sciences or **PLSC 494.6** Research Thesis in Plant Sciences (3 credit units count as restricted electives)~~
- SLSC 312.3 Soil Fertility and Fertilizers

Choose 3 credit units from the following (Agribusiness Courses):

- AREC 230.3 Innovation and Entrepreneurship
- AREC 238.3 Natural Resource Economics
- AREC 251.3 Introduction to Agricultural Policy
- AREC 254.3 Agribusiness Taxation
- AREC 343.3 Grain and Livestock Marketing
- AREC 346.3 Principles of Selling
- AREC 347.3 Agribusiness Marketing Management

Choose 9 credit units from the following Crop Protection courses:

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

Choose 6 credit units from the following:

- ~~**PLSC 202.3** Introductory Precision Agriculture~~
- PLSC 333.3 Tropical Crops of the World

- **PLSC 342.3** Medicinal Plants Agriculture and Human Health
- ~~**PLSC 375.3** Current Topics in Agronomy~~
- ~~**PLSC 382.3** Introduction to Field Scouting~~
- PLSC 402.3 Advanced Precision Agriculture
- **PLSC 405.3** Genetics of Plant Populations
- **PLSC 411.3** Plant Breeding
- PLSC 418.3 Management of Arable Grassland
- PLSC 420.3 Grain Chemistry and Technology
- PLSC 422.3 Rangeland Ecology and Management
- ~~**PLSC 440.3** Climate Smart Agriculture~~
- PLSC 441.3 Fruit Science
- PLSC 451.3 Vegetable Agronomy
- ~~**PLSC 475.3** Insect Ecology~~
- **PLSC 492.3** Project Thesis in Plant Sciences or **PLSC 494.6** Research Thesis in Plant Sciences (3 credit units count as restricted elective)

Restricted Electives (18 credit units)

Students can choose courses for completion of a minor (not including Field Crop Production) or choose courses selected from the following list: AGRC 211.3 Global Food Security, AGRC 445.3 Experiential Learning in the Workplace, ANBI 375.3 Animals and the Environment, BIOL 365.3 Insect Diversity and Evolution, AREC 254.3 Agribusiness Taxation, AREC 346.3 Principles of Selling, AREC 347.3 Agribusiness Marketing Management, FABS 211.3 Introductory Bioproduct Science, GEOG 222.3 Geomatics, RCM 200.3 Effective Professional Communication, **RCM 400.3** Rhetorical Theory and Practice of Persuasion, **RCM 407.3** Rhetorical Editing, **RCM 408.3** Rhetorical Composition Writing for the Public, **RCM 410.3** Rhetoric of Science and Technology, or ~~**RRM 215.3** Identification of Saskatchewan Plants and Soils,~~ any 200-level or above course in PLSC, EVSC, RRM, or SLSC not required for the major, or courses approved by an advisor.

Open Electives

- Choose ~~6~~ 9 credit units of open electives

Rationale: The changes to the required and optional courses in the B.S.A. Agronomy are the result of an extensive curriculum-mapping initiative carried out the by the Plant Sciences department and reflect the competencies and training deemed important for this major.

Agronomy

Diploma, Dip.(Agrn.)

Year 1 - Fall Term (15 credit units)

- **AGRC 110.3** Scientific Literacy and Communication for the Agricultural Sciences or **RCM 200.3** Effective Professional Communication
- AGRC 111.3 Introduction to Plant and Soil Sciences
- AREC 220.3 History of Indigenous Agriculture in Canada or INDG 107.3 Introduction to Canadian Indigenous Studies (AREC 220.3 History of Indigenous Agriculture in Canada is preferred)
- BIOL 120.3 The Nature of Life

Choose ~~6~~ 3 credit units of open electives

Year 1 - Winter Term (15 credit units)

- **AGRC 113.3** Introduction to Agri Food Economics
- ~~**BIOL 222.3** The Living Plant~~
- PLSC 201.3 Field Crops of Western Canada
- ~~**PLSC 205.3** Principles and Management of Agricultural Equipment~~
- PLSC 260.3 Principles of Plant Protection
- SLSC 240.3 Agricultural Soil Science

Choose 3 credit units of open electives

Year 2 - (30 credit units)

- ~~**AGRC 113.3** Introduction to Agri Food Economics~~
- **PLSC 202.3** Introductory Precision Agriculture
- **PLSC 205.3** Principles and Management of Agricultural Equipment
- PLSC 375.3 Current Topics in Agronomy
- ~~**RCM 200.3** Effective Professional Communication or **AGRC 110.3** Scientific Literacy and Communication for the Agricultural Sciences~~
- SLSC 312.3 Soil Fertility and Fertilizers

Choose 9 credit units from the following Plant Protection restricted electives:

- BIOL 345.3 Introductory Plant Pathology
- PLSC 234.3 Weed Control in Organic Agriculture
- PLSC 335.3 Field Crop Disease Management

- PLSC 340.3 Weed Science
- ~~PLSC 345.3 Pesticides and Crop Protection~~
- PLSC 350.3 Agricultural Entomology
- **PLSC 427.3** Ecology and Management of Invasive Plants
- PLSC 450.3 Applied Entomology

Choose 9 credit units from the following restricted electives:

- AGRC 112.3 Animal Agriculture and Food Science
- AGRC 211.3 Global Food Security
- AREC 222.3 Introduction to Farm Business Management
- AREC 230.3 Innovation and Entrepreneurship
- AREC 251.3 Introduction to Agricultural Policy
- AREC 343.3 Grain and Livestock Marketing
- AREC 347.3 Agribusiness Marketing Management
- **GEOG 222.3** Geomatics
- Any 200-level or above course in PLSC, EVSC, RRM, or SLSC not required for the diploma, or courses approved by an advisor.
- ~~**PLSC 202.3** Introductory Precision Agriculture~~
- ~~**PLSC 213.3** Principles of Plant Ecology~~
- ~~**PLSC 214.3** Statistical Methods~~
- ~~**PLSC 220.3** Fundamentals of Horticulture~~
- ~~**PLSC 234.3** Weed Control in Organic Agriculture~~
- ~~**PLSC 235.3** Urban Agriculture~~
- ~~**PLSC 311.3** General Apiculture~~
- ~~**PLSC 330.3** Ornamental Plants~~
- ~~**PLSC 333.3** Tropical Crops of the World~~
- ~~**PLSC 335.3** Field Crop Disease Management~~
- ~~**PLSC 340.3** Weed Science~~
- ~~**PLSC 345.3** Pesticides and Crop Protection~~
- ~~**PLSC 350.3** Agricultural Entomology~~

- ~~**PLSC 382.3** Introduction to Field Scouting~~
- ~~**PLSC 408.3** Global Plant Genetic Resources~~
- ~~**PLSC 418.3** Management of Arable Grassland~~
- ~~**PLSC 420.3** Grain Chemistry and Technology~~
- ~~**PLSC 450.3** Applied Entomology~~
- ~~**SLSC 232.3** Soil Genesis and Classification~~
- ~~**SLSC 342.3** Agronomic Soil Microbiology~~
- ~~**SLSC 342.3** Agronomic Soil Microbiology~~
- ~~**SLSC 444.3** Soil Ecology~~

Rationale: The changes to the required and optional courses in the Diploma in Agronomy are the result of an extensive curriculum-mapping initiative carried out the by the Plant Sciences department and reflect the competencies and training deemed important for this program.

Applied Plant Ecology

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

Year 1 (30 credit units)

- AGRC 110.3 Scientific Literacy and Communication for the Agricultural Sciences
- AGRC 111.3 Introduction to Plant and Soil Sciences
- AGRC 112.3 Animal Agriculture and Food Science
- AGRC 113.3 Introduction to Agri Food Economics
- AREC 220.3 History of Indigenous Agriculture in Canada or INDG 107.3 Introduction to Canadian Indigenous Studies
- 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
- 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
- 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)

- BIOL 222.3 The Living Plant
- BIOL 226.3 Genes to Genomics
- EVSC 220.3 Environmental Soil Science or SLSC 240.3 Agricultural Soil Science
- 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 or BIOL 228.3 An Introduction to Ecology and Ecosystems (PLSC 213.3 Principles of Plant Ecology is preferred)
- **PLSC 214.3** Statistical Methods or **STAT 245.3** Introduction to Statistical Methods
- PLSC 220.3 Fundamentals of Horticulture or PLSC 222.3 Introduction to Field Crops
- PLSC 260.3 Principles of Plant Protection
- RRM 215.3 Identification of Saskatchewan Plants and Soils

- ~~Choose 3 credit units of open electives~~

English Language Writing Requirement

Choose 3 credit units from the following:

- ANTH 302.3 The Practice of Ethnography
- ANTH 306.3 Anthropology of Disaster and Dislocation
- ANTH 310.3 Anthropology of Gender
- ANTH 421.3
- CPSJ 203.3 Cultivating Humanity
- 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
- HIST 115.3 History Matters Ideas and Culture
- HIST 125.3 History Matters Indigenous Colonial and Post Colonial Histories
- HIST 135.3 History Matters Gender Sex and Society
- HIST 145.3 History Matters War Violence and Politics
- HIST 155.3 History Matters Science and Environment
- HIST 165.3 History Matters Health and Society
- HIST 175.3 History Matters Identities and Communities in Transition
- HIST 185.3 History Matters Conflict Law Politics and the State
- HIST 193.3 History Matters Topics in Canadian History
- HIST 194.3 History Matters Topics in European History
- PHIL 120.3 Knowledge Mind and Existence
- PHIL 121.3 Introduction to World Philosophies
- PHIL 133.3 Introduction to Ethics and Values
- PHIL 208.3 Ancient Philosophy Presocratics to Plato
- PHIL 233.3 Ethical Theory
- POLS 245.3 Politics of Africa

- POLS 323.3 Indigenous Policies and Programs
- POLS 328.3 Public Policy Analysis
- POLS 333.3 Theory and Politics of Law
- POLS 336.3 Justice and Democracy
- POLS 422.3 Indigenous Governance and Self Determined Sustainable Development
- POLS 461.3 Topics in Global Politics
- PSY 323.3 Qualitative Study of Lives and Social Practices
- PSY 355.3 Research in Advanced Cognitive Science
- RLST 280.3 Methodologies and Approaches to Study of Religions
- RLST 362.3 Monsters and Mischief Makers

Years 3 & 4 (60 credit units)

- BIOL 323.3 Plant Systematics and Evolution
- EVSC 380.3 Grassland Soils and Vegetation
- ~~**PLSC 214.3** Statistical Methods or **STAT 245.3** Introduction to Statistical Methods~~
- PLSC 317.3 Plant Metabolism or **BIOL 331.3** Plant Physiology
- PLSC 413.3 Advanced Plant Ecology or **PLSC 492.3** Project Thesis in Plant Sciences or **PLSC 494.6** Research Thesis in Plant Sciences (3 credit units count as restricted elective)
- ~~**PLSC 418.3** Management of Arable Grassland~~
- ~~**PLSC 422.3** Rangeland Ecology and Management~~
- ~~**PLSC 425.3** Forest Ecology~~
- ~~**PLSC 427.3** Ecology and Management of Invasive Plants~~
- ~~**PLSC 492.3** Project Thesis in Plant Sciences or **PLSC 494.6** Research Thesis in Plant Sciences (3 credit units count as restricted elective)~~

Choose 12 credit units (Plant Ecology):

- **ANBI 475.3** Field Studies in Arctic Ecosystems with Indigenous Peoples
- **PLSC 413.3** Advanced Plant Ecology
- **PLSC 418.3** Management of Arable Grassland
- **PLSC 422.3** Rangeland Ecology and Management
- **PLSC 425.3** Forest Ecology

- **PLSC 427.3** Ecology and Management of Invasive Plants

Choose 12 credit units (Additional Plant Science and Ecology)

- **ANBI 375.3** Animals and the Environment
- **ANBI 475.3** Field Studies in Arctic Ecosystems with Indigenous Peoples
- **BIOL 342.3** Fungi Environment and People
- **BIOL 373.3** Community Ecology
- **BIOL 470.3** Conservation Biology
- **BIOL 475.3** Ecological Toxicology
- **GEOG 222.3** Geomatics
- **GEOG 351.3** Northern Environments
- **GEOG 380.3** Environmental Geography of the Circumpolar North
- **PLSC 335.3** Field Crop Disease Management
- **PLSC 340.3** Weed Science
- **PLSC 413.3** Advanced Plant Ecology
- **PLSC 418.3** Management of Arable Grassland
- **PLSC 422.3** Rangeland Ecology and Management
- **PLSC 425.3** Forest Ecology
- **PLSC 427.3** Ecology and Management of Invasive Plants
- **PLSC 450.3** Applied Entomology
- **PLSC 475.3** Insect Ecology
- **PLSC 492.3** Project Thesis in Plant Sciences
- **PLSC 494.6** Research Thesis in Plant Sciences
- **RRM 321.3** Resource Data and Environmental Modeling
- **SLSC 350.3** Terrestrial Restoration
- **SLSC 444.3** Soil Ecology
- **SLSC 460.3** Forest Soils
- **SLSC 480.3** Soils and Boreal Landscapes

Choose ~~21~~ 15 credit units of restricted electives from the following:

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

- Any 200-level or above course in PLSC, ANBI, ANSC, EVSC, FABS, RRM, or SLSC not required for the major or courses approved by an advisor. If a student chooses to register in **PLSC 494.6** Research Thesis in Plant Sciences, 3 credit units will be applied here.
- **AGRC 445.3** Experiential Learning in the Workplace
- ~~**ANBI 375.3** Animals and the Environment~~
- ~~**ANBI 475.3** Field Studies in Arctic Ecosystems with Indigenous Peoples~~
- ~~**BIOL 331.3** Plant Physiology~~
- **BIOL 342.3** Fungi Environment and People
- **BIOL 373.3** Community Ecology
- **BIOL 470.3** Conservation Biology
- **BIOL 475.3** Ecological Toxicology
- **GEOG 222.3** Geomatics
- **GEOG 322.3** Geographic Information Systems
- **GEOG 323.3** Remote Sensing
- **GEOG 351.3** Northern Environments
- **GEOG 380.3** Environmental Geography of the Circumpolar North
- **RCM 200.3** Effective Professional Communication
- **RCM 400.3** Rhetorical Theory and Practice of Persuasion
- **RCM 407.3** Rhetorical Editing
- **RCM 408.3** Rhetorical Composition Writing for the Public
- **RCM 410.3** Rhetoric of Science and Technology
- ~~**PLSC 335.3** Field Crop Disease Management~~
- ~~**PLSC 340.3** Weed Science~~
- ~~**PLSC 345.3** Pesticides and Crop Protection~~
- ~~**PLSC 440.3** Climate Smart Agriculture~~
- ~~**PLSC 450.3** Applied Entomology~~
- ~~**PLSC 475.3** Insect Ecology~~
- ~~**PLSC 494.6** Research Thesis in Plant Sciences~~

- ~~**SLSC 232.3** Soil Genesis and Classification~~
- ~~**SLSC 350.3** Terrestrial Restoration~~
- ~~**SLSC 444.3** Soil Ecology~~
- ~~**SLSC 460.3** Forest Soils~~
- ~~**SLSC 480.3** Soils and Boreal Landscapes~~

Open Electives

- Choose 9 credit units open electives

Rationale: The changes to the required and optional courses in the B.S.A. Applied Plant Ecology are the result of an extensive curriculum-mapping initiative carried out the by the Plant Sciences department and reflect the competencies and training deemed important for this major.

Applied Plant Ecology

Minor

Requirements

- RRM 215.3 Identification of Saskatchewan Plants and Soils or BIOL 323.3 Plant Systematics and Evolution or EVSC 380.3 Grassland Soils and Vegetation
- PLSC 213.3 Principles of Plant Ecology or BIOL 228.3 An Introduction to Ecology and Ecosystems (PLSC 213.3 Principles of Plant Ecology is preferred)
- Choose two of: PLSC 413.3 Advanced Plant Ecology, PLSC 422.3 Rangeland Ecology and Management, PLSC 425.3 Forest Ecology, or PLSC 427.3 Ecology and Management of Invasive Plants

Choose 6 credit units from the following:

- **ANBI 475.3** Field Studies in Arctic Ecosystems with Indigenous Peoples
- BIOL 373.3 Community Ecology
- PLSC 413.3 Advanced Plant Ecology
- PLSC 422.3 Rangeland Ecology and Management
- PLSC 425.3 Forest Ecology
- PLSC 427.3 Ecology and Management of Invasive Plants

- RRM 215.3 Identification of Saskatchewan Plants and Soils or BIOL 323.3 Plant Systematics and Evolution or EVSC 380.3 Grassland Soils and Vegetation

Rationale: The addition of ANBI 475.3 to the minor electives increases course options for students.

Crop Science

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

Year 1 (30 credit units)

- AGRC 110.3 Scientific Literacy and Communication for the Agricultural Sciences
- AGRC 111.3 Introduction to Plant and Soil Sciences
- AGRC 112.3 Animal Agriculture and Food Science
- AGRC 113.3 Introduction to Agri Food Economics
- AREC 220.3 History of Indigenous Agriculture in Canada or INDG 107.3 Introduction to Canadian Indigenous Studies
- 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
- 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 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)

- **BIOL 222.3** The Living Plant
- **BIOL 226.3** Genes to Genomics
- **CHEM 250.3** Introduction to Organic Chemistry
- **PLSC 214.3** Statistical Methods or **STAT 245.3** Introduction to Statistical Methods
- **PLSC 220.3** Fundamentals of Horticulture or **PLSC 213.3** Principles of Plant Ecology
- **PLSC 222.3** Introduction to Field Crops
- **PLSC 260.3** Principles of Plant Protection
- Choose 6 credit units of open electives

English Language Writing Requirement

Choose 3 credit units of the following:

- **ANTH 302.3** The Practice of Ethnography
- **ANTH 306.3** Anthropology of Disaster and Dislocation
- **ANTH 310.3** Anthropology of Gender
- ANTH 421.3
- **CPSJ 203.3** Cultivating Humanity
- **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
- **HIST 115.3** History Matters Ideas and Culture
- **HIST 125.3** History Matters Indigenous Colonial and Post Colonial Histories
- **HIST 135.3** History Matters Gender Sex and Society
- **HIST 145.3** History Matters War Violence and Politics
- **HIST 155.3** History Matters Science and Environment
- **HIST 165.3** History Matters Health and Society
- **HIST 175.3** History Matters Identities and Communities in Transition
- **HIST 185.3** History Matters Conflict Law Politics and the State
- **HIST 193.3** History Matters Topics in Canadian History
- **HIST 194.3** History Matters Topics in European History
- **PHIL 120.3** Knowledge Mind and Existence
- **PHIL 121.3** Introduction to World Philosophies
- **PHIL 133.3** Introduction to Ethics and Values
- **PHIL 208.3** Ancient Philosophy Presocratics to Plato
- **PHIL 233.3** Ethical Theory
- **POLS 245.3** Politics of Africa
- **POLS 323.3** Indigenous Policies and Programs
- **POLS 328.3** Public Policy Analysis
- **POLS 333.3** Theory and Politics of Law
- **POLS 336.3** Justice and Democracy
- **POLS 422.3** Indigenous Governance and Self Determined Sustainable Development
- **POLS 461.3** Topics in Global Politics
- **PSY 323.3** Qualitative Study of Lives and Social Practices
- **PSY 355.3** Research in Advanced Cognitive Science
- **RLST 280.3** Methodologies and Approaches to Study of Religions
- **RLST 362.3** Monsters and Mischief Makers

Years 3 & 4 (60 credit units)

- **BIOL 331.3** Plant Physiology

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

Choose 21 credit units from the following:

- PLSC 333.3 Tropical Crops of the World
- PLSC 335.3 Field Crop Disease Management
- PLSC 340.3 Weed Science
- **PLSC 342.3** Medicinal Plants Agriculture and Human Health
- ~~**PLSC 345.3** Pesticides and Crop Protection~~
- PLSC 401.3 Sustainable Crop Production
- PLSC 408.3 Global Plant Genetic Resources
- PLSC 416.3 Applied Plant Biotechnology
- PLSC 418.3 Management of Arable Grassland
- PLSC 420.3 Grain Chemistry and Technology
- PLSC 427.3 Ecology and Management of Invasive Plants
- PLSC 441.3 Fruit Science
- PLSC 450.3 Applied Entomology
- PLSC 451.3 Vegetable Agronomy
- PLSC 470.3 Plant Propagation

Choose 18 credit units of restricted electives:

Students can choose courses for completion of a minor in an unrelated subject or choose courses selected from the following list: AGRC 211.3 Global Food Security, AGRC 445.3 Experiential Learning in the Workplace, ANBI 375.3 Animals and the Environment, BINF 151.3 Computing in the Biological Sciences, BIOL 302.3 Evolutionary Processes, BIOL 345.3 Introductory Plant Pathology, BIOL 365.3 Insect Diversity and Evolution, ~~**BLE 205.3** Agricultural Machinery Management,~~ BMSC 200.3 Biomolecules, AREC 254.3 Agribusiness Taxation, AREC 346.3 Principles of Selling, AREC 347.3 Agribusiness Marketing Management, FABS 211.3 Introductory Bioproduct Science, GEOG 222.3 Geomatics, RCM 200.3 Effective Professional Communication, **RCM 400.3** Rhetorical Theory and Practice of Persuasion, **RCM 407.3** Rhetorical

Editing, **RCM 408.3** Rhetorical Composition Writing for the Public, **RCM 410.3** Rhetoric of Science and Technology, ~~**RRM 215.3** Identification of Saskatchewan Plants and Soils,~~ or any 200-level or above course in PLSC, EVSC, RRM, or SLSC not required for the major, or courses approved by an advisor.

Open Electives

- Choose 3 credit units open electives

Rationale: The changes to the optional courses in the B.S.A. Crop Science are the result of an extensive curriculum-mapping initiative carried out the by the Plant Sciences department and reflect the competencies and training deemed important for this major.

Field Crop Production

Minor

Requirements (18 credit units)

- **PLSC 222.3** Introduction to Field Crops or **PLSC 201.3** Field Crops of Western Canada
- **PLSC 260.3** Principles of Plant Protection
- ~~**PLSC 375.3** Current Topics in Agronomy~~
- **SLSC 240.3** Agricultural Soil Science
- **SLSC 312.3** Soil Fertility and Fertilizers

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

- **PLSC 202.3** Introductory Precision Agriculture
- ~~**PLSC 234.3** Weed Control in Organic Agriculture~~
- **PLSC 335.3** Field Crop Disease Management
- **PLSC 340.3** Weed Science
- ~~**PLSC 345.3** Pesticides and Crop Protection~~
- **PLSC 350.3** Agricultural Entomology
- **PLSC 375.3** Current Topics in Agronomy
- **PLSC 382.3** Introduction to Field Scouting
- **PLSC 401.3** Sustainable Crop Production ~~(strongly recommended)~~

Rationale: The changes to the optional courses in the Field Crop Production minor are the result of an extensive curriculum-mapping initiative carried out the by the Plant Sciences department and reflect the competencies and training deemed important for this minor.

Horticulture Science

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

Year 1 (30 credit units)

- AGRC 110.3 Scientific Literacy and Communication for the Agricultural Sciences
- AGRC 111.3 Introduction to Plant and Soil Sciences
- AGRC 112.3 Animal Agriculture and Food Science
- AGRC 113.3 Introduction to Agri Food Economics
- AREC 220.3 History of Indigenous Agriculture in Canada or INDG 107.3 Introduction to Canadian Indigenous Studies
- 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
- **MATH 104.3** Elementary Calculus or **MATH 110.3** Calculus I or **MATH 125.3** Mathematics for the Life Sciences
- ~~Choose 3 credit units of open electives~~

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 2 (30 credit units)

- **BIOL 222.3** The Living Plant
- **BIOL 226.3** Genes to Genomics
- **CHEM 250.3** Introduction to Organic Chemistry
- ~~**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
- **PLSC 220.3** Fundamentals of Horticulture
- ~~**PLSC 235.3** Urban Agriculture~~
- **PLSC 260.3** Principles of Plant Protection
- **SLSC 240.3** Agricultural Soil Science

English Language Writing Requirement

Choose 3 credit units from the following:

- **ANTH 302.3** The Practice of Ethnography
- **ANTH 306.3** Anthropology of Disaster and Dislocation
- **ANTH 310.3** Anthropology of Gender
- ANTH 421.3
- **CPSJ 203.3** Cultivating Humanity
- **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
- HIST 115.3 History Matters Ideas and Culture
- HIST 125.3 History Matters Indigenous Colonial and Post Colonial Histories
- HIST 135.3 History Matters Gender Sex and Society
- HIST 145.3 History Matters War Violence and Politics
- HIST 155.3 History Matters Science and Environment
- HIST 165.3 History Matters Health and Society
- HIST 175.3 History Matters Identities and Communities in Transition
- HIST 185.3 History Matters Conflict Law Politics and the State
- HIST 193.3 History Matters Topics in Canadian History
- HIST 194.3 History Matters Topics in European History
- PHIL 120.3 Knowledge Mind and Existence
- PHIL 121.3 Introduction to World Philosophies
- PHIL 133.3 Introduction to Ethics and Values
- PHIL 208.3 Ancient Philosophy Presocratics to Plato
- PHIL 233.3 Ethical Theory
- POLS 245.3 Politics of Africa
- POLS 323.3 Indigenous Policies and Programs
- POLS 328.3 Public Policy Analysis
- POLS 333.3 Theory and Politics of Law
- POLS 336.3 Justice and Democracy
- POLS 422.3 Indigenous Governance and Self Determined Sustainable Development
- POLS 461.3 Topics in Global Politics
- PSY 323.3 Qualitative Study of Lives and Social Practices
- PSY 355.3 Research in Advanced Cognitive Science
- RLST 280.3 Methodologies and Approaches to Study of Religions
- RLST 362.3 Monsters and Mischief Makers

Open Electives

- Choose 6 credit units open electives

Years 3 & 4 (60 credit units)

PLSC 433 and PLSC 451 ~~must be taken~~ are offered ONLY in odd years; PLSC 330, PLSC 441, PLSC 461 and PLSC 470 ~~must be taken~~ are offered ONLY in even years.

- ~~**BIOL 226.3** Genes to Genomics~~
- **BIOL 331.3** Plant Physiology ~~or **PLSC 411.3** Plant Breeding~~ or **PLSC 317.3 Plant Metabolism**
- ~~**PLSC 317.3** Plant Metabolism~~
- **PLSC 405.3** Genetics of Plant Populations or **PLSC 411.3** Plant Breeding
- **AGRC 311.3** International Study Tour or **EVSC 485.3** Environmental Science Capstone Course or **PLSC 492.3** Project Thesis in Plant Sciences or **PLSC 494.6** Research Thesis in Plant Sciences (3 credit units count as restricted elective)
- ~~**PLSC 330.3** Ornamental Plants~~
- ~~**PLSC 433.3** Greenhouse Crop Production~~
- ~~**PLSC 441.3** Fruit Science~~
- ~~**PLSC 451.3** Vegetable Agronomy~~
- ~~**PLSC 461.3** Post Harvest Management of Horticultural Crops~~
- ~~**PLSC 470.3** Plant Propagation~~
- ~~**PLSC 492.3** Project Thesis in Plant Sciences or **PLSC 494.6** Research Thesis in Plant Sciences (3 credit units count as restrictive elective)~~

Choose 15 credit units (Horticulture Science)

- **PLSC 330.3** Ornamental Plants
- **PLSC 433.3** Greenhouse Crop Production
- **PLSC 435.3** Landscape Design
- **PLSC 441.3** Fruit Science
- **PLSC 451.3** Vegetable Agronomy
- **PLSC 461.3** Post Harvest Management of Horticultural Crops
- **PLSC 470.3** Plant Propagation

Choose 9 credit units (Additional Plant Science)

- **AGRC 311.3** International Study Tour
- **BIOL 324.3** Plants and Human Affairs

- **BIOL 342.3** Fungi Environment and People
- **EVSC 485.3** Environmental Science Capstone Course
- **PLSC 311.3** General Apiculture
- **PLSC 330.3** Ornamental Plants
- **PLSC 333.3** Tropical Crops of the World
- **PLSC 342.3** Medicinal Plants Agriculture and Human Health
- **PLSC 405.3** Genetics of Plant Populations
- **PLSC 411.3** Plant Breeding
- **PLSC 416.3** Applied Plant Biotechnology
- **PLSC 433.3** Greenhouse Crop Production
- **PLSC 435.3** Landscape Design
- **PLSC 441.3** Fruit Science
- **PLSC 451.3** Vegetable Agronomy
- **PLSC 461.3** Post Harvest Management of Horticultural Crops
- **PLSC 470.3** Plant Propagation
- **PLSC 492.3** Project Thesis in Plant Sciences or **PLSC 494.6** Research Thesis in Plant Sciences (3 credit units count as restricted elective)

Choose 6 credit units (Agribusiness and Entrepreneurship)

- **AGRC 445.3** Experiential Learning in the Workplace
- **AREC 230.3** Innovation and Entrepreneurship
- **AREC 346.3** Principles of Selling
- **AREC 347.3** Agribusiness Marketing Management
- **COMM 204.3** Introduction to Marketing

Choose 18 credit units of restricted electives:

Students can choose courses to complete a minor in an unrelated subject or choose courses selected from the following list:

- **AGRC 211.3** Global Food Security
- **AGRC 311.3** International Study Tour
- **AGRC 445.3** Experiential Learning in the Workplace
- **AREC 230.3** Innovation and Entrepreneurship
- **AREC 254.3** Agribusiness Taxation
- **AREC 346.3** Principles of Selling
- **AREC 347.3** Agribusiness Marketing Management
- ~~**ANBI 375.3** Animals and the Environment~~
- **BIOL 324.3** Plants and Human Affairs
- **BIOL 342.3** Fungi Environment and People

- **BIOL 345.3** Introductory Plant Pathology
- BIOL 365.3 Insect Diversity and Evolution
- ~~**BLE 205.3** Agricultural Machinery Management~~
- ~~**AREC 254.3** Agribusiness Taxation~~
- ~~**AREC 346.3** Principles of Selling~~
- ~~**AREC 347.3** Agribusiness Marketing Management~~
- ~~**FABS 211.3** Introductory Bioproduct Science~~
- ~~**FABS 212.3** Agrifood and Resources Microbiology~~
- **COMM 204.3** Introduction to Marketing
- **GEOG 222.3** Geomatics
- GEOG 240.3 Sustainable Cities and Regions
- NUTR 120.3 Basic Nutrition
- ~~**RRM 215.3** Identification of Saskatchewan Plants and Soils~~
- any 200-level or above course in PLSC, EVSC, FABS, RRM, or SLSC not required for the major or courses approved by an advisor. If a student chooses to register in PLSC 494.6 Research Thesis in Plant Sciences, 3 credit units will be applied here.

Open Electives

- Choose ~~12~~ **3** credit units open electives

Rationale: The changes to the optional courses in the B.S.A. Horticulture Science are the result of an extensive curriculum-mapping initiative carried out the by the Plant Sciences department and reflect the competencies and training deemed important for this major.

Horticulture Science

Minor

Requirements (18 credit units)

- PLSC 220.3 Fundamentals of Horticulture

Choose 9 credit units from the following:

- **PLSC 330.3** Ornamental Plants
- **PLSC 433.3** Greenhouse Crop Production
- **PLSC 435.3** Landscape Design
- **PLSC 441.3** Fruit Science
- **PLSC 451.3** Vegetable Agronomy
- **PLSC 461.3** Post Harvest Management of Horticultural Crops
- **PLSC 470.3** Plant Propagation

Choose 6 credit units from the following:

- **AGRC 311.3** International Study Tour
- **PLSC 235.3** Urban Agriculture
- **PLSC 311.3** General Apiculture
- **PLSC 330.3** Ornamental Plants
- **PLSC 333.3** Tropical Crops of the World
- **PLSC 433.3** Greenhouse Crop Production
- **PLSC 435.3** Landscape Design
- ~~**PLSC 440.3** Climate Smart Agriculture~~
- **PLSC 441.3** Fruit Science
- **PLSC 451.3** Vegetable Agronomy
- **PLSC 461.3** Post Harvest Management of Horticultural Crops
- **PLSC 470.3** Plant Propagation
- other courses, as approved by the Department of Plant Sciences

Rationale: The changes to optional courses for the Horticulture minor reflect changes to current course offerings and the training and competencies deemed important to this minor.

Animal Bioscience

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

~~Animal Bioscience is the study of animal metabolism, genetics, physiology, nutrition, behaviour, care, health, and the social and environmental impact of animals. This degree has less emphasis on traditional agribusiness than the B.S.A. Animal Science while still providing students with the opportunity to learn about issues and handling of farm animals as well as domestic animals.~~

~~The Bachelor of Science in Animal Bioscience [B.Sc.(An.Biosc.)] provides students with a broad background in domestic animal biology (animal metabolism, genetics, physiology, nutrition, behavior, care, social and environmental impact) and prepares them to work in fields outside of traditional animal agriculture including biomedical sciences, companion, equine and research animal care, animal health and environmental sciences. This program can meet the pre-veterinary medicine requirements.~~

~~The program focuses on experiential learning including the opportunity for direct involvement with a wide variety of domestic animals and the development of relevant laboratory skills and decision making and problem solving skills. Students gain the ability to work in unstructured environments and learn to review, synthesize, and communicate information.~~

Animal Bioscience is the interdisciplinary study of animal metabolism, animal genetics, animal physiology, animal nutrition, animal behaviour, animal care, animal health, and the social and environmental impacts of animals. The Bachelor of Science in Animal Bioscience [B.Sc.(An.Biosc.)] program provides students with a broad background in domestic animal biology and has less emphasis on traditional agribusiness than the B.S.A. Animal Science program, while still providing students with the opportunity to learn about issues related to animal production as well as domestic animals. Students will gain knowledge that prepares them to work in fields outside of traditional animal agriculture including biomedical sciences, the care of companion (including equine) and research animals, animal health and diseases, and environmental sciences.

Students interested in veterinary medicine can complete all required courses for entry into the D.V.M. program at the Western College of Veterinary Medicine in the first two years of the Animal Bioscience Program. Please see the College of Agriculture & Bioresources website for details. In addition, please see **WCVM Admissions** for further information on D.V.M. Admissions.

Year 1 (30 credit units)

- **AGRC 110.3** Scientific Literacy and Communication for the Agricultural Sciences
- **AGRC 111.3** Introduction to Plant and Soil Sciences
- **AGRC 113.3** Introduction to Agri Food Economics
- **ANBI 110.3** Introductory Animal Bioscience
- **AREC 220.3** History of Indigenous Agriculture in Canada or **INDG 107.3** Introduction to Canadian Indigenous Studies
- **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

Year 2 (30 credit units)

- ANBI 320.3 Equine Science or ANBI 360.3 Canine and Feline Science
- 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

English Language Writing Requirement

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

Restricted Electives:

- ANBI 298.3 Special Topics
- ANBI 320.3 Equine Science
- ANBI 360.3 Canine and Feline Science
- ANBI 398.3 Special Topics
- ANBI 420.3 Comparative Animal Endocrinology
- ANBI 471.3 Animal Microbiomes and Health
- ANBI 475.3 Field Studies in Arctic Ecosystems with Indigenous Peoples
- ANBI 494.3 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 Technology
- **ANSC 355.3** Sheep and Goat Management
- **ANSC 398.3** Special Topics
- **ANSC 410.3** Cow Calf Management
- **ANSC 430.3** Intensive Management of Beef Cattle
- **ANSC 440.3** Poultry Production
- **ANSC 460.3** Intensive Management of Dairy Cattle
- **ANSC 485.3** Swine Production and Management
- **ANSC 498.3** Special Topics
- **AREC 222.3** Introduction to Farm Business Management
- **AREC 343.3** Grain and Livestock Marketing
- **BINF 151.3** Computing in the Biological Sciences
- **BIOL 222.3** The Living Plant
- **BIOL 226.3** Genes to Genomics
- **BIOL 316.3** Genetic Analysis of Eukaryotes
- **BIOL 430.3** Neurobiology of Behaviour
- **BIOL 451.3** Ichthyology
- **BIOL 455.3** Mammal Diversity and Evolution
- **BIOL 458.3** Ornithology
- **BIOL 472.3** Animal Behaviour
- **BLE 205.3** Agricultural Machinery Management
- **BLE 303.3** Principles of Food and Bioproducts Engineering
- **BMIS 308.3** An Introduction to Microbial Pathogens
- **BMIS 310.3** Proteins and Enzymes
- **BMIS 321.3** Introduction to Immunology
- **BMIS 340.3** Introductory Molecular Biology
- **BMIS 435.3** Human Metabolism and Disease
- **BMIS 436.3** Advanced Molecular Biology
- **BMSC 220.3** Cell Biology

- **BMSC 240.3** Laboratory Techniques
- **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
- **FABS 110.3** The Science of Food
- **FABS 325.3** Food Microbiology and Safety
- **FABS 457.3** Meat Science and Technology
- MCIM 321.3
- **PHYS 115.3** Physics and the Universe
- **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 423.3
- **RCM 400.3** Rhetorical Theory and Practice of Persuasion
- **RCM 401.3** Oral Rhetoric
- **RCM 402.3** Interpersonal Communication and Rhetoric
- **RCM 404.3** Leadership as Communication
- **RCM 406.3** Studies in Communication Series
- **RCM 407.3** Rhetorical Editing
- **RCM 408.3** Rhetorical Composition Writing for the Public
- **RCM 409.3** Negotiation as Rhetorical Practice
- **RCM 410.3** Rhetoric of Science and Technology
- **RCM 495.3** Rhetorical Peer Mentorship
- **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 Ruminants
- VTPA 412.3 Diseases of Poultry
- or courses approved by an Animal Science program advisor

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 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

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

Restricted Electives:

- ANBI 298.3 Special Topics
- ANBI 320.3 Equine Science
- ANBI 360.3 Canine and Feline Science
- ANBI 398.3 Special Topics
- ANBI 420.3 Comparative Animal Endocrinology
- ANBI 471.3 Animal Microbiomes and Health
- ANBI 475.3 Field Studies in Arctic Ecosystems with Indigenous Peoples
- ANBI 494.3 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 Technology
- ANSC 355.3 Sheep and Goat Management
- ANSC 398.3 Special Topics
- ANSC 410.3 Cow Calf Management
- ANSC 430.3 Intensive Management of Beef Cattle
- ANSC 440.3 Poultry Production
- ANSC 460.3 Intensive Management of Dairy Cattle
- ANSC 485.3 Swine Production and Management
- ANSC 498.3 Special Topics
- AREC 222.3 Introduction to Farm Business Management
- AREC 343.3 Grain and Livestock Marketing

- **BINF 151.3** Computing in the Biological Sciences
- **BIOL 222.3** The Living Plant
- **BIOL 226.3** Genes to Genomics
- **BIOL 316.3** Genetic Analysis of Eukaryotes
- **BIOL 430.3** Neurobiology of Behaviour
- **BIOL 451.3** Ichthyology
- **BIOL 455.3** Mammal Diversity and Evolution
- **BIOL 458.3** Ornithology
- **BIOL 472.3** Animal Behaviour
- **BLE 205.3** Agricultural Machinery Management
- **BLE 303.3** Principles of Food and Bioproducts Engineering
- **BMIS 308.3** An Introduction to Microbial Pathogens
- **BMIS 310.3** Proteins and Enzymes
- **BMIS 321.3** Introduction to Immunology
- **BMIS 340.3** Introductory Molecular Biology
- **BMIS 435.3** Human Metabolism and Disease
- **BMIS 436.3** Advanced Molecular Biology
- **BMSC 220.3** Cell Biology
- **BMSC 240.3** Laboratory Techniques
- **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
- **FABS 110.3** The Science of Food
- **FABS 325.3** Food Microbiology and Safety
- **FABS 457.3** Meat Science and Technology
- MCIM 321.3

- **PHYS 115.3** Physics and the Universe
- **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 423.3
- **RCM 400.3** Rhetorical Theory and Practice of Persuasion
- **RCM 401.3** Oral Rhetoric
- **RCM 402.3** Interpersonal Communication and Rhetoric
- **RCM 404.3** Leadership as Communication
- **RCM 406.3** Studies in Communication Series
- **RCM 407.3** Rhetorical Editing
- **RCM 408.3** Rhetorical Composition Writing for the Public
- **RCM 409.3** Negotiation as Rhetorical Practice
- **RCM 410.3** Rhetoric of Science and Technology
- **RCM 495.3** Rhetorical Peer Mentorship
- **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 Ruminants
- **VTPA 412.3** Diseases of Poultry
- or courses approved by an Animal Science program advisor

Year 4 (30 credit units)

- **ANBI 411.3** Behaviour of Domestic Animals
- **ANBI 420.3** Comparative Animal Endocrinology or **ANBI 471.3** Animal Microbiomes and Health
- **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)
- ANSC 440.3 Poultry Production or ANSC 485.3 Swine Production and Management
- VLAC 411.3 Diseases of Ruminants or VTPA 412.3 Diseases of Poultry

Choose 3 credit units from the following:

- ANSC 355.3 Sheep and Goat Management
- ANSC 410.3 Cow Calf Management
- ANSC 430.3 Intensive Management of Beef Cattle
- ANSC 460.3 Intensive Management of Dairy Cattle

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 3 credit units of restricted electives

Restricted Electives:

- ANBI 298.3 Special Topics
- ANBI 320.3 Equine Science
- ANBI 360.3 Canine and Feline Science
- ANBI 398.3 Special Topics
- ANBI 420.3 Comparative Animal Endocrinology
- ANBI 471.3 Animal Microbiomes and Health
- ANBI 475.3 Field Studies in Arctic Ecosystems with Indigenous Peoples
- ANBI 494.3 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 Technology
- ANSC 355.3 Sheep and Goat Management
- ANSC 398.3 Special Topics
- ANSC 410.3 Cow Calf Management

- **ANSC 430.3** Intensive Management of Beef Cattle
- **ANSC 440.3** Poultry Production
- **ANSC 460.3** Intensive Management of Dairy Cattle
- **ANSC 485.3** Swine Production and Management
- **ANSC 498.3** Special Topics
- **AREC 222.3** Introduction to Farm Business Management
- **AREC 343.3** Grain and Livestock Marketing
- **BINF 151.3** Computing in the Biological Sciences
- **BIOL 222.3** The Living Plant
- **BIOL 226.3** Genes to Genomics
- **BIOL 316.3** Genetic Analysis of Eukaryotes
- **BIOL 430.3** Neurobiology of Behaviour
- **BIOL 451.3** Ichthyology
- **BIOL 455.3** Mammal Diversity and Evolution
- **BIOL 458.3** Ornithology
- **BIOL 472.3** Animal Behaviour
- **BLE 205.3** Agricultural Machinery Management
- **BLE 303.3** Principles of Food and Bioproducts Engineering
- **BMIS 308.3** An Introduction to Microbial Pathogens
- **BMIS 310.3** Proteins and Enzymes
- **BMIS 321.3** Introduction to Immunology
- **BMIS 340.3** Introductory Molecular Biology
- **BMIS 435.3** Human Metabolism and Disease
- **BMIS 436.3** Advanced Molecular Biology
- **BMSC 220.3** Cell Biology
- **BMSC 240.3** Laboratory Techniques
- **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
- FABS 110.3 The Science of Food
- FABS 325.3 Food Microbiology and Safety
- FABS 457.3 Meat Science and Technology
- MCIM 321.3
- PHYS 115.3 Physics and the Universe
- 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 423.3
- RCM 400.3 Rhetorical Theory and Practice of Persuasion
- RCM 401.3 Oral Rhetoric
- RCM 402.3 Interpersonal Communication and Rhetoric
- RCM 404.3 Leadership as Communication
- RCM 406.3 Studies in Communication Series
- RCM 407.3 Rhetorical Editing
- RCM 408.3 Rhetorical Composition Writing for the Public
- RCM 409.3 Negotiation as Rhetorical Practice
- RCM 410.3 Rhetoric of Science and Technology
- RCM 495.3 Rhetorical Peer Mentorship
- 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 Ruminants
- VTPA 412.3 Diseases of Poultry

- or courses approved by an Animal Science program advisor

Animal Science

~~More and more, Animal Science professionals are committed to devising innovative solutions to the challenges posed by a growing world population with changing patterns of diet, a finite amount of farmland, and changing climatic conditions. Animal Scientists study the feeding, breeding, and management of domestic animals, particularly those of agricultural significance. This field of science encompasses subjects ranging from herd genetics and high-performance diets to animal vaccines and environmentally-sound animal management, with a focus on transferring this knowledge into practice.~~

~~Areas of emphasis in the program include physiology, genetics, nutrition, feed processing, animal behaviour and welfare, sustainable production systems and management, pasture management, and forage production. This program prepares students for careers serving the animal agri-food industry.~~

~~Students interested in veterinary medicine can complete all required courses in the first two years of the Animal Science Program. Please see the College of Agriculture & Bioresources website for details. In addition, please see **WCVM Admissions** for further information on D.V.M. Admissions.~~

Animal Science is the study of the feeding, breeding and management of domestic animals with a focus on livestock production systems. Areas of emphasis in the Bachelor of Science in Agriculture (B.S.A) in Animal Science program include physiology, genetics, nutrition, feed processing, animal behaviour and welfare, sustainable production systems and management, pasture management, and forage production. This program also focuses on applying a broad knowledge base in animal science to address local and global challenges facing animal industries. Students will gain skills that prepare them for careers serving the animal agri-food industry.

Students interested in veterinary medicine can complete all required courses for entry into the D.V.M. program at the Western College of Veterinary Medicine in the first two years of the Animal Science program. Please see the College of Agriculture & Bioresources website for details. In addition, please see **WCVM Admissions** for further information on D.V.M. Admissions.

Animal Science

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

Year 1 (30 credit units)

- **AGRC 110.3** Scientific Literacy and Communication for the Agricultural Sciences
- **AGRC 111.3** Introduction to Plant and Soil Sciences
- **AGRC 112.3** Animal Agriculture and Food Science
- **AGRC 113.3** Introduction to Agri Food Economics

- AREC 220.3 History of Indigenous Agriculture in Canada or INDG 107.3 Introduction to Canadian Indigenous Studies
- 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 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.

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 , MATH 110.3 Calculus I or MATH 125.3 Mathematics for the Life Sciences
- PLSC 214.3 Statistical Methods

English Language Writing Requirement

Choose 3 credit units from the following:

- ANTH 302.3 The Practice of Ethnography
- ANTH 306.3 Anthropology of Disaster and Dislocation
- ANTH 310.3 Anthropology of Gender
- ANTH 421.3
- CPSJ 203.3 Cultivating Humanity
- 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
- HIST 115.3 History Matters Ideas and Culture
- HIST 125.3 History Matters Indigenous Colonial and Post Colonial Histories
- HIST 135.3 History Matters Gender Sex and Society
- HIST 145.3 History Matters War Violence and Politics
- HIST 155.3 History Matters Science and Environment
- HIST 165.3 History Matters Health and Society
- HIST 175.3 History Matters Identities and Communities in Transition
- HIST 185.3 History Matters Conflict Law Politics and the State
- HIST 193.3 History Matters Topics in Canadian History
- HIST 194.3 History Matters Topics in European History

- **PHIL 120.3** Knowledge Mind and Existence
- **PHIL 121.3** Introduction to World Philosophies
- **PHIL 133.3** Introduction to Ethics and Values
- **PHIL 208.3** Ancient Philosophy Presocratics to Plato
- **PHIL 233.3** Ethical Theory
- **POLS 245.3** Politics of Africa
- **POLS 323.3** Indigenous Policies and Programs
- **POLS 328.3** Public Policy Analysis
- **POLS 333.3** Theory and Politics of Law
- **POLS 336.3** Justice and Democracy
- **POLS 422.3** Indigenous Governance and Self Determined Sustainable Development
- **POLS 461.3** Topics in Global Politics
- **PSY 323.3** Qualitative Study of Lives and Social Practices
- **PSY 355.3** Research in Advanced Cognitive Science
- **RLST 280.3** Methodologies and Approaches to Study of Religions
- **RLST 362.3** Monsters and Mischief Makers

Choose 6 credit units of restricted electives

- **ANBI 298.3** Special Topics
- **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 475.3** Field Studies in Arctic Ecosystems with Indigenous Peoples
- **ANBI 498.3** Special Topics
- **ANSC 298.3** Special Topics

- **ANSC 301.3** Animal Production Tour
- **ANSC 355.3** Sheep and Goat Management
- **ANSC 398.3** Special Topics
- **ANSC 494.3** Research Thesis in Animal Science
- **ANSC 498.3** Special Topics
- **AREC 222.3** Introduction to Farm Business Management
- **AREC 343.3** Grain and Livestock Marketing
- **BINF 151.3** Computing in the Biological Sciences
- **BIOL 222.3** The Living Plant
- **BIOL 226.3** Genes to Genomics
- **BIOL 316.3** Genetic Analysis of Eukaryotes
- **BIOL 430.3** Neurobiology of Behaviour
- **BIOL 451.3** Ichthyology
- **BIOL 455.3** Mammal Diversity and Evolution
- **BIOL 458.3** Ornithology
- **BIOL 472.3** Animal Behaviour
- **BLE 205.3** Agricultural Machinery Management
- **BLE 303.3** Principles of Food and Bioproducts Engineering
- **BMIS 308.3** An Introduction to Microbial Pathogens
- **BMIS 340.3** Introductory Molecular Biology
- **BMSC 220.3** Cell Biology
- **BMSC 240.3** Laboratory Techniques
- **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
- **FABS 110.3** The Science of Food

- **FABS 325.3** Food Microbiology and Safety
- **FABS 457.3** Meat Science and Technology
- **PHYS 115.3** Physics and the Universe
- **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
- **RCM 400.3** Rhetorical Theory and Practice of Persuasion
- **RCM 401.3** Oral Rhetoric
- **RCM 402.3** Interpersonal Communication and Rhetoric
- **RCM 404.3** Leadership as Communication
- **RCM 406.3** Studies in Communication Series
- **RCM 407.3** Rhetorical Editing
- **RCM 408.3** Rhetorical Composition Writing for the Public
- **RCM 409.3** Negotiation as Rhetorical Practice
- **RCM 410.3** Rhetoric of Science and Technology
- **RCM 495.3** Rhetorical Peer Mentorship
- **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 Ruminants
- **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 316.3** Feed Technology

- ANSC 410.3 Cow Calf Management
- ANSC 430.3 Intensive Management of Beef Cattle
- ANSC 440.3 Poultry Production
- ANSC 460.3 Intensive Management of Dairy Cattle
- ANSC 485.3 Swine Production and Management
- 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 12 credit units of restricted electives from the following:

- ANBI 298.3 Special Topics
- 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 475.3 Field Studies in Arctic Ecosystems with Indigenous Peoples
- ANBI 498.3 Special Topics
- ANSC 298.3 Special Topics
- ANSC 301.3 Animal Production Tour
- ANSC 355.3 Sheep and Goat Management
- ANSC 398.3 Special Topics
- ANSC 494.3 Research Thesis in Animal Science
- ANSC 498.3 Special Topics
- AREC 222.3 Introduction to Farm Business Management
- AREC 343.3 Grain and Livestock Marketing

- **BINF 151.3** Computing in the Biological Sciences
- **BIOL 222.3** The Living Plant
- **BIOL 226.3** Genes to Genomics
- **BIOL 316.3** Genetic Analysis of Eukaryotes
- **BIOL 430.3** Neurobiology of Behaviour
- **BIOL 451.3** Ichthyology
- **BIOL 455.3** Mammal Diversity and Evolution
- **BIOL 458.3** Ornithology
- **BIOL 472.3** Animal Behaviour
- **BLE 205.3** Agricultural Machinery Management
- **BLE 303.3** Principles of Food and Bioproducts Engineering
- **BMIS 308.3** An Introduction to Microbial Pathogens
- **BMIS 340.3** Introductory Molecular Biology
- **BMSC 220.3** Cell Biology
- **BMSC 240.3** Laboratory Techniques
- **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
- **FABS 110.3** The Science of Food
- **FABS 325.3** Food Microbiology and Safety
- **FABS 457.3** Meat Science and Technology
- **PHYS 115.3** Physics and the Universe
- **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
- RCM 400.3 Rhetorical Theory and Practice of Persuasion
- RCM 401.3 Oral Rhetoric
- RCM 402.3 Interpersonal Communication and Rhetoric
- RCM 404.3 Leadership as Communication
- RCM 406.3 Studies in Communication Series
- RCM 407.3 Rhetorical Editing
- RCM 408.3 Rhetorical Composition Writing for the Public
- RCM 409.3 Negotiation as Rhetorical Practice
- RCM 410.3 Rhetoric of Science and Technology
- RCM 495.3 Rhetorical Peer Mentorship
- 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 Ruminants
- VTPA 412.3 Diseases of Poultry
- or courses approved by an Animal Science program advisor

Open Electives

- Choose 18 credit units of open electives

Resource Economics and Policy

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

Year 1 (30 credit units)

- 3 credit units open electives
- AGRC 113.3 Introduction to Agri Food Economics
- BIOL 120.3 The Nature of Life or 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)

- 6 credit units open electives
- **AREC 220.3** History of Indigenous Agriculture in Canada
- **AREC 238.3** Natural Resource Economics
- **AREC 261.3** Agricultural Data Analytics I
- **AREC 262.3** Agricultural Data Analytics II

  Note: Students should take AREC 261.3 in term 1 of their second year, and AREC 262.3 in term 2 of their second year.
- **AREC 272.3** Introduction to Agricultural Economics
- **ENVS 201.3** Foundations of Sustainability
- **GEOG 280.3** Environmental Geography
- **RCM 200.3** Effective Professional Communication

Year 3 (30 credit units)

- 9 credit units open electives
- **AREC 315.3** Application of Microeconomic Theory to Agriculture or **ECON 277.3** Economics of the Environment
- ~~**RRM 201.1** Geographical Information Systems~~
- **RRM 312.3** Natural Resource Management and Indigenous Peoples
- ~~**RRM 323.2** Resource Data and Environmental Modeling~~
- **RRM 321.3** Resource Data and Environmental Modeling

- 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

Choose 9 credit units of restricted electives:

Emphasis

Students may use their restricted electives to take courses to achieve a general level of knowledge in resource economics and management, or they can choose to take a more prescribed set of courses within the curriculum that gives them greater depth of knowledge in specific areas of natural resource management, assessment and development. To achieve this, students may choose one emphasis from the four offered as part of their restricted electives. An emphasis consists of five courses from the prescribed list.

Indigenous Resource Management
• **ASKI 102.3** Introduction to Legal Concepts in Resource Management
• **ASKI 103.3** Legal Process and Instruments in Resource Management
• **ASKI 202.1** Introduction to Land Management Frameworks and **ASKI 204.2** Introduction to the Duty to Consult
• **GEOG 380.3** Environmental Geography of the Circumpolar North
• **INDG 241.3** Weaving Indigenous Science and Western Science
• **INDG 265.3** Aboriginal People and Development
• **INDG 362.3** Aboriginal People and Northern Development
• **POLS 222.3** Indigenous Governance and Politics
• POLS 322.3
• **POLS 323.3** Indigenous Policies and Programs

Sustainable Water/Energy/Food Systems
• **AGRC 211.3** Global Food Security
• **ENVE 381.3** Sustainability and Environmental Assessment
• **GEOG 225.3** Hydrology of Canada
• **GEOG 380.3** Environmental Geography of the Circumpolar North
• PLAN 329.3

Environmental Impact Assessment and Policy
• **AREC 451.3** Agricultural Policy Analysis
• **ENVE 381.3** Sustainability and Environmental Assessment
• **GEOG 385.3** Analysis of Environmental Management and Policy Making
• **GEOG 386.3** Environmental Impact Assessment
• **INDG 321.3** International Indigenous Disaster Risk Reduction
• **POLS 226.3** Canadian Public Policy
• POLS 322.3
• **POLS 323.3** Indigenous Policies and Programs
• **TOX 321.3** Risk Assessment and Regulatory Toxicology

Development and the Environment

- **ECON 270.3** Development in Non Industrialized Countries
- **ENVE 381.3** Sustainability and Environmental Assessment
- **GEOG 208.3** World Regional Development
- **GEOG 240.3** Sustainable Cities and Regions
- **GEOG 380.3** Environmental Geography of the Circumpolar North
- **GEOG 386.3** Environmental Impact Assessment
- **INDG 265.3** Aboriginal People and Development
- **INDG 361.3** Indigenous Community Development in the 21st Century

Restricted Electives

- **AGRC 111.3** Introduction to Plant and Soil Sciences
- **AGRC 211.3** Global Food Security
- **ANBI 375.3** Animals and the Environment
- **ANBI 420.3** Comparative Animal Endocrinology
- **ANTH 111.3** One World Many Peoples Introduction to Cultural Anthropology
- ANTH 224.3
- **ANTH 329.3** Environmental Anthropology
- **AREC 238.3** Natural Resource Economics
- **AREC 315.3** Application of Microeconomic Theory to Agriculture
- **AREC 342.3** Industrial Organization of Agricultural Markets
- **AREC 430.3** Advanced Natural Resource Economics
- **AREC 432.3** Rural Development Theory and Applications
- **AREC 451.3** Agricultural Policy Analysis
- **ASKI 102.3** Introduction to Legal Concepts in Resource Management
- **ASKI 103.3** Legal Process and Instruments in Resource Management
- **ASKI 202.1** Introduction to Land Management Frameworks and **ASKI 204.2** Introduction to the Duty to Consult
- **BIOL 323.3** Plant Systematics and Evolution
- **BIOL 412.3** Limnology
- BIOL 424.3
- **BIOL 475.3** Ecological Toxicology
- **CHEM 375.3** Environmental Chemistry
- **COMM 201.3** Introduction to Financial Accounting
- **COMM 347.3** Indigenous Business in Canada
- **ECON 211.3** Intermediate Microeconomics
- **ECON 231.3** Co operatives
- **ECON 270.3** Development in Non Industrialized Countries
- **ECON 275.3** Economics of Natural Resources
- **ECON 277.3** Economics of the Environment
- ECON 347.3
- **ENVE 381.3** Sustainability and Environmental Assessment
- **ENVE 432.3** Land Management and Reclamation
- **EVSC 220.3** Environmental Soil Science

- **EVSC 380.3** Grassland Soils and Vegetation
- **FABS 212.3** Agrifood and Resources Microbiology OR **BMSC 210.3** Microbiology
- FABS 360.3
- FABS 430.3
- **GEOG 150.3** Introduction to the Circumpolar World
- **GEOG 208.3** World Regional Development
- **GEOG 225.3** Hydrology of Canada
- **GEOG 233.3** Weather and Climate
- **GEOG 235.3** Earth Processes and Natural Hazards A Canadian Perspective
- **GEOG 240.3** Sustainable Cities and Regions
- GEOG 271.3
- **GEOG 280.3** Environmental Geography
- **GEOG 323.3** Remote Sensing
- **GEOG 328.3** Groundwater Hydrology
- GEOG 332.3
- **GEOG 351.3** Northern Environments
- GEOG 352.3
- GEOG 371.3
- **GEOG 380.3** Environmental Geography of the Circumpolar North
- **GEOG 385.3** Analysis of Environmental Management and Policy Making
- **GEOG 386.3** Environmental Impact Assessment
- GEOG 462.3
- **GEOL 121.3** Earth Processes
- GEOL 312.3
- GEOL 330.3
- HIST 170.6
- **INDG 241.3** Weaving Indigenous Science and Western Science
- **INDG 265.3** Aboriginal People and Development
- **INDG 321.3** International Indigenous Disaster Risk Reduction
- **INDG 361.3** Indigenous Community Development in the 21st Century
- **INDG 362.3** Aboriginal People and Northern Development
- **LAW 436.3** Aboriginal Law
- **PHIL 226.3** Environmental Philosophy
- PLAN 329.3

- **PLSC 214.3** Statistical Methods

- PLSC 412.3
- **PLSC 413.3** Advanced Plant Ecology
- **PLSC 418.3** Management of Arable Grassland
- **PLSC 422.3** Rangeland Ecology and Management
- **PLSC 425.3** Forest Ecology
- **POLS 111.3** Politics Power and Government or **POLS 112.3** Justice and Injustice in Politics and Law
- **POLS 222.3** Indigenous Governance and Politics

• POLS 225.3 Canadian Public Administration and Administrative Law
• POLS 226.3 Canadian Public Policy
• POLS 322.3
• POLS 323.3 Indigenous Policies and Programs
• POLS 326.3 Comparative Public Policy
• POLS 328.3 Public Policy Analysis
• POLS 425.3
• 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 444.3 Soil Ecology
• SLSC 460.3 Forest Soils
• SLSC 480.3 Soils and Boreal Landscapes
• TOX 301.3 Environmental Toxicology
• TOX 321.3 Risk Assessment and Regulatory Toxicology

Year 4 (30 credit units)

- 3 credit units open electives
- AREC 430.3 Advanced Natural Resource Economics
- ENVS 401.3 Sustainability in Action or EVSC 485.3 Environmental Science Capstone Course
- RRM 421.6 Group Project in Renewable Resource Management

Choose 15 credit units of restricted electives:

Emphasis

Students may use their restricted electives to take courses to achieve a general level of knowledge in resource economics and management, or they can choose to take a more prescribed set of courses within the curriculum that gives them greater depth of knowledge in specific areas of natural resource management, assessment and development. To achieve this, students may choose one emphasis from the four offered as part of their restricted electives. An emphasis consists of five courses from the prescribed list.

Indigenous Resource Management
• ASKI 102.3 Introduction to Legal Concepts in Resource Management
• ASKI 103.3 Legal Process and Instruments in Resource Management
• ASKI 202.1 Introduction to Land Management Frameworks and ASKI 204.2 Introduction to the Duty to Consult
• GEOG 380.3 Environmental Geography of the Circumpolar North
• INDG 241.3 Weaving Indigenous Science and Western Science
• INDG 265.3 Aboriginal People and Development

- **INDG 362.3** Aboriginal People and Northern Development
- **POLS 222.3** Indigenous Governance and Politics
- POLS 322.3
- **POLS 323.3** Indigenous Policies and Programs

Sustainable Water/Energy/Food Systems
- **AGRC 211.3** Global Food Security
- **ENVE 381.3** Sustainability and Environmental Assessment
- **GEOG 225.3** Hydrology of Canada
- **GEOG 380.3** Environmental Geography of the Circumpolar North
- PLAN 329.3

Environmental Impact Assessment and Policy
- **AREC 451.3** Agricultural Policy Analysis
- **ENVE 381.3** Sustainability and Environmental Assessment
- **GEOG 385.3** Analysis of Environmental Management and Policy Making
- **GEOG 386.3** Environmental Impact Assessment
- **INDG 321.3** International Indigenous Disaster Risk Reduction
- **POLS 226.3** Canadian Public Policy
- POLS 322.3
- **POLS 323.3** Indigenous Policies and Programs
- **TOX 321.3** Risk Assessment and Regulatory Toxicology

Development and the Environment
- **ECON 270.3** Development in Non Industrialized Countries
- **ENVE 381.3** Sustainability and Environmental Assessment
- **GEOG 208.3** World Regional Development
- **GEOG 240.3** Sustainable Cities and Regions
- **GEOG 380.3** Environmental Geography of the Circumpolar North
- **GEOG 386.3** Environmental Impact Assessment
- **INDG 265.3** Aboriginal People and Development
- **INDG 361.3** Indigenous Community Development in the 21st Century

Restricted Electives
- **AGRC 111.3** Introduction to Plant and Soil Sciences
- **AGRC 211.3** Global Food Security
- **ANBI 375.3** Animals and the Environment
- **ANBI 420.3** Comparative Animal Endocrinology
- **ANTH 111.3** One World Many Peoples Introduction to Cultural Anthropology
- ANTH 224.3
- **ANTH 329.3** Environmental Anthropology
- **AREC 238.3** Natural Resource Economics
- **AREC 315.3** Application of Microeconomic Theory to Agriculture
- **AREC 342.3** Industrial Organization of Agricultural Markets
- **AREC 430.3** Advanced Natural Resource Economics

- **AREC 432.3** Rural Development Theory and Applications
- **AREC 451.3** Agricultural Policy Analysis
- **ASKI 102.3** Introduction to Legal Concepts in Resource Management
- **ASKI 103.3** Legal Process and Instruments in Resource Management
- **ASKI 202.1** Introduction to Land Management Frameworks and **ASKI 204.2** Introduction to the Duty to Consult
- **BIOL 323.3** Plant Systematics and Evolution
- **BIOL 412.3** Limnology
- BIOL 424.3
- **BIOL 475.3** Ecological Toxicology
- **CHEM 375.3** Environmental Chemistry
- **COMM 201.3** Introduction to Financial Accounting
- **COMM 347.3** Indigenous Business in Canada
- **ECON 211.3** Intermediate Microeconomics
- **ECON 231.3** Co operatives
- **ECON 270.3** Development in Non Industrialized Countries
- **ECON 275.3** Economics of Natural Resources
- **ECON 277.3** Economics of the Environment
- ECON 347.3
- **ENVE 381.3** Sustainability and Environmental Assessment
- **ENVE 432.3** Land Management and Reclamation
- **EVSC 220.3** Environmental Soil Science
- **EVSC 380.3** Grassland Soils and Vegetation
- **FABS 212.3** Agrifood and Resources Microbiology OR **BMSC 210.3** Microbiology
- FABS 360.3
- FABS 430.3
- **GEOG 150.3** Introduction to the Circumpolar World
- **GEOG 208.3** World Regional Development
- **GEOG 225.3** Hydrology of Canada
- **GEOG 233.3** Weather and Climate
- **GEOG 235.3** Earth Processes and Natural Hazards A Canadian Perspective
- **GEOG 240.3** Sustainable Cities and Regions
- GEOG 271.3
- **GEOG 280.3** Environmental Geography
- **GEOG 323.3** Remote Sensing
- **GEOG 328.3** Groundwater Hydrology
- GEOG 332.3
- **GEOG 351.3** Northern Environments
- GEOG 352.3
- GEOG 371.3
- **GEOG 380.3** Environmental Geography of the Circumpolar North
- **GEOG 385.3** Analysis of Environmental Management and Policy Making
- **GEOG 386.3** Environmental Impact Assessment
- GEOG 462.3

- **GEOL 121.3** Earth Processes
- GEOL 312.3
- GEOL 330.3
- HIST 170.6
- **INDG 241.3** Weaving Indigenous Science and Western Science
- **INDG 265.3** Aboriginal People and Development
- **INDG 321.3** International Indigenous Disaster Risk Reduction
- **INDG 361.3** Indigenous Community Development in the 21st Century
- **INDG 362.3** Aboriginal People and Northern Development
- **LAW 436.3** Aboriginal Law
- **PHIL 226.3** Environmental Philosophy
- PLAN 329.3
- **PLSC 214.3** Statistical Methods
- PLSC 412.3
- **PLSC 413.3** Advanced Plant Ecology
- **PLSC 418.3** Management of Arable Grassland
- **PLSC 422.3** Rangeland Ecology and Management
- **PLSC 425.3** Forest Ecology
- **POLS 111.3** Politics Power and Government or **POLS 112.3** Justice and Injustice in Politics and Law
- **POLS 222.3** Indigenous Governance and Politics
- **POLS 225.3** Canadian Public Administration and Administrative Law
- **POLS 226.3** Canadian Public Policy
- POLS 322.3
- **POLS 323.3** Indigenous Policies and Programs
- **POLS 326.3** Comparative Public Policy
- **POLS 328.3** Public Policy Analysis
- POLS 425.3
- **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 444.3** Soil Ecology
- **SLSC 460.3** Forest Soils
- **SLSC 480.3** Soils and Boreal Landscapes
- **TOX 301.3** Environmental Toxicology
- **TOX 321.3** Risk Assessment and Regulatory Toxicology

Agribusiness

Bachelor of Science in Agribusiness [B.Sc.(Agbus.)]

Minimum Requirements for Degree (120 credit units)

Year 1 - (30 credit units)

- AGRC 111.3 Introduction to Plant and Soil Sciences
- AGRC 112.3 Animal Agriculture and Food Science
- AGRC 113.3 Introduction to Agri Food Economics
- COMM 101.3 Introduction to Business
- ECON 111.3 Introductory Microeconomics
- ECON 114.3 Introductory Macroeconomics
- MATH 104.3 Elementary Calculus or MATH 110.3 Calculus I or MATH 121.3 or MATH 125.3 Mathematics for the Life Sciences

Note: If you excel in mathematics, you are encouraged to take MATH 110.3 Calculus I rather than MATH 104.3 Elementary Calculus.

English Language Writing Requirement

Choose 3 credit units from the following:

- ANTH 302.3 The Practice of Ethnography
- ANTH 306.3 Anthropology of Disaster and Dislocation
- ANTH 310.3 Anthropology of Gender
- ANTH 421.3
- CPSJ 203.3 Cultivating Humanity
- 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
- HIST 115.3 History Matters Ideas and Culture
- HIST 125.3 History Matters Indigenous Colonial and Post Colonial Histories
- HIST 135.3 History Matters Gender Sex and Society
- HIST 145.3 History Matters War Violence and Politics
- HIST 155.3 History Matters Science and Environment
- HIST 165.3 History Matters Health and Society
- HIST 175.3 History Matters Identities and Communities in Transition

- HIST 185.3 History Matters Conflict Law Politics and the State
- HIST 193.3 History Matters Topics in Canadian History
- HIST 194.3 History Matters Topics in European History
- PHIL 120.3 Knowledge Mind and Existence
- PHIL 121.3 Introduction to World Philosophies
- PHIL 133.3 Introduction to Ethics and Values
- PHIL 208.3 Ancient Philosophy Presocratics to Plato
- PHIL 233.3 Ethical Theory
- POLS 245.3 Politics of Africa
- POLS 323.3 Indigenous Policies and Programs
- POLS 328.3 Public Policy Analysis
- POLS 333.3 Theory and Politics of Law
- POLS 336.3 Justice and Democracy
- POLS 422.3 Indigenous Governance and Self Determined Sustainable Development
- POLS 461.3 Topics in Global Politics
- PSY 323.3 Qualitative Study of Lives and Social Practices
- PSY 355.3 Research in Advanced Cognitive Science
- RLST 280.3 Methodologies and Approaches to Study of Religions
- RLST 362.3 Monsters and Mischief Makers

Choose 3 credit units from the following:

- **BIOL — 100-Level, 200-Level, 300-Level, 400-Level**
- **CHEM — 100-Level, 200-Level, 300-Level, 400-Level**
- GEOG 120.3 Introduction to Global Environmental Systems or GEOG 125.3 Environmental Science and Society
- **GEOL — 100-Level, 200-Level, 300-Level, 400-Level**
- **PHYS — 100-Level, 200-Level, 300-Level, 400-Level**

Choose 3 credit units from the following:

Humanities, Social Sciences, and Fine Arts Requirement

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)

- AREC 222.3 Introduction to Farm Business Management
- AREC 261.3 Agricultural Data Analytics I
- AREC 262.3 Agricultural Data Analytics II

  Note: Students should take AREC 261.3 in term 1 of their second year, and AREC 262.3 in term 2 of their second year.
- AREC 272.3 Introduction to Agricultural Economics
- COMM 201.3 Introduction to Financial Accounting
- COMM 203.3 Introduction to Finance

  Note: Students take COMM 203.3 after completing AREC 261.3 and MATH 104.3 (or equivalent). See your academic program advisor for the necessary permission to be entered for COMM 203.3.

- COMM 204.3 Introduction to Marketing
- RCM 200.3 Effective Professional Communication

Choose 3 credit units from the following:

- BIOL — 100-Level, 200-Level, 300-Level, 400-Level
- CHEM — 100-Level, 200-Level, 300-Level, 400-Level
- GEOG 120.3 Introduction to Global Environmental Systems or GEOG 125.3 Environmental Science and Society
- GEOL — 100-Level, 200-Level, 300-Level, 400-Level
- PHYS — 100-Level, 200-Level, 300-Level, 400-Level

Open Electives

Choose 3 credit units of Open Electives.

Years 3 and 4 (60 credit units)

- AREC 322.3 Agricultural Finance
- AREC 342.3 Industrial Organization of Agricultural Markets
- AREC 343.3 Grain and Livestock Marketing
- AREC 347.3 Agribusiness Marketing Management
- AREC 495.3 Agribusiness Venture Management or AREC 428.3 Case Studies in Agribusiness Management

Choose 3 credit units from the following:

Humanities, Social Sciences, and Fine Arts Requirement

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**

Open Electives

Choose 18 credit units of Open Electives.

Restricted Electives

Choose 24 credit units of restricted electives, which may include an emphasis:

Note: Minimum 12 credit units must be at the 400-level. Maximum of 6 credit units of 400-level RCM classes may be taken to fulfill this requirement. Of the 24 credit units of restricted electives, students may take a maximum of 6 credit units of 400-level RCM classes OR **AGRC 445.3** Experiential Learning in the Workplace and 3 credit units of 400-level RCM classes.

Please choose Restricted Electives from the following:

Emphasis

Students may use their restricted electives to take courses to achieve a general level of knowledge in agribusiness and economics, or they can choose to take a more prescribed set of courses within the curriculum that gives them greater depth of knowledge in specific areas within agricultural economics and agribusiness management. To achieve this, students may choose one of three emphases as part of their restricted electives. An emphasis consists of five courses including one at the 200-level, two at the 300-level and two at the 400-level.

Farm Business Management

- **AREC 230.3** Innovation and Entrepreneurship
- **AREC 254.3** Agribusiness Taxation
- **AREC 420.3** Operations Management for Agriculture
- AREC 435.3
- **AREC 451.3** Agricultural Policy Analysis
- **COMM 211.3** Human Resource Management

• COMM 306.3 Ethics and Strategic Decision Making
• COMM 229.3 Personal Financial Management

Economics and Policy
• AREC 238.3 Natural Resource Economics
• AREC 251.3 Introduction to Agricultural Policy
• AREC 315.3 Application of Microeconomic Theory to Agriculture
• AREC 348.3 Food Economics and Consumer Behaviour (can be used as a 400-level restricted elective)
• AREC 356.3 The Economics of International Agribusiness (can be used as a 400-level restricted elective)
• AREC 445.3 Competition Regulation and Antitrust Theory and Applications
• AREC 451.3 Agricultural Policy Analysis
• AREC 459.3 The Economics of Agricultural Innovation
• ECON 211.3 Intermediate Microeconomics
• ECON 304.3 Introduction to Empirical Economics
• ECON 350.3 Economics of Public Expenditures
• ECON 354.3 International Trade and Commercial Policy
• ECON 373.3 Topics in Intermediate Microeconomic Theory
• ECON 412.3
• One of POLS 226.3 Canadian Public Policy; POLS 305.3 Provincial Politics and Policy; POLS 328.3 Public Policy Analysis

Agribusiness Marketing and Management
• AREC 230.3 Innovation and Entrepreneurship
• AREC 344.3 Follow the Grain
• AREC 346.3 Principles of Selling
• AREC 348.3 Food Economics and Consumer Behaviour (can be used as a 400-level restricted elective)
• AREC 354.3 Economic Decision Analysis in Agribusiness
• AREC 356.3 The Economics of International Agribusiness (can be used as a 400-level restricted elective)
• AREC 420.3 Operations Management for Agriculture
• AREC 428.3 Case Studies in Agribusiness Management or AREC 495.3 Agribusiness Venture Management
• AREC 440.3 Agricultural Marketing Systems
• COMM 205.3 Introduction to Operations Management
• COMM 211.3 Human Resource Management
• COMM 306.3 Ethics and Strategic Decision Making
• COMM 357.3 Marketing Research
• COMM 495.3 Supply Chain Management
• RCM 404.3 Leadership as Communication

Restricted Electives

Choose 24 credit units of restricted electives from the following, which may include an emphasis. Note: Minimum 12 credit units must be at the 400-level. Maximum of 6 credit units of 400-level RCM
classes may be taken to fulfill this requirement. Of the 24 credit units of restricted electives, students may take a maximum of 6 credit units of 400-level RCM classes OR **AGRC 445.3** Experiential Learning in the Workplace and 3 credit units of 400-level RCM classes.

- **AGRC 445.3** Experiential Learning in the Workplace
- **AREC 220.3** History of Indigenous Agriculture in Canada
- **AREC 230.3** Innovation and Entrepreneurship
- **AREC 238.3** Natural Resource Economics
- **AREC 251.3** Introduction to Agricultural Policy
- **AREC 254.3** Agribusiness Taxation
- **AREC 315.3** Application of Microeconomic Theory to Agriculture
- **AREC 344.3** Follow the Grain
- **AREC 346.3** Principles of Selling
- **AREC 348.3** Food Economics and Consumer Behaviour (can be used as a 400-level restricted elective)
- **AREC 354.3** Economic Decision Analysis in Agribusiness
- **AREC 356.3** The Economics of International Agribusiness (can be used as a 400-level restricted elective)
- AREC 395.3
- AREC 400.3
- **AREC 420.3** Operations Management for Agriculture
- **AREC 428.3** Case Studies in Agribusiness Management
- **AREC 430.3** Advanced Natural Resource Economics
- **AREC 432.3** Rural Development Theory and Applications
- AREC 433.3
- AREC 434.3
- AREC 435.3
- **AREC 440.3** Agricultural Marketing Systems
- **AREC 445.3** Competition Regulation and Antitrust Theory and Applications
- **AREC 451.3** Agricultural Policy Analysis
- **AREC 459.3** The Economics of Agricultural Innovation
- **AREC 495.3** Agribusiness Venture Management
- **COMM 105.3** Introduction to Organizational Behaviour
- **COMM 205.3** Introduction to Operations Management
- **COMM 210.3** Introduction to Management Accounting
- **COMM 211.3** Human Resource Management
- **COMM 229.3** Personal Financial Management
- **COMM 304.3** Introduction to Business Law
- **COMM 306.3** Ethics and Strategic Decision Making
- **COMM 340.3** Introduction to International Business
- **COMM 342.3** Organization Structure and Design

• **COMM 345.3** Business and Public Policy
• **COMM 347.3** Indigenous Business in Canada
• **COMM 354.3** Consumer Behaviour
• **COMM 357.3** Marketing Research
• **COMM 363.3** Intermediate Corporate Finance
• **COMM 368.3** Entrepreneurial Finance and Venture Capital
• **COMM 456.3** International Marketing
• **COMM 495.3** Supply Chain Management
• **ECON 211.3** Intermediate Microeconomics
• **ECON 304.3** Introduction to Empirical Economics
• **ECON 350.3** Economics of Public Expenditures
• **ECON 354.3** International Trade and Commercial Policy
• **ECON 373.3** Topics in Intermediate Microeconomic Theory
• ECON 412.2
• **PLSC 214.3** Statistical Methods
• One of **POLS 226.3** Canadian Public Policy; **POLS 305.3** Provincial Politics and Policy; **POLS 328.3** Public Policy Analysis
• **RCM 400.3** Rhetorical Theory and Practice of Persuasion
• **RCM 401.3** Oral Rhetoric
• **RCM 402.3** Interpersonal Communication and Rhetoric
• **RCM 404.3** Leadership as Communication
• **RCM 406.3** Studies in Communication Series
• **RCM 407.3** Rhetorical Editing
• **RCM 408.3** Rhetorical Composition Writing for the Public
• **RCM 409.3** Negotiation as Rhetorical Practice
• **RCM 410.3** Rhetoric of Science and Technology
• **RCM 495.3** Rhetorical Peer Mentorship
• **RRM 312.3** Natural Resource Management and Indigenous Peoples

Rationale: Notes have been added to assist students in their course planning and reduce confusion.

Agricultural Economics

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

Year 1 (30 credit units)

- **AGRC 111.3** Introduction to Plant and Soil Sciences
- **AGRC 112.3** Animal Agriculture and Food Science
- **AGRC 113.3** Introduction to Agri Food Economics
- **AREC 220.3** History of Indigenous Agriculture in Canada or **INDG 107.3** Introduction to Canadian Indigenous Studies

- 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
- ECON 114.3 Introductory Macroeconomics

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 2 (30 credit units)

- **AGRC 110.3** Scientific Literacy and Communication for the Agricultural Sciences

- **AREC 261.3** Agricultural Data Analytics I
- **AREC 262.3** Agricultural Data Analytics II

  Note: Students should take AREC 261.3 in term 1 of their second year, and AREC 262.3 in term 2 of their second year.
- **AREC 272.3** Introduction to Agricultural Economics
- **COMM 101.3** Introduction to Business
- **ECON 211.3** Intermediate Microeconomics
- **ECON 214.3** Intermediate Macroeconomics
- **MATH 104.3** Elementary Calculus, **MATH 110.3** Calculus I, or MATH 121.3 or **MATH 125.3** Mathematics for the Life Sciences

Note: If you excel in mathematics, you are encouraged to take **MATH 110.3** Calculus I rather than **MATH 104.3** Elementary Calculus

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

- **ANTH 302.3** The Practice of Ethnography
- **ANTH 306.3** Anthropology of Disaster and Dislocation
- **ANTH 310.3** Anthropology of Gender
- ANTH 421.3
- **CPSJ 203.3** Cultivating Humanity
- **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
- **HIST 115.3** History Matters Ideas and Culture
- **HIST 125.3** History Matters Indigenous Colonial and Post Colonial Histories
- **HIST 135.3** History Matters Gender Sex and Society
- **HIST 145.3** History Matters War Violence and Politics
- **HIST 155.3** History Matters Science and Environment
- **HIST 165.3** History Matters Health and Society

- HIST 175.3 History Matters Identities and Communities in Transition
- HIST 185.3 History Matters Conflict Law Politics and the State
- HIST 193.3 History Matters Topics in Canadian History
- HIST 194.3 History Matters Topics in European History
- PHIL 120.3 Knowledge Mind and Existence
- PHIL 121.3 Introduction to World Philosophies
- PHIL 133.3 Introduction to Ethics and Values
- PHIL 208.3 Ancient Philosophy Presocratics to Plato
- PHIL 233.3 Ethical Theory
- POLS 245.3 Politics of Africa
- POLS 323.3 Indigenous Policies and Programs
- POLS 328.3 Public Policy Analysis
- POLS 333.3 Theory and Politics of Law
- POLS 336.3 Justice and Democracy
- POLS 422.3 Indigenous Governance and Self Determined Sustainable Development
- POLS 461.3 Topics in Global Politics
- PSY 323.3 Qualitative Study of Lives and Social Practices
- PSY 355.3 Research in Advanced Cognitive Science
- RLST 280.3 Methodologies and Approaches to Study of Religions
- RLST 362.3 Monsters and Mischief Makers

Choose 3 credit units from the following:

- ECON 305.3 Quantitative Methods in Economics I
- ECON 306.3 Quantitative Methods in Economics II
- MATH 116.3 Calculus II
- MATH 164.3 Introduction to Linear Algebra

Years 3 and 4 (60 credit units)

- AREC 315.3 Application of Microeconomic Theory to Agriculture
- AREC 322.3 Agricultural Finance
- AREC 342.3 Industrial Organization of Agricultural Markets

- AREC 492.3 Research Project and Technical Writing
- COMM 201.3 Introduction to Financial Accounting
- COMM 203.3 Introduction to Finance

  Note: Students take COMM 203.3 after completing AREC 261.3 and MATH 104.3 (or equivalent). See your academic program advisor for the necessary permission to be entered for COMM 203.3.
- COMM 204.3 Introduction to Marketing
- ECON 304.3 Introduction to Empirical Economics and ECON 408.3 Econometrics 1

Choose 3 credit units from the following:

- HIST 254.3 The Age of Total Wars in 20th Century Europe
- HIST 257.3 The Canadian Prairie to 1905
- HIST 258.3 The Canadian Prairies since 1905
- PHIL 120.3 Knowledge Mind and Existence
- PHIL 133.3 Introduction to Ethics and Values
- PHIL 140.3 Critical Thinking
- PHIL 235.3
- PHIL 241.3 Introduction to Symbolic Logic I
- PHIL 251.3 Philosophy of Science
- PHIL 262.3 Social and Political Philosophy

Choose 12 credit units restricted electives from the following:

- AREC — 400-Level

Note: AREC 356.3 The Economics of International Agribusiness and AREC 348.3 Food Economics and Consumer Behaviour can be used toward this requirement

Choose 12 credit units restricted electives from the following:

- GEOG 130.3 Environment Health and Planning or equivalent
- AGRC 445.3 Experiential Learning in the Workplace
- ANTH — 100-Level, 200-Level, 300-Level, 400-Level
- ARCH — 100-Level, 200-Level, 300-Level, 400-Level
- AREC — 100-Level, 200-Level, 300-Level, 400-Level
- BIOL — 100-Level, 200-Level, 300-Level, 400-Level

- CHEM — 100-Level, 200-Level, 300-Level, 400-Level
- CHIN — 100-Level, 200-Level, 300-Level, 400-Level
- CLAS — 100-Level, 200-Level, 300-Level, 400-Level
- COMM — 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
- GEOL — 100-Level, 200-Level, 300-Level, 400-Level
- GERM — 100-Level, 200-Level, 300-Level, 400-Level
- GRK — 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
- INDG — 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
- LING — 100-Level, 200-Level, 300-Level, 400-Level
- PHIL — 100-Level, 200-Level, 300-Level, 400-Level
- PHYS — 100-Level, 200-Level, 300-Level, 400-Level
- PLSC 214.3 Statistical Methods
- POLS — 100-Level, 200-Level, 300-Level, 400-Level
- PSY — 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
- SOC — 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
- If applicable, a specialization minor course can be used.

Open Electives

- Choose 6 credit units of open electives

Rationale: Notes have been added to assist students in their course planning and reduce confusion.

Food Industry Management

Bachelor of Science in Food Industry Management [B.Sc.(FIM)]

Year 1 (30 credit units)

- AGRC 110.3 Scientific Literacy and Communication for the Agricultural Sciences
- AGRC 113.3 Introduction to Agri Food Economics
- AREC 220.3 History of Indigenous Agriculture in Canada
- BIOL 120.3 The Nature of Life
- CHEM 112.3 General Chemistry I Structure Bonding and Properties of Materials
- COMM 101.3 Introduction to Business
- ECON 111.3 Introductory Microeconomics
- FABS 110.3 The Science of Food
- MATH 104.3 Elementary Calculus or MATH 110.3 Calculus I or MATH 125.3 Mathematics for the Life Sciences

English Language Writing Requirement

Choose 3 credit units from the following:

- **ANTH 302.3** The Practice of Ethnography
- **ANTH 306.3** Anthropology of Disaster and Dislocation
- **ANTH 310.3** Anthropology of Gender
- **CPSJ 203.3** Cultivating Humanity
- 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
- **HIST 115.3** History Matters Ideas and Culture
- **HIST 125.3** History Matters Indigenous Colonial and Post Colonial Histories
- **HIST 135.3** History Matters Gender Sex and Society
- **HIST 145.3** History Matters War Violence and Politics
- **HIST 155.3** History Matters Science and Environment
- **HIST 165.3** History Matters Health and Society
- **HIST 175.3** History Matters Identities and Communities in Transition
- **HIST 185.3** History Matters Conflict Law Politics and the State
- **HIST 193.3** History Matters Topics in Canadian History
- **HIST 194.3** History Matters Topics in European History
- **PHIL 120.3** Knowledge Mind and Existence
- **PHIL 121.3** Introduction to World Philosophies
- **PHIL 133.3** Introduction to Ethics and Values
- **PHIL 208.3** Ancient Philosophy Presocratics to Plato
- **PHIL 233.3** Ethical Theory
- **POLS 245.3** Politics of Africa
- **POLS 323.3** Indigenous Policies and Programs
- **POLS 328.3** Public Policy Analysis
- **POLS 333.3** Theory and Politics of Law
- **POLS 336.3** Justice and Democracy
- **POLS 422.3** Indigenous Governance and Self Determined Sustainable Development
- **POLS 461.3** Topics in Global Politics
- **PSY 323.3** Qualitative Study of Lives and Social Practices
- **PSY 355.3** Research in Advanced Cognitive Science
- **RLST 280.3** Methodologies and Approaches to Study of Religions
- **RLST 362.3** Monsters and Mischief Makers

Year 2 (30 credit units)

- AREC 230.3 Innovation and Entrepreneurship
- AREC 272.3 Introduction to Agricultural Economics
- BMSC 200.3 Biomolecules
- COMM 201.3 Introduction to Financial Accounting
- COMM 203.3 Introduction to Finance

  Note: Students take COMM 203.3 after completing PLSC 214.3 or AREC 261.3 and MATH 104.3 (or equivalent). See your academic program advisor for the necessary permission to be entered for COMM 203.3.
- COMM 204.3 Introduction to Marketing
- FABS 211.3 Introductory Bioproduct Science
- FABS 212.3 Agrifood and Resources Microbiology
- PLSC 214.3 Statistical Methods or AREC 261.3 Agricultural Data Analytics I

Note: If you plan to work in the food science area, choose PLSC 214.3 Statistical Methods. If you plan to work in the industry management area, choose AREC 261.3 Agricultural Data Analytics I

Choose 3 credit units from the following:

- BIOL — 100-Level, 200-Level, 300-Level, 400-Level
- CHEM — 100-Level, 200-Level, 300-Level, 400-Level
- GEOG 120.3 Introduction to Global Environmental Systems or GEOG 125.3 Environmental Science and Society
- GEOL — 100-Level, 200-Level, 300-Level, 400-Level
- PHYS — 100-Level, 200-Level, 300-Level, 400-Level

Years 3 and 4 (60 credit units)

- AREC 322.3 Agricultural Finance
- AREC 346.3 Principles of Selling
- AREC 347.3 Agribusiness Marketing Management
- AREC 348.3 Food Economics and Consumer Behaviour
- AREC 354.3 Economic Decision Analysis in Agribusiness
- AREC 428.3 Case Studies in Agribusiness Management or AREC 495.3 Agribusiness Venture Management or FABS 492.3 Literature Thesis
- FABS 315.3 Food Chemistry

- **FABS 317.3** Food and Bioproducts Analysis
- FABS 325.3 Food Microbiology and Safety
- FABS 345.3 Unit Operations in Food Processing
- ~~**FABS 317.3** Food and Bioproducts Analysis~~
- FABS 452.3 Quality Assurance and HACCP

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**

Choose 15 credit units of restricted electives from the following:

- **AGRC 445.3** Experiential Learning in the Workplace
- **AREC 262.3** Agricultural Data Analytics II
- **AREC 315.3** Application of Microeconomic Theory to Agriculture

- **AREC 342.3** Industrial Organization of Agricultural Markets
- **AREC 356.3** The Economics of International Agribusiness
- **AREC 420.3** Operations Management for Agriculture
- **AREC 440.3** Agricultural Marketing Systems
- **AREC 451.3** Agricultural Policy Analysis
- **CHEM 115.3** General Chemistry II Chemical Processes
- **CHEM 221.3** Analytical Chemistry I
- **CHEM 250.3** Introduction to Organic Chemistry
- **COMM 205.3** Introduction to Operations Management
- **FABS 222.3** Improving Food Security through Food Science and Technology
- **FABS 298.3** Special Topics
- FABS 360.3
- **FABS 362.3** Functional Foods and Nutraceuticals
- **FABS 371.3** Food Biotechnology
- **FABS 398.3** Special Topics
- **FABS 401.3** Dairy Science and Technology
- **FABS 411.3** Lipid Science and Technology
- **FABS 456.3** Laboratory Techniques in Food and Bioproduct Sciences
- **FABS 457.3** Meat Science and Technology
- **FABS 460.3** Protein Science and Technology
- **FABS 474.3** Food Enzymology
- **FABS 493.3** Product Development
- **FABS 498.3** Special Topics
- **PLSC 420.3** Grain Chemistry and Technology

Open Electives

Choose **9 credit units** of Open Electives

Rationale: Notes have been added to assist students in their course planning and reduce confusion. Additional courses have been added to the English Language Writing Requirement for the B.Sc. FIM program to bring it in-line with the English Language Writing Requirement for other

AgBio degree programs. The addition of FABS 456.3 to restricted electives adds extra options and flexibility for students.

Agribusiness

Diploma, Dip.(Agbus.)

Year 1 - Fall Term (15 credit units)

- **AGRC 111.3** Introduction to Plant and Soil Sciences
- **COMM 101.3** Introduction to Business
- **ECON 111.3** Introductory Microeconomics

Choose 6 credit units of open electives:

Please note that students planning to ladder the Diploma in Agribusiness towards a Bachelor of Science in Agribusiness are advised to register in **MATH 104.3** Elementary Calculus (or an approved equivalent) as an open elective and **AREC 272.3** Introduction to Agricultural Economics and **AREC 261.3** Agricultural Data Analytics I and **AREC 262.3** Agricultural Data Analytics II as ~~a~~ restricted or open electives and meet with an advisor as soon as possible to plan their program.

Year 1 - Winter Term (15 credit units)

- **AGRC 112.3** Animal Agriculture and Food Science
- **AGRC 113.3** Introduction to Agri Food Economics
- **AREC 230.3** Innovation and Entrepreneurship
- **COMM 204.3** Introduction to Marketing

Choose 3 credit units of Open Electives:

Please note that students planning to ladder the Diploma in Agribusiness towards a Bachelor of Science in Agribusiness are advised to register in **MATH 104.3** Elementary Calculus (or an approved equivalent) as an open elective and **AREC 272.3** Introduction to Agricultural Economics and **AREC 261.3** Agricultural Data Analytics I and **AREC 262.3** Agricultural Data Analytics II as ~~a~~ restricted or open electives and meet with an advisor as soon as possible to plan their program.

Year 2 - Fall Term (15 credit units)

- **AREC 222.3** Introduction to Farm Business Management
- **COMM 201.3** Introduction to Financial Accounting
- **RCM 200.3** Effective Professional Communication

Choose 3 credit units from the following restricted electives:

- AREC 220.3 History of Indigenous Agriculture in Canada
- AREC 238.3 Natural Resource Economics
- AREC 251.3 Introduction to Agricultural Policy
- AREC 254.3 Agribusiness Taxation
- AREC 272.3 Introduction to Agricultural Economics
- AREC 343.3 Grain and Livestock Marketing
- AREC 344.3 Follow the Grain
- AREC 346.3 Principles of Selling
- AREC 347.3 Agribusiness Marketing Management
- AREC 354.3 Economic Decision Analysis in Agribusiness

Choose 3 credit units of Open Electives:

Please note that students planning to ladder the Diploma in Agribusiness towards a Bachelor of Science in Agribusiness are advised to register in MATH 104.3 Elementary Calculus (or an approved equivalent) as an open elective and AREC 272.3 Introduction to Agricultural Economics and **AREC 261.3** Agricultural Data Analytics I and **AREC 262.3** Agricultural Data Analytics II as ~~a~~ restricted or open electives and meet with an advisor as soon as possible to plan their program.

Year 2 - Winter Term (15 credit units)

- AREC 495.3 Agribusiness Venture Management

Choose 9 credit units from the following restricted electives:

- AREC 220.3 History of Indigenous Agriculture in Canada
- AREC 238.3 Natural Resource Economics
- AREC 251.3 Introduction to Agricultural Policy
- AREC 254.3 Agribusiness Taxation
- AREC 272.3 Introduction to Agricultural Economics
- AREC 343.3 Grain and Livestock Marketing
- AREC 344.3 Follow the Grain
- AREC 346.3 Principles of Selling
- AREC 347.3 Agribusiness Marketing Management
- AREC 354.3 Economic Decision Analysis in Agribusiness

Choose 3 credit units of Open Electives:

Please note that students planning to ladder the Diploma in Agribusiness towards a Bachelor of Science in Agribusiness are advised to register in **MATH 104.3** Elementary Calculus (or an approved equivalent) as an open elective and **AREC 272.3** Introduction to Agricultural Economics and **AREC 261.3** Agricultural Data Analytics I and **AREC 262.3** Agricultural Data Analytics II as ~~a~~ restricted or open electives and meet with an advisor as soon as possible to plan their program

Rationale: Notes have been revised to help students planning to ladder from the Diploma in Agribusiness to the B.Sc. Agribusiness choose open electives in the diploma that will meet requirements for the degree.

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 (30 credit units)

- **AGRC 110.3** Scientific Literacy and Communication for the Agricultural Sciences
- **AGRC 111.3** Introduction to Plant and Soil Sciences
- **AGRC 112.3** Animal Agriculture and Food Science
- **AGRC 113.3** Introduction to Agri Food Economics
- **AREC 220.3** History of Indigenous Agriculture in Canada or **INDG 107.3** Introduction to Canadian Indigenous Studies
- **BIOL 120.3** The Nature of Life
- **BIOL 121.3** The Diversity of Life or **EVSC 110.3** Renewable Resources and Environment
- **CHEM 112.3** General Chemistry I Structure Bonding and Properties of Materials
- **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
- 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)

- 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

English Language Writing Requirement

Choose 3 credit units from the following:

- ANTH 302.3 The Practice of Ethnography
- ANTH 306.3 Anthropology of Disaster and Dislocation

- **ANTH 310.3** Anthropology of Gender
- ANTH 421.3
- **CPSJ 203.3** Cultivating Humanity
- **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
- **HIST 115.3** History Matters Ideas and Culture
- **HIST 125.3** History Matters Indigenous Colonial and Post Colonial Histories
- **HIST 135.3** History Matters Gender Sex and Society
- **HIST 145.3** History Matters War Violence and Politics
- **HIST 155.3** History Matters Science and Environment
- **HIST 165.3** History Matters Health and Society
- **HIST 175.3** History Matters Identities and Communities in Transition
- **HIST 185.3** History Matters Conflict Law Politics and the State
- **HIST 193.3** History Matters Topics in Canadian History
- **HIST 194.3** History Matters Topics in European History
- **PHIL 120.3** Knowledge Mind and Existence
- **PHIL 121.3** Introduction to World Philosophies
- **PHIL 133.3** Introduction to Ethics and Values
- **PHIL 208.3** Ancient Philosophy Presocratics to Plato
- **PHIL 233.3** Ethical Theory
- **POLS 245.3** Politics of Africa
- **POLS 323.3** Indigenous Policies and Programs
- **POLS 328.3** Public Policy Analysis
- **POLS 333.3** Theory and Politics of Law
- **POLS 336.3** Justice and Democracy
- **POLS 422.3** Indigenous Governance and Self Determined Sustainable Development

- POLS 461.3 Topics in Global Politics
- PSY 323.3 Qualitative Study of Lives and Social Practices
- PSY 355.3 Research in Advanced Cognitive Science
- RLST 280.3 Methodologies and Approaches to Study of Religions
- RLST 362.3 Monsters and Mischief Makers

Open Electives

- Choose 3 credit units open electives

Years 3 & 4 (60 credit units)

- GEOG 222.3 Geomatics

Choose 3 credit units from the following:

Selection will depend upon the student's area of interest.

- EVSC 485.3 Environmental Science Capstone Course
- ENVS 401.3 Sustainability in Action
- EVSC 492.3 Research and Term Paper
- EVSC 494.6 Research and Thesis
- RRM 421.6 Group Project in Renewable Resource Management

Choose 3 credit units of Environmental Policy from the following:

- AREC 238.3 Natural 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~~
- EVSC 421.3 Contaminated Site Management and Remediation
- GEOG 225.3 Hydrology of Canada
- GEOG 233.3 Weather and Climate
- GEOG 325.3 River 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 or **SLSC 460.3 Forest Soils**

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

- ANBI 375.3 Animals and the Environment
- **EVSC 202.3** Agricultural Climate Change
- 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 342.3** Soil Microbiology
- SLSC 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 15 credit units open electives

Rationale: Minor adjustments have been made to add course options for students.

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~~ 9 credit units open electives
- **EVSC 202.3** Agricultural Climate Change in Saskatchewan or **GEOG 233.3** Weather and Climate
- EVSC 203.3 Sampling and Laboratory Analysis

- GEOG 222.3 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
- **AGRC 110.3** Scientific Literacy and Communication for the Agricultural Sciences or RCM 200.3 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~~ 6 credit units open electives
- ~~**GEOG 322.3** Geographic Information Systems~~
- PLSC 214.3 Statistical Methods or STAT 245.3 Introduction to Statistical Methods
- ~~**RRM 201.1** Geographical Information Systems or **ASKI 201.3** Resource Management Project Assessment~~
- 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 or **ASKI 204.2** Introduction to the Duty to Consult~~
- **RRM 321.3** 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 or **SLSC 350.3** Terrestrial Restoration

Note: Students in their third year Fall (T1) semester should consider taking **RRM 301.9** Field Course in Renewable Resource Management, **RRM 321.3** Resource Data and Environmental Modeling, and **SLSC 232.3** Soil Genesis and Classification, if possible.

Year 4 (30 credit units)

- EVSC 485.3 Environmental Science Capstone Course or ENVS 401.3 Sustainability in Action
- RRM 421.6 Group Project in Renewable Resource Management

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

Indigenous Land Management

- ANTH 111.3 One World Many Peoples Introduction to Cultural Anthropology
- ~~ANTH 224.3~~
- ANTH 329.3 Environmental Anthropology
- ASKI 202.1 Introduction to Land Management Frameworks
- ASKI 204.2 Introduction to the Duty to Consult
- COMM 347.3 Indigenous Business in Canada
- ~~GEOG 462.3~~
- ~~HIST 170.6~~
- LAW 436.3 Aboriginal Law
- ~~LAW 437.3~~

Ecology

- AGRC 111.3 Introduction to Plant and Soil Sciences
- ANBI 375.3 Animals and the Environment
- ANBI 420.3 Comparative Animal Endocrinology
- BIOL 323.3 Plant Systematics and Evolution
- ~~BIOL 424.3~~
- EVSC 380.3 Grassland Soils and Vegetation
- ~~FABS 430.3~~
- ~~GEOG 371.3~~
- ~~PLSC 412.3~~
- PLSC 413.3 Advanced Plant Ecology
- PLSC 418.3 Management of Arable Grassland
- PLSC 422.3 Rangeland Ecology and Management
- PLSC 425.3 Forest Ecology
- **PLSC 427.3** Ecology and Management of Invasive Plants

~~**Geological Sciences**~~

- ~~**GEOL 121.3** Earth Processes~~
- ~~GEOL 312.3~~
- ~~GEOL 330.3~~

Northern Studies

- **GEOG 150.3** Introduction to the Circumpolar World
- **GEOG 351.3** Northern Environments
- ~~GEOG 352.3~~
- **GEOG 380.3** Environmental Geography of the Circumpolar North

~~**Physical Geography**~~

- ~~**GEOG 225.3** Hydrology of Canada~~
- ~~**GEOG 233.3** Weather and Climate~~
- ~~**GEOG 235.3** Earth Processes and Natural Hazards A Canadian Perspective~~
- ~~GEOG 271.3~~
- ~~**GEOG 280.3** Environmental Geography~~
- ~~**GEOG 323.3** Remote Sensing~~
- ~~**GEOG 328.3** Groundwater Hydrology~~
- ~~GEOG 332.3~~
- ~~**GEOG 351.3** Northern Environments~~
- ~~GEOG 371.3~~

Policy

- **AGRC 211.3** Global Food Security
- **AREC 342.3** Industrial Organization of Agricultural Markets
- **AREC 432.3** Rural Development Theory and Applications
- **AREC 451.3** Agricultural Policy Analysis
- **COMM 201.3** Introduction to Financial Accounting
- **ECON 231.3** Co operatives
- ~~ECON 347.3~~
- **GEOG 385.3** Analysis of Environmental Management and Policy Making
- **PHIL 226.3** Environmental Philosophy

- POLS 111.3 Politics Power and Government or POLS 112.3 Justice and Injustice in Politics and Law
- POLS 225.3 Canadian Public Administration and Administrative Law
- POLS 226.3 Canadian Public Policy
- POLS 326.3 Comparative Public Policy
- POLS 328.3 Public Policy Analysis
- ~~POLS 425.3~~

Resource Economics Policy

- **AREC 238.3** Natural Resource Economics
- AREC 315.3 Application of Microeconomic Theory to Agriculture
- ~~AREC 330.3~~
- AREC 430.3 Advanced Natural Resource Economics
- ECON 211.3 Intermediate Microeconomics
- ECON 275.3 Economics of Natural Resources
- ECON 277.3 Economics of the Environment

Soil Science

- EVSC 220.3 Environmental Soil Science
- EVSC 421.3 Contaminated Site Management and Remediation
- **GEOG 235.3** Earth Processes and Natural Hazards A Canadian Perspective
- 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 350.3 Terrestrial Restoration
- SLSC 444.3 Soil Ecology
- SLSC 460.3 Forest Soils
- ~~**SLSC 480.3** Soils and Boreal Landscapes~~

Techniques

- **AGRC 445.3** Experiential Learning in the Workplace

- ENVE 381.3 Sustainability and Environmental Assessment
- **FABS 212.3** Agrifood and Resources Microbiology or **BMSC 210.3** Microbiology
- **GEOG 322.3 Geographic Information Systems**
- GEOG 323.3 Remote Sensing
- GEOG 385.3 Analysis of Environmental Management and Policy Making
- GEOG 386.3 Environmental Impact Assessment

Water Science

- BIOL 412.3 Limnology
- BIOL 475.3 Ecological Toxicology
- CHEM 375.3 Environmental Chemistry
- ENVE 432.3 Land Management and Reclamation
- ~~**FABS 212.3** Agrifood and Resources Microbiology OR **BMSC 210.3** Microbiology~~
- ~~FABS 360.3~~
- ~~FABS 430.3~~
- GEOG 225.3 Hydrology of Canada
- GEOG 328.3 Groundwater Hydrology
- TOX 301.3 Environmental Toxicology
- TOX 321.3 Risk Assessment and Regulatory Toxicology

Rationale: Changes to required and optional courses have been made to remove courses that are no longer offered, to reorganize elective options, and to reflect the competencies and training deemed important for this major.

Soil Science

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

Year 1 (30 credit units)

- AGRC 110.3 Scientific Literacy and Communication for the Agricultural Sciences
- AGRC 111.3 Introduction to Plant and Soil Sciences
- AGRC 112.3 Animal Agriculture and Food Science
- AGRC 113.3 Introduction to Agri Food Economics

- AREC 220.3 History of Indigenous Agriculture in Canada or INDG 107.3 Introduction to Canadian Indigenous Studies
- 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
- 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 Science

- **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)

- **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
- **SLSC 240.3** Agricultural Soil Science or **EVSC 220.3** Environmental Soil Science

English Language Writing Requirement

Choose 3 credit units from the following:

- **ANTH 302.3** The Practice of Ethnography
- **ANTH 306.3** Anthropology of Disaster and Dislocation
- **ANTH 310.3** Anthropology of Gender
- ANTH 421.3
- **CPSJ 203.3** Cultivating Humanity
- **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
- **HIST 115.3** History Matters Ideas and Culture
- **HIST 125.3** History Matters Indigenous Colonial and Post Colonial Histories
- **HIST 135.3** History Matters Gender Sex and Society
- **HIST 145.3** History Matters War Violence and Politics
- **HIST 155.3** History Matters Science and Environment
- **HIST 165.3** History Matters Health and Society
- **HIST 175.3** History Matters Identities and Communities in Transition
- **HIST 185.3** History Matters Conflict Law Politics and the State
- **HIST 193.3** History Matters Topics in Canadian History
- **HIST 194.3** History Matters Topics in European History
- **PHIL 120.3** Knowledge Mind and Existence

- PHIL 121.3 Introduction to World Philosophies
- PHIL 133.3 Introduction to Ethics and Values
- PHIL 208.3 Ancient Philosophy Presocratics to Plato
- PHIL 233.3 Ethical Theory
- POLS 245.3 Politics of Africa
- POLS 323.3 Indigenous Policies and Programs
- POLS 328.3 Public Policy Analysis
- POLS 333.3 Theory and Politics of Law
- POLS 336.3 Justice and Democracy
- POLS 422.3 Indigenous Governance and Self Determined Sustainable Development
- POLS 461.3 Topics in Global Politics
- PSY 323.3 Qualitative Study of Lives and Social Practices
- PSY 355.3 Research in Advanced Cognitive Science
- RLST 280.3 Methodologies and Approaches to Study of Religions
- RLST 362.3 Monsters and Mischief Makers

Open Electives

- Choose 9 credit units open electives

Years 3 & 4 (60 credit units)

- AREC 238.3 Natural Resource Economics
- **EVSC 110.3** Renewable Resources and Environment or GEOL 206.3 Earth Systems or GEOG 120.3 Introduction to Global Environmental Systems
- **EVSC 202.3** Agricultural Climate Change in Saskatchewan
- EVSC 380.3 Grassland Soils and Vegetation or **SLSC 460.3** Forest Soils or **SLSC 480.3** Soils and Boreal Landscapes
- 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 350.3 Terrestrial Restoration
- ~~**SLSC 444.3** Soil Ecology~~
- ~~**SLSC 460.3** Forest Soils or **SLSC 480.3** Soils and Boreal Landscapes~~

Choose 3 credit units from the following:

Selection will depend upon the student's area of interest

- EVSC 485.3 Environmental Science Capstone Course
- ENVS 401.3 Sustainability in Action
- RRM 421.6 Group Project in Renewable Resource Management (3 credit units count as restricted elective)
- SLSC 492.3 Research and Term Paper
- 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 422.3 Rangeland Ecology and Management
- PLSC 425.3 Forest Ecology

Restricted Electives

- Choose ~~9~~ 12 credit units of electives, as approved by the Soil Science Program Advisor (may include 3 credit units of SLSC 494.6 Research and Thesis or **RRM 421.6** Group Project in Renewable Resource Management). Students may choose **AGRC 445.3** Experiential Learning in the Workplace if their summer work is related to Soil Science and Environmental Science. Students may also choose **RRM 321.3** Resource Data and Environmental Modeling.

Open Electives

- Choose 9 credit units open electives

Rationale: Changes to the required and optional courses for the B.S.A. Soil Science reflect changes to course offerings and the competencies and training deemed important for this major.

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~~
- EVSC 421.3 Contaminated Site Management and Remediation
- RRM 215.3 Identification of Saskatchewan Plants and Soils
- **RRM 321.3** Resource Data and Environmental Modeling
- 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 350.3 Terrestrial Restoration
- SLSC 444.3 Soil Ecology
- SLSC 460.3 Forest Soils or **SLSC 480.3** Soils and Boreal Landscapes
- ~~**SLSC 480.3** Soils and Boreal Landscapes~~
- SLSC 492.3 Research and Term Paper

Rationale: These revisions have been made to reflect courses that are no longer offered and add additional choices for students.

Food and Bioproduct Sciences

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

Please note that FABS 110.3 The Science of Food may be taken in year one or two.

Year 1 (30 credit units)

- AGRC 110.3 Scientific Literacy and Communication for the Agricultural Sciences
- AGRC 111.3 Introduction to Plant and Soil Sciences
- AGRC 112.3 Animal Agriculture and Food Science
- AGRC 113.3 Introduction to Agri Food Economics
- 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
- CHEM 250.3 Introduction to Organic Chemistry
- ECON 111.3 Introductory Microeconomics
- FABS 110.3 The Science of Food*

Note: FABS 110.3 The Science of Food can be taken in Years 1, 2, or if needed, during a Spring Term.

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 2 (30 credit units)

- AREC 220.3 History of Indigenous Agriculture in Canada or INDG 107.3 Introduction to Canadian Indigenous Studies
- BMSC 200.3 Biomolecules
- BMSC 230.3 Metabolism
- FABS 110.3 The Science of Food*
- FABS 211.3 Introductory Bioproduct Science
- 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
- NUTR 120.3 Basic Nutrition
- PLSC 214.3 Statistical Methods or STAT 245.3 Introduction to Statistical Methods

Note: FABS 110.3 The Science of Food can be taken in Years 1, 2, or if needed, during a Spring Term.

English Language Writing Requirement

Choose 3 credit units from the following:

- ANTH 302.3 The Practice of Ethnography
- ANTH 306.3 Anthropology of Disaster and Dislocation
- ANTH 310.3 Anthropology of Gender
- ANTH 421.3
- CPSJ 203.3 Cultivating Humanity
- 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
- HIST 115.3 History Matters Ideas and Culture
- HIST 125.3 History Matters Indigenous Colonial and Post Colonial Histories
- HIST 135.3 History Matters Gender Sex and Society
- HIST 145.3 History Matters War Violence and Politics
- HIST 155.3 History Matters Science and Environment

- HIST 165.3 History Matters Health and Society
- HIST 175.3 History Matters Identities and Communities in Transition
- HIST 185.3 History Matters Conflict Law Politics and the State
- HIST 193.3 History Matters Topics in Canadian History
- HIST 194.3 History Matters Topics in European History
- PHIL 120.3 Knowledge Mind and Existence
- PHIL 121.3 Introduction to World Philosophies
- PHIL 133.3 Introduction to Ethics and Values
- PHIL 208.3 Ancient Philosophy Presocratics to Plato
- PHIL 233.3 Ethical Theory
- POLS 245.3 Politics of Africa
- POLS 323.3 Indigenous Policies and Programs
- POLS 328.3 Public Policy Analysis
- POLS 333.3 Theory and Politics of Law
- POLS 336.3 Justice and Democracy
- POLS 422.3 Indigenous Governance and Self Determined Sustainable Development
- POLS 461.3 Topics in Global Politics
- PSY 323.3 Qualitative Study of Lives and Social Practices
- PSY 355.3 Research in Advanced Cognitive Science
- RLST 280.3 Methodologies and Approaches to Study of Religions
- RLST 362.3 Monsters and Mischief Makers

Years 3 and 4 (60 credit units)

- ~~**BLE 303.3** Principles of Food and Bioproducts Engineering~~
- COMM 204.3 Introduction to Marketing or AREC 230.3 Innovation and Entrepreneurship
- FABS 315.3 Food Chemistry
- FABS 317.3 Food and Bioproducts Analysis
- FABS 325.3 Food Microbiology and Safety
- FABS 334.3 Industrial Microbiology
- FABS 345.3 Unit Operations in Food Processing

- **FABS 375.3** A Practical Approach to Seed Processing
- FABS 452.3 Quality Assurance and HACCP
- FABS 456.3 Laboratory Techniques in Food and Bioproduct Sciences
- FABS 492.3 Literature Thesis or FABS 494.6 Research Thesis (3 credit units of FABS 494.6 Research Thesis count as restricted electives)

Choose 18 credit units of restricted electives from the following:

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

- BMSC 240.3 Laboratory Techniques
- BMSC 320.3 Nucleic Acids From Central Dogma to Human Disease
- CHEM 115.3 General Chemistry II Chemical Processes
- CHEM 221.3 Analytical Chemistry I
- CHEM 231.3 Inorganic Chemistry I
- CHEM 242.3 Thermodynamics and Kinetics
- CHEM 255.3 Bio Organic Chemistry
- FABS 222.3 Improving Food Security through Food Science and Technology
- FABS 298.3 Special Topics
- FABS 360.3
- FABS 362.3 Functional Foods and Nutraceuticals
- FABS 371.3 Food Biotechnology
- FABS 398.3 Special Topics
- FABS 401.3 Dairy Science and Technology
- FABS 411.3 Lipid Science and Technology
- FABS 457.3 Meat Science and Technology
- FABS 460.3 Protein Science and Technology
- FABS 474.3 Food Enzymology
- FABS 493.3 Product Development
- FABS 494.6 Research Thesis
- FABS 498.3 Special Topics

- **NUTR 310.3** Food Culture and Human Nutrition
- **NUTR 322.3** Nutrition Throughout the Lifespan
- **PLSC 420.3** Grain Chemistry and Technology

Open Electives

- Choose 12 credit units of open electives

Rationale: This minor changes include the removal of BLE 303.3, which is no longer offered, and the addition of the proposed new course FABS 375.3.

Food and Nutrition

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

Year 1 (30 credit units)

- **AREC 220.3** History of Indigenous Agriculture in Canada or **INDG 107.3** Introduction to Canadian Indigenous Studies
- **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
- **CHEM 250.3** Introduction to Organic Chemistry
- **ECON 111.3** Introductory Microeconomics
- **FABS 110.3** The Science of Food
- **NUTR 120.3** Basic Nutrition

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 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)

- BMSC 200.3 Biomolecules
- BMSC 230.3 Metabolism
- FABS 212.3 Agrifood and Resources Microbiology OR BMSC 210.3 Microbiology
- FABS 222.3 Improving Food Security through Food Science and Technology
- MATH 104.3 Elementary Calculus or MATH 125.3 Mathematics for the Life Sciences
- NUTR 210.3 Food Fundamentals and Preparation
- NUTR 221.3 Advanced Nutrition Micronutrients for Nutrition Program
- NUTR 305.3 Research Methods
- PLSC 214.3 Statistical Methods

Open Electives

- Choose 3 credit units of Open Electives

Years 3 and 4 (60 credit units)

- FABS 315.3 Food Chemistry
- FABS 325.3 Food Microbiology and Safety
- FABS 345.3 Unit Operations in Food Processing
- FABS 362.3 Functional Foods and Nutraceuticals
- FABS 317.3 Food and Bioproducts Analysis
- FABS 452.3 Quality Assurance and HACCP
- FABS 492.3 Literature Thesis or FABS 494.6 Research Thesis Research Thesis (3 credit units of FABS 494.6 Research Thesis Research Thesis count as restricted electives)
- NUTR 310.3 Food Culture and Human Nutrition
- NUTR 321.3 Advanced Nutrition Macronutrients and Energy
- NUTR 322.3 Nutrition Throughout the Lifespan
- NUTR 365.3 Quantity Food Production and Service
- NUTR 420.3 Current Issues in Nutrition

Choose 15 credit units of restricted electives from the following:

- BMSC 240.3 Laboratory Techniques
- BMSC 320.3 Nucleic Acids From Central Dogma to Human Disease
- CHEM 115.3 General Chemistry II Chemical Processes
- CHEM 221.3 Analytical Chemistry I
- CHEM 231.3 Inorganic Chemistry I
- CHEM 242.3 Thermodynamics and Kinetics
- CHEM 255.3 Bio Organic Chemistry
- FABS 298.3 Special Topics
- FABS 360.3
- FABS 371.3 Food Biotechnology
- FABS 398.3 Special Topics
- FABS 401.3 Dairy Science and Technology
- FABS 411.3 Lipid Science and Technology
- **FABS 456.3** Laboratory Techniques in Food and Bioproduct Sciences

- **FABS 457.3** Meat Science and Technology
- **FABS 460.3** Protein Science and Technology
- **FABS 474.3** Food Enzymology
- **FABS 493.3** Product Development
- **FABS 494.6** Research Thesis
- **FABS 498.3** Special Topics
- **KIN 121.3** Functional Basis of Physical Activity
- **KIN 122.3** Social Behavioral Foundations of Physical Activity
- **NUTR 350.3** Introduction to Public Health and Community Nutrition
- **PLSC 201.3** Field Crops of Western Canada
- **PLSC 235.3** Urban Agriculture
- **PLSC 420.3** Grain Chemistry and Technology

Open Electives

- Choose 9 credit units of Open Electives

Rationale: The addition of FABS 456.3 to restricted electives provides more options and flexibility for students.

Kanawayihetaytan Askiy

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

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

The Diploma in Indigenous Resource Management provides students with a broad background in resource management for Indigenous communities. The program teaches students the skills required for future employment as land managers as well as the scientific and traditional knowledge required for research and decision-making. The diploma consists of a combination of in-person and online courses to allow students flexibility in their scheduling. Students who have completed the Kanawayihetaytan Askiy Certificate can ladder into the program and complete the Diploma in Indigenous Resource Management with the completion of 39 credit units. Alternatively, students can enter the Diploma in Indigenous Resource Management directly from high school or another post-secondary program.

Core Requirements (21 credit units)

- **AGRC 110.3** Scientific Literacy and Communication for the Agricultural Sciences

- ASKI 202.1 Introduction to Land Management Frameworks
- ASKI 204.2 Introduction to the Duty to Consult
- EVSC 110.3 Renewable Resources and Environment
- INDG 107.3 Introduction to Canadian Indigenous Studies
- GEOG 120.3 Introduction to Global Environmental Systems
- AGRC 111.3 Introduction to Plant and Soil Sciences or ASKI 101.3 Field Studies in the Environment
- RRM 114.3 Introductory Resource Economics and Policy or ASKI 105.3 Economics and Planning

Indigenous Studies (6 credit units)

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

- AREC 220.3 History of Indigenous Agriculture in Canada
- INDG 210.3 Indigenous Ways of Knowing
- INDG 241.3 Weaving Indigenous Science and Western Science
- INDG 264.3 Aboriginal People and Canadian Politics
- INDG 265.3 Aboriginal People and Development
- POLS 222.3 Indigenous Governance and Politics
- POLS 323.3 Indigenous Policies and Programs
- POLS 324.3 Metis otehpayimusuak and apihtawikosisanak Governance
- RRM 312.3 Natural Resource Management and Indigenous Peoples

Restricted Electives (27 credit units)

Choose **27 credit units** from any of the following subgroups of courses.

Note: While students can opt to take several courses from one subgroup, they may also select courses from across the subgroups. These subgroups are intended to identify for students the specializations embedded into the diploma but also to provide maximum flexibility.

Tools and Techniques

- ~~**EVSC 204.1** Soil Sampling Design and Implementation~~
- GEOG 222.3 Geomatics
- GEOG 322.3 Geographic Information Systems or RRM 321.3 Resource Data and Environmental Modeling ~~**RRM 323.2** Resource Data and Environmental Modeling and **RRM 201.1** Geographical Information Systems~~

- RRM 215.3 Identification of Saskatchewan Plants and Soils
- ~~**SLSC 205.1** Introduction to Field Description of Soils~~
- PLSC 202.3 Introductory Precision Agriculture

Land-based Field Studies

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

Soils and Landscapes

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

Plants and Biology

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

Policy, Planning, and Law

- ASKI 102.3 Introduction to Legal Concepts in Resource Management

- **ASKI 103.3** Legal Process and Instruments in Resource Management
- **ASKI 104.3** Introduction to Management Issues or **COMM 101.3** Introduction to Business
- **ASKI 201.3** Resource Management Project Assessment
- **GEOG 380.3** Environmental Geography of the Circumpolar North
- **GEOG 385.3** Analysis of Environmental Management and Policy Making
- **GEOG 386.3** Environmental Impact Assessment
- PLAN 329.3

Food Security and Sovereignty

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

Animal Science

- **AGRC 112.3** Animal Agriculture and Food Science
- **AGRC 113.3** Introduction to Agri Food Economics
- **ANSC 212.3** Livestock and Poultry Production
- **ANBI 375.3** Animals and the Environment

Open Electives (6 credit units)

Please choose **6 credit units** of open electives.

Rationale: RRM 323.2 has been changed to RRM 321.3, and EVSC 204.1, SLSC 205.1, and RRM 201.1 are not offered with enough regularity (due to low enrollment) to continue to include them in the program.

University Course Challenge – December 2024
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)

Anthropology

Minor program revisions
Bachelor of Science Honours, Double Honours and Three-year in Anthropology
Add ANTH 440 to the restricted electives in the C4 Major Requirement.

Bachelor of Science Honours (B.Sc. Honours) - Anthropology
C4 Major Requirement (54 credit units)
...

Choose **42 credit units** from the following:

At least 15 credit units must at the 300-level or higher.

- **ANTH 231.3** Cross Cultural Perspectives on Health and Illness
- **ANTH 250.3** Introduction to Archaeological Science
- **ANTH 251.3** Introduction to Archaeological Interpretation
- **ANTH 259.3** Archaeology of North America
- **ANTH 270.3** Human Evolution
- **ANTH 298.3** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 299.6** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 304.3** Anthropology Research Course
- **ANTH 305.3** Anthropology Reading Course
- **ANTH 329.3** Environmental Anthropology
- **ANTH 331.3** The Archaeology of Human Environmental Impact
- **ANTH 332.3** Anthropology of Infectious Disease
- **ANTH 350.3** Introduction to Boreal Forest Archaeology
- ANTH 352.3
- **ANTH 353.3** Plains Archaeology
- **ANTH 358.3** Zooarchaeology I
- **ANTH 359.3** Archaeology of the Northwest Coast and Plateau
- **ANTH 361.6** Archaeological Field Methods
- **ANTH 370.3** Human Osteology
- **ANTH 386.3** Computer Applications in Archaeology
- **ANTH 398.3** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 399.6** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 440.3** Archaeology of Food
- **ANTH 458.3** Zooarchaeology II
- ANTH 459.3
- **ANTH 462.3** Contemporary Archaeological Theory
- ANTH 465.3
- **ANTH 471.3** Forensic Anthropology
- **ANTH 472.3** Palaeopathology
- **ANTH 475.3** Bioarchaeology
- **ANTH 498.3** Special Topics (if the topic relates to archaeology or biological anthropology)

- **ANTH 499.6** Special Topics (if the topic relates to archaeology or biological anthropology)
- **BIOL 324.3** Plants and Human Affairs
- **CPPS 310.3** Basic Human Anatomy
- **GEOG 235.3** Earth Processes and Natural Hazards A Canadian Perspective
- **GEOL 245.3** Introduction to Sedimentary Rocks
- **GEOL 247.3** Palaeontology

Bachelor of Science Four-year (B.Sc. Four-year) - Anthropology
C4 Major Requirement (42 credit units)

…

Choose **36 credit units** from the following:

At least 9 credit units must at the 300-level or higher.

- **ANTH 231.3** Cross Cultural Perspectives on Health and Illness
- **ANTH 250.3** Introduction to Archaeological Science
- **ANTH 251.3** Introduction to Archaeological Interpretation
- **ANTH 259.3** Archaeology of North America
- **ANTH 270.3** Human Evolution
- **ANTH 298.3** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 299.6** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 304.3** Anthropology Research Course
- **ANTH 305.3** Anthropology Reading Course
- **ANTH 329.3** Environmental Anthropology
- **ANTH 331.3** The Archaeology of Human Environmental Impact
- **ANTH 332.3** Anthropology of Infectious Disease
- **ANTH 350.3** Introduction to Boreal Forest Archaeology
- ANTH 352.3
- **ANTH 353.3** Plains Archaeology
- **ANTH 358.3** Zooarchaeology I
- **ANTH 359.3** Archaeology of the Northwest Coast and Plateau
- **ANTH 361.6** Archaeological Field Methods
- **ANTH 370.3** Human Osteology
- **ANTH 386.3** Computer Applications in Archaeology
- **ANTH 398.3** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 399.6** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 440.3** Archaeology of Food
- **ANTH 458.3** Zooarchaeology II
- ANTH 459.3
- **ANTH 462.3** Contemporary Archaeological Theory
- ANTH 465.3
- **ANTH 471.3** Forensic Anthropology
- **ANTH 472.3** Palaeopathology
- **ANTH 475.3** Bioarchaeology
- **ANTH 498.3** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 499.6** Special Topics (if the topic relates to archaeology or biological anthropology)
- **BIOL 324.3** Plants and Human Affairs
- **CPPS 310.3** Basic Human Anatomy
- **GEOG 235.3** Earth Processes and Natural Hazards A Canadian Perspective
- **GEOL 245.3** Introduction to Sedimentary Rocks

- **GEOL 247.3** Palaeontology

Bachelor of Science Double Honours - Anthropology - Major 1
C4 Major Requirement (36 credit units)

...

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

- **ANTH 231.3** Cross Cultural Perspectives on Health and Illness
- **ANTH 250.3** Introduction to Archaeological Science
- **ANTH 251.3** Introduction to Archaeological Interpretation
- **ANTH 259.3** Archaeology of North America
- **ANTH 270.3** Human Evolution
- **ANTH 298.3** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 299.6** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 304.3** Anthropology Research Course
- **ANTH 305.3** Anthropology Reading Course
- **ANTH 329.3** Environmental Anthropology
- **ANTH 331.3** The Archaeology of Human Environmental Impact
- **ANTH 332.3** Anthropology of Infectious Disease
- **ANTH 350.3** Introduction to Boreal Forest Archaeology
- ANTH 352.3
- **ANTH 353.3** Plains Archaeology
- **ANTH 358.3** Zooarchaeology I
- **ANTH 359.3** Archaeology of the Northwest Coast and Plateau
- **ANTH 361.6** Archaeological Field Methods
- **ANTH 370.3** Human Osteology
- **ANTH 386.3** Computer Applications in Archaeology
- **ANTH 398.3** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 399.6** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 440.3** Archaeology of Food
- **ANTH 458.3** Zooarchaeology II
- ANTH 459.3
- **ANTH 462.3** Contemporary Archaeological Theory
- ANTH 465.3
- **ANTH 471.3** Forensic Anthropology
- **ANTH 472.3** Palaeopathology
- **ANTH 475.3** Bioarchaeology
- **ANTH 498.3** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 499.6** Special Topics (if the topic relates to archaeology or biological anthropology)
- **BIOL 324.3** Plants and Human Affairs
- **CPPS 310.3** Basic Human Anatomy

Bachelor of Science Double Honours - Anthropology - Major 2 (Science Option)
Requirements (36 credit units)

...

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

- **ANTH 231.3** Cross Cultural Perspectives on Health and Illness

- **ANTH 250.3** Introduction to Archaeological Science
- **ANTH 251.3** Introduction to Archaeological Interpretation
- **ANTH 259.3** Archaeology of North America
- **ANTH 270.3** Human Evolution
- **ANTH 298.3** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 299.6** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 304.3** Anthropology Research Course
- **ANTH 305.3** Anthropology Reading Course
- **ANTH 329.3** Environmental Anthropology
- **ANTH 331.3** The Archaeology of Human Environmental Impact
- **ANTH 332.3** Anthropology of Infectious Disease
- **ANTH 350.3** Introduction to Boreal Forest Archaeology
- ANTH 352.3
- **ANTH 353.3** Plains Archaeology
- **ANTH 358.3** Zooarchaeology I
- **ANTH 359.3** Archaeology of the Northwest Coast and Plateau
- **ANTH 361.6** Archaeological Field Methods
- **ANTH 370.3** Human Osteology
- **ANTH 386.3** Computer Applications in Archaeology
- **ANTH 398.3** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 399.6** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 440.3** Archaeology of Food
- **ANTH 458.3** Zooarchaeology II
- ANTH 459.3
- **ANTH 462.3** Contemporary Archaeological Theory
- ANTH 465.3
- **ANTH 471.3** Forensic Anthropology
- **ANTH 472.3** Palaeopathology
- **ANTH 475.3** Bioarchaeology
- **ANTH 498.3** Special Topics (if the topic relates to archaeology or biological anthropology)
- **ANTH 499.6** Special Topics (if the topic relates to archaeology or biological anthropology)
- **BIOL 324.3** Plants and Human Affairs
- **CPPS 310.3** Basic Human Anatomy

Rationale: ANTH 440 was previously offered as ARTH 498.3 and was included under that label. This update is to make clear that the course can continue to be used in this list. This course was included on the list of C4 (Major Requirements) when it was ARCH 498.

Environment and Society

Minor program revisions
Bachelor of Arts and Science Honours and Four-year in Environment and Society
In the J4 Major requirement, add GEOG 240 to the required courses, remove it from the restricted elective list in which it appears and reduce the credit units required for that list by 3 credit units; replace PLAN 329 with PLAN 429; and add GEOG 421 to the list of restricted social science electives as shown below.

Bachelor of Arts and Science Honours (B.A.& Sc. Honours) - Environment & Society - Climate Change
J4 Major Requirement (78 credit units)

- **GEOG 120.3** Introduction to Global Environmental Systems

- **GEOG 125.3** Environmental Science and Society
- **GEOG 130.3** Environment Health and Planning
- **GEOG 222.3** Geomatics
- **GEOG 240.3** Sustainable Cities and Regions
- **GEOG 280.3** Environmental Geography
- **GEOG 302.3** Quantitative Methods in Geography

…

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

- ~~PLAN 329.3~~
- **PLAN 341.3** Urban Planning
- **PLAN 346.3** Introduction to Urban Design
- **PLAN 350.3** Transportation Planning and Geography
- **PLAN 360.3** Urban Data Analysis and Visualization
- **GEOG 429.3** Integrated Water Resource Planning
- **PLAN 441.3** Challenges in Urban Development
- **PLAN 442.3** Regional Planning

Option C: Climate Change (48 credit units)

…

Choose ~~**15**~~ **12 credit units** from the following, with at least 3 credit units at the 300-level or higher:

- **ANTH 240.3** Cultural Landscapes and Environments
- **ANTH 244.3** Political Ecology Anthropology and Global Environmental Issues
- **ANTH 329.3** Environmental Anthropology
- **ECON 277.3** Economics of the Environment
- **ENVS 201.3** Foundations of Sustainability
- **GEOG 150.3** Introduction to the Circumpolar World
- ~~**GEOG 240.3** Sustainable Cities and Regions~~
- **GEOG 322.3** Geographic Information Systems
- **GEOG 348.3** Introduction to Demography
- **GEOG 364.3** Geography of Environment and Health
- **GEOG 385.3** Analysis of Environmental Management and Policy Making
- **GEOG 386.3** Environmental Impact Assessment
- **GEOG 421.3** Local Water Security
- **INDG 201.3** Introduction to the Health and Well Being of Indigenous Peoples
- **INDG 241.3** Weaving Indigenous Science and Western Science
- **PHIL 226.3** Environmental Philosophy
- **SOC 202.3** Environmental Sociology
- **WGST 305.3** Geographies of Gender and Ecology

Bachelor of Arts and Science Honours (B.A.& Sc. Honours) - Environment & Society - Environmental Challenges

J4 Major Requirement (78 credit units)

- **GEOG 120.3** Introduction to Global Environmental Systems
- **GEOG 125.3** Environmental Science and Society
- **GEOG 130.3** Environment Health and Planning
- **GEOG 222.3** Geomatics

- **GEOG 240.3** Sustainable Cities and Regions
- **GEOG 280.3** Environmental Geography
- **GEOG 302.3** Quantitative Methods in Geography

…

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

- ~~PLAN 329.3~~
- **PLAN 341.3** Urban Planning
- **PLAN 346.3** Introduction to Urban Design
- **PLAN 350.3** Transportation Planning and Geography
- **PLAN 360.3** Urban Data Analysis and Visualization
- **GEOG 429.3** Integrated Water Resource Planning
- **PLAN 441.3** Challenges in Urban Development
- **PLAN 442.3** Regional Planning

Option A: Environmental Challenges (48 credit units)

…

Choose ~~**12**~~ **9 credit units** from the following, with at least 3 credit units at the 300-level above:

- **ANTH 240.3** Cultural Landscapes and Environments
- **ANTH 244.3** Political Ecology Anthropology and Global Environmental Issues
- **ANTH 329.3** Environmental Anthropology
- **GEOG 150.3** Introduction to the Circumpolar World
- ~~**GEOG 240.3** Sustainable Cities and Regions~~
- **GEOG 333.3** Global Climate Change
- **GEOG 348.3** Introduction to Demography
- **GEOG 364.3** Geography of Environment and Health
- **GEOG 385.3** Analysis of Environmental Management and Policy Making
- **GEOG 386.3** Environmental Impact Assessment
- **GEOG 421.3** Local Water Security
- **GEOG 465.3** Environment and Health in Indigenous Communities
- **INDG 201.3** Introduction to the Health and Well Being of Indigenous Peoples
- **INDG 241.3** Weaving Indigenous Science and Western Science
- **PHIL 226.3** Environmental Philosophy
- **POLS 226.3** Canadian Public Policy
- **SOC 202.3** Environmental Sociology

Bachelor of Arts and Science Honours (B.A.& Sc. Honours) - Environment & Society - Environmental Management
J4 Major Requirement (78 credit units)

Note: Some courses may require prerequisites that are not listed among the required courses.

- **GEOG 120.3** Introduction to Global Environmental Systems
- **GEOG 125.3** Environmental Science and Society
- **GEOG 130.3** Environment Health and Planning
- **GEOG 222.3** Geomatics
- **GEOG 240.3** Sustainable Cities and Regions
- **GEOG 280.3** Environmental Geography

- **GEOG 302.3** Quantitative Methods in Geography

…

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

- ~~PLAN 329.3~~
- **PLAN 341.3** Urban Planning
- **PLAN 346.3** Introduction to Urban Design
- **PLAN 350.3** Transportation Planning and Geography
- **PLAN 360.3** Urban Data Analysis and Visualization
- **GEOG 429.3** Integrated Water Resource Planning
- **PLAN 441.3** Challenges in Urban Development
- **PLAN 442.3** Regional Planning

Option B: Environmental Management (48 credit units)

…

Choose ~~12~~ **9 credit units** from the following, with at least 3 credit units at the 300-level or higher:

- **ANTH 240.3** Cultural Landscapes and Environments
- **ANTH 244.3** Political Ecology Anthropology and Global Environmental Issues
- **ANTH 329.3** Environmental Anthropology
- **ENVS 201.3** Foundations of Sustainability
- **GEOG 150.3** Introduction to the Circumpolar World
- ~~**GEOG 240.3** Sustainable Cities and Regions~~
- **GEOG 322.3** Geographic Information Systems
- **GEOG 333.3** Global Climate Change
- **GEOG 348.3** Introduction to Demography
- **GEOG 386.3** Environmental Impact Assessment
- **GEOG 421.3** Local Water Security
- **GEOG 465.3** Environment and Health in Indigenous Communities
- **INDG 201.3** Introduction to the Health and Well Being of Indigenous Peoples
- **INDG 241.3** Weaving Indigenous Science and Western Science
- **PHIL 226.3** Environmental Philosophy
- **POLS 226.3** Canadian Public Policy
- **SOC 202.3** Environmental Sociology

Bachelor of Arts and Science Four-year (B.A.& Sc. Four-year) - Environment & Society - Climate Change

J4 Major Requirement (75 credit units)

- **GEOG 120.3** Introduction to Global Environmental Systems
- **GEOG 125.3** Environmental Science and Society
- **GEOG 130.3** Environment Health and Planning
- **GEOG 222.3** Geomatics
- **GEOG 240.3** Sustainable Cities and Regions
- **GEOG 280.3** Environmental Geography
- **GEOG 302.3** Quantitative Methods in Geography

…

Choose **3 credit units** from:

- ~~PLAN 329.3~~
- **PLAN 341.3** Urban Planning
- **PLAN 346.3** Introduction to Urban Design
- **PLAN 350.3** Transportation Planning and Geography
- **PLAN 360.3** Urban Data Analysis and Visualization
- **GEOG 429.3** Integrated Water Resource Planning
- **PLAN 441.3** Challenges in Urban Development
- **PLAN 442.3** Regional Planning

Option C: Climate Change (45 credit units)

…

Choose ~~**15**~~ **12** **credit units** from the following, with at least 3 credit units at the 300-level or higher:

- **ANTH 240.3** Cultural Landscapes and Environments
- **ANTH 244.3** Political Ecology Anthropology and Global Environmental Issues
- **ANTH 329.3** Environmental Anthropology
- **ECON 277.3** Economics of the Environment
- **ENVS 201.3** Foundations of Sustainability
- **GEOG 150.3** Introduction to the Circumpolar World
- ~~**GEOG 240.3** Sustainable Cities and Regions~~
- **GEOG 322.3** Geographic Information Systems
- **GEOG 348.3** Introduction to Demography
- **GEOG 364.3** Geography of Environment and Health
- **GEOG 385.3** Analysis of Environmental Management and Policy Making
- **GEOG 386.3** Environmental Impact Assessment
- **GEOG 421.3** Local Water Security
- **INDG 201.3** Introduction to the Health and Well Being of Indigenous Peoples
- **INDG 241.3** Weaving Indigenous Science and Western Science
- **PHIL 226.3** Environmental Philosophy
- **SOC 202.3** Environmental Sociology
- **WGST 305.3** Geographies of Gender and Ecology

Bachelor of Arts and Science Four-year (B.A.& Sc. Four-year) - Environment & Society - Environmental Challenges

J4 Major Requirement (75 credit units)

- **GEOG 120.3** Introduction to Global Environmental Systems
- **GEOG 125.3** Environmental Science and Society
- **GEOG 130.3** Environment Health and Planning
- **GEOG 222.3** Geomatics
- **GEOG 240.3** Sustainable Cities and Regions
- **GEOG 280.3** Environmental Geography
- **GEOG 302.3** Quantitative Methods in Geography

…

Choose **3 credit units** from:

- ~~PLAN 329.3~~
- **PLAN 341.3** Urban Planning
- **PLAN 346.3** Introduction to Urban Design
- **PLAN 350.3** Transportation Planning and Geography
- **PLAN 360.3** Urban Data Analysis and Visualization
- **GEOG 429.3** Integrated Water Resource Planning
- **PLAN 441.3** Challenges in Urban Development
- **PLAN 442.3** Regional Planning

Option A: Environmental Challenge (45 credit units)

…

Choose ~~**12**~~ **9** **credit units** from the following, with at least 3 credit units at the 300-level or higher:

- **ANTH 240.3** Cultural Landscapes and Environments
- **ANTH 244.3** Political Ecology Anthropology and Global Environmental Issues
- **ANTH 329.3** Environmental Anthropology
- **GEOG 150.3** Introduction to the Circumpolar World
- ~~**GEOG 240.3** Sustainable Cities and Regions~~
- **GEOG 333.3** Global Climate Change
- **GEOG 348.3** Introduction to Demography
- **GEOG 364.3** Geography of Environment and Health
- **GEOG 385.3** Analysis of Environmental Management and Policy Making
- **GEOG 386.3** Environmental Impact Assessment
- **GEOG 465.3** Environment and Health in Indigenous Communities
- **GEOG 421.3** Local Water Security
- **INDG 201.3** Introduction to the Health and Well Being of Indigenous Peoples
- **INDG 241.3** Weaving Indigenous Science and Western Science
- **PHIL 226.3** Environmental Philosophy
- **POLS 226.3** Canadian Public Policy
- **SOC 202.3** Environmental Sociology

Bachelor of Arts and Science Four-year (B.A.& Sc. Four-year) - Environment & Society - Environmental Management
J4 Major Requirement (75 credit units)

- **GEOG 120.3** Introduction to Global Environmental Systems
- **GEOG 125.3** Environmental Science and Society
- **GEOG 130.3** Environment Health and Planning
- **GEOG 222.3** Geomatics
- **GEOG 240.3** Sustainable Cities and Regions
- **GEOG 280.3** Environmental Geography
- **GEOG 302.3** Quantitative Methods in Geography

…

Choose **3 credit units** from:

- ~~PLAN 329.3~~
- **PLAN 341.3** Urban Planning
- **PLAN 346.3** Introduction to Urban Design
- **PLAN 350.3** Transportation Planning and Geography
- **PLAN 360.3** Urban Data Analysis and Visualization
- **GEOG 429.3** Integrated Water Resource Planning
- **PLAN 441.3** Challenges in Urban Development
- **PLAN 442.3** Regional Planning

Option B: Environmental Management (45 credit units)

…

Choose ~~**12**~~ **9 credit units** from the following, with at least 3 credit units at the 300-level or higher:

- **ANTH 240.3** Cultural Landscapes and Environments
- **ANTH 244.3** Political Ecology Anthropology and Global Environmental Issues
- **ANTH 329.3** Environmental Anthropology
- **GEOG 150.3** Introduction to the Circumpolar World
- ~~**GEOG 240.3** Sustainable Cities and Regions~~
- **GEOG 322.3** Geographic Information Systems
- **GEOG 333.3** Global Climate Change
- **GEOG 348.3** Introduction to Demography
- **GEOG 386.3** Environmental Impact Assessment
- **GEOG 465.3** Environment and Health in Indigenous Communities
- **GEOG 421.3** Local Water Security
- **INDG 201.3** Introduction to the Health and Well Being of Indigenous Peoples
- **INDG 241.3** Weaving Indigenous Science and Western Science
- **PHIL 226.3** Environmental Philosophy
- **POLS 226.3** Canadian Public Policy
- **SOC 202.3** Environmental Sociology

Rationale: GEOG 240 is a prerequisite for 6 of the 7 PLAN courses from which students must choose 1. Making GEOG 240 a required course will help ensure that all students can proceed through the program in a timely manner. PLAN 329 was renumbered to PLAN 429. GEOG 421 is a recently approved course that is relevant to the program.

Minor course revision
GEOG 491.3 Honours Thesis in Environment and Society
Prerequisite change:
Current prerequisite: One of GEOG 340.3, GEOG 364.3, GEOG 379.3, GEOG 381.3, GEOG 385.3, GEOG 386.3, GEOG 464.3, PLAN 329.3, PLAN 341.3, PLAN 343.3, PLAN 346.3, PLAN 350.3, PLAN 390.3, PLAN 441.3, PLAN 445.3 or PLAN 446.3.
New prerequisite: One of GEOG 333.3, GEOG 364.3, GEOG 380.3, GEOG 385.3, GEOG 386.3, GEOG 421.3 or GEOG 465.3.
Rationale: This change reflects that several of the old prerequisites listed are no longer offered by the Department of Geography and Planning and that new courses also provide adequate preparation. The old prerequisites included several PLAN courses. These were a remnant of the fact that GEOG 491 served as a Honours thesis course for both ENSO and Regional and Urban Planning (RUP) programs. In 2023, the RUP program established its own Honours thesis course (PLAN 491), and therefore GEOG 491 no longer needs those prerequisites.

Food Science

Minor program revisions
Bachelor of Science Honours and Four-year in Food Science
In the C4 Major Requirement remove BLE 303 as a required course, and add FABS 375.3 and FABS 456.3 as required courses. Add 3 credit units to the C4 Major Requirement and remove 3 credit units from the C5 Electives requirement for the Four-year program only. Adjust from 15 to 12 credit units of FABS electives in the C4 Major Requirement for the Honours program as shown below.

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

C4 Major Requirement (60 credit units)

- ~~**BLE 303.3** Principles of Food and Bioproducts Engineering~~
- **BMSC 200.3** Biomolecules
- **BMSC 230.3** Metabolism
- **CHEM 250.3** Introduction to Organic Chemistry
- **FABS 110.3** The Science of Food
- **FABS 211.3** Introductory Bioproduct Science
- **FABS 212.3** Agrifood and Resources Microbiology
- **FABS 315.3** Food Chemistry
- **FABS 317.3** Food and Bioproducts Analysis
- **FABS 325.3** Food Microbiology and Safety
- **FABS 345.3** Unit Operations in Food Processing
- **FABS 375.3** A Practical Approach to Seed Processing
- **FABS 452.3** Quality Assurance and HACCP
- **FABS 456.3** Laboratory Techniques in Food and Bioproduct Sciences
- **FABS 494.6** Research Thesis

Choose ~~**15**~~ **12 credit units** from the following:

- **FABS 323.3** Food Additives and Toxicants
- **FABS 334.3** Industrial Microbiology
- **FABS 360.3**
- **FABS 362.3** Functional Foods and Nutraceuticals
- **FABS 366.3**
- **FABS 371.3** Food Biotechnology
- **FABS 401.3** Dairy Science and Technology
- **FABS 411.3** Lipid Science and Technology
- **FABS 457.3** Meat Science and Technology
- **FABS 460.3** Protein Science and Technology
- **FABS 474.3** Food Enzymology
- **FABS 486.3**
- **FABS 493.3** Product Development

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

- **FABS 222.3** Improving Food Security through Food Science and Technology
- **FABS 323.3** Food Additives and Toxicants
- **FABS 334.3** Industrial Microbiology
- **FABS 360.3**
- **FABS 362.3** Functional Foods and Nutraceuticals
- **FABS 371.3** Food Biotechnology

- **FABS 401.3** Dairy Science and Technology
- **FABS 411.3** Lipid Science and Technology
- **FABS 457.3** Meat Science and Technology
- **FABS 460.3** Protein Science and Technology
- **FABS 474.3** Food Enzymology
- **FABS 486.3**
- **FABS 493.3** Product Development

Bachelor of Science Four-year (B.Sc. Four-year) - Food Science
C4 Major Requirement (~~39~~ 42 credit units)

- ~~**BLE 303.3** Principles of Food and Bioproducts Engineering~~
- **BMSC 200.3** Biomolecules
- **BMSC 230.3** Metabolism
- **CHEM 250.3** Introduction to Organic Chemistry
- **FABS 110.3** The Science of Food
- **FABS 211.3** Introductory Bioproduct Science
- **FABS 212.3** Agrifood and Resources Microbiology
- **FABS 315.3** Food Chemistry
- **FABS 317.3** Food and Bioproducts Analysis
- **FABS 325.3** Food Microbiology and Safety
- **FABS 345.3** Unit Operations in Food Processing
- **FABS 375.3** A Practical Approach to Seed Processing
- **FABS 452.3** Quality Assurance and HACCP
- **FABS 456.3** Laboratory Techniques in Food and Bioproduct Sciences
- **FABS 492.3** Literature Thesis

C5 Electives Requirement (~~30~~ 27 credit units)
…

Rationale: BLE 303 is no longer being offered by Chemical and Biological Engineering so FABS 375 has been proposed as a replacement for core concepts and content. FABS 375 (see course proposal in Agriculture and Bioresources section) will include a lab which employs pilot scale equipment in use by food processors, and will provide the equivalent learning outcomes to BLE 303. Adding FABS 456 as a required course will replace lab content formerly provided in FABS 315 and 317 (labs removed for 2023-24), in a single streamlined course with improved content.

International Studies

Minor program revisions
Remove HIST 472 and POLS 465 from list of restricted elective courses in the B4 Major Requirement.

Bachelor of Arts (B.A. Honours) - International Studies
B4 Major Requirement (57 credit units)

...

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

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

- **ANTH 226.3** Business and Industrial Anthropology
- **ANTH 227.3** Cultures of Central and Eastern Europe
- **ANTH 231.3** Cross Cultural Perspectives on Health and Illness
- ...
- **HIST 416.3** Intoxicating History Alcohol and Drugs
- **HIST 453.3** Decolonization in the Postcolonial World
- **HIST 474.3** The United States in the Nuclear Age
- ~~HIST 472.3~~
- **HIST 478.3** United States and the Vietnam Wars
- **HIST 488.3** Topics in History of Development
- **INDG 321.3** International Indigenous Disaster Risk Reduction
- ...
- **POLS 460.3** Ethics and Global Politics
- **POLS 461.3** Topics in Global Politics
- **POLS 463.3** Politics and the International Criminal Court
- ~~POLS 465.3~~
- **POLS 471.3** Global Governance in a Contested World
- **SOC 202.3** Environmental Sociology
- **SOC 204.3** Rural Sociology and Rural Development
- ...
- **WGST 220.3** Queering the Terrain Cultural Space and Queer Theory
- **WGST 411.3** Situated Transnational Feminisms
- One of **POLS 383.3** Career Internship or **ECON 387.3** Economics Career Internship or **SOSC 320.6** Washington Center Internship or both of **SOSC 322.3** Washington Center Internship Summer and **SOSC 323.3** Washington Center Portfolio Summer

Bachelor of Arts (B.A. Four-year) - International Studies
B4 Major Requirement (54 credit units)

...
Choose **27 credit units** from the following:

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

- **ANTH 226.3** Business and Industrial Anthropology
- **ANTH 227.3** Cultures of Central and Eastern Europe
- **ANTH 231.3** Cross Cultural Perspectives on Health and Illness
- ...
- **HIST 416.3** Intoxicating History Alcohol and Drugs
- **HIST 453.3** Decolonization in the Postcolonial World
- **HIST 474.3** The United States in the Nuclear Age
- ~~HIST 472.3~~
- **HIST 478.3** United States and the Vietnam Wars
- **HIST 488.3** Topics in History of Development
- **INDG 321.3** International Indigenous Disaster Risk Reduction
- ...
- **POLS 460.3** Ethics and Global Politics
- **POLS 461.3** Topics in Global Politics
- **POLS 463.3** Politics and the International Criminal Court
- ~~POLS 465.3~~
- **POLS 471.3** Global Governance in a Contested World
- **SOC 202.3** Environmental Sociology

- **SOC 204.3** Rural Sociology and Rural Development
- ...
- **WGST 220.3** Queering the Terrain Cultural Space and Queer Theory
- **WGST 411.3** Situated Transnational Feminisms
- One of **POLS 383.3** Career Internship or **ECON 387.3** Economics Career Internship or **SOSC 320.6** Washington Center Internship or both of **SOSC 322.3** Washington Center Internship Summer and **SOSC 323.3** Washington Center Portfolio Summer

Rationale: Each removed course is inactive.

Music

Minor program revisions
Bachelor of Music Honours and Four-year in Music
Add MUS 204.3 and MUS 300.3 to the Music History Electives list in the G2 Music requirement for both programs (Individualized and Performance). Add MUS 315.3 and update the information for voice majors in the Music Elective (Litarature/Pedagogy list in the G2 Music requirement for the Honours (Performance) program only.

Bachelor of Music Individualized (B.Mus. Individualized)
G2 Music (62 credit units)

…

Music History Electives

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

- **MUS 204.3** The Music of Women Composers
- **MUS 300.3** String Literature
- MUS 303.3
- **MUS 311.3** History of Opera
- **MUS 352.3** Music Politics and Power
- MUS 363.3
- MUS 364.3
- MUS 365.3
- **MUS 368.3** Music in Canada
- **MUS 453.3** Seminar in Choral Literature and Materials
- **MUS 458.3** Introduction to Music and the Supernatural
- **MUS 459.3** Introduction to Music Gender and Sexuality
- **MUS 463.3** Seminar in Wind Literature and Materials
- **MUS 464.3** Research Seminar in Musicology I
- **MUS 465.3** Research Seminar in Musicology II
- MUS 472.3

…

Bachelor of Music Performance Honours (B.Mus. Performance Honours)
G2 Music (65 credit units)

...

Music History Electives

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

- **MUS 204.3** The Music of Women Composers
- **MUS 300.3** String Literature
- MUS 303.3
- **MUS 311.3** History of Opera
- **MUS 352.3** Music Politics and Power
- MUS 363.3
- MUS 364.3
- MUS 365.3
- MUS 367.3
- **MUS 368.3** Music in Canada
- **MUS 453.3** Seminar in Choral Literature and Materials
- **MUS 458.3** Introduction to Music and the Supernatural
- **MUS 459.3** Introduction to Music Gender and Sexuality
- **MUS 463.3** Seminar in Wind Literature and Materials
- **MUS 464.3** Research Seminar in Musicology I
- **MUS 465.3** Research Seminar in Musicology II
- MUS 472.3

Music Elective (Literature/Pedagogy)

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

- Wind/Brass majors must take **MUS 463.3** Seminar in Wind Literature and Materials (formerly MUS 350) and 3 credit units Open Music Elective.
- Piano majors must take **MUS 354.3** Survey of Keyboard Literature and **MUS 359.3** Piano Pedagogy.
- Voice majors must take 6 credit units from **MUS 242.1** Introduction to Lyric Diction, **MUS 243.1** German Lyric Diction, **MUS 244.1** French Lyric Diction, **MUS 312.3** Vocal Literature, MUS 315.3 Introduction to Vocal Pedagogy for Singersa, or **MUS 453.3** Seminar in Choral Literature and Materials~~; and MUS 313.3~~.

...

Rationale: MUS 315.3 is proposed concurrently and MUS 204 and MUS 300 were recently approved. Adding these courses and revising the voice options will provide more choice for students and make it easier for them to complete in a timely manner.

New course

MUS 315.3 Introduction to Vocal Pedagogy for Singers

1/2 3L This course explores the basic principles of vocology and vocal pedagogy. Classes address the anatomy and physiology of singing, the processes of sound production, and acoustics, as well as past and current methodologies of vocal pedagogy (both in classical and contemporary commercial music, CCM). The focus is to ensure singers and educators are skilled in maintaining and fostering vocal health and habilitation while teaching singing.

Prerequisite(s): 45 credit units of university courses including MUS 101.3 or MUS 133.3; or permission of the Program Chair of Music.

Note: To be successful in this class students must be able to read music, have had previous voice training (private or choral), and be prepared to sing in front of the class.

Instructor: Betty Allison

Rationale: This course addresses a gap in the school's vocal offerings; this topic is standard and essential material for all singers in a BMus program but especially those wanting to go on to a MMus. It will also be a useful class for students in the Individualized stream as well as those in Music Education who may go on to teach music.

Minor course revisions

MUS 243.3 Diction for Singers II German

New course title: German Lyric Diction

New course description: This class is an introduction to German lyric diction for singers and collaborative pianists. This course will focus on the specific sounds, rules, and diction nuances to sing German lied and arias. After learning the basic diction skills, students will then apply this foundation to their classical vocal repertoire to improve diction, clarity, and communication skills.

Prerequisite change:

Current prerequisite: MUS 133 or permission of the Department of Music.

New prerequisite: MUS 242.1 or permission of the Program Chair of Music.

Rationale: MUS 242.1 (Introduction to Lyric Diction) provides a better foundation for this course than MUS 133 (which is a music theory course) and will ensure that necessary content such as the International Phonetic Alphabet does not need to be taught in both MUS 242 and 243.

MUS 244.3 Diction for Singers III French

New course title: French Lyric Diction

New course description: This class is an introduction to French lyric diction for singers and collaborative pianists. This course will focus on the specific sounds, rules, and diction nuances to sing French chanson and arias. After learning the basic diction skills, students will then apply this foundation to their classical vocal repertoire to improve diction, clarity, and communication skills.

Prerequisite change:

Current prerequisite: MUS 133 or permission of the Department of Music.

New prerequisite: MUS 242.1 or permission of the Program Chair of Music.

Rationale: MUS 242.1 (Introduction to Lyric Diction) provides a better foundation for this course than MUS 133 (which is a music theory course) and will ensure that necessary content such as the International Phonetic Alphabet does not need to be taught in both MUS 242 and 244.

MUS 312.3 Vocal Literature

New course description: This class examines classical art song literature through the lens of the historical and personal context from which composers created their works. Through the investigation of context, style and performance practice, the course provides links to the creation of contemporary classical art. This exploration of classical art song literature aligns it with today's society and provides foundations for practicing musicians, as well as for those with curiosity about the genre.

Prerequisite change:

Current prerequisite: Two years of applied voice training; MUS 233; and MUS 151 or MUS 156.

New prerequisite: MUS 255.3 or permission of the Program Chair of Music.

Remove current Note: ~~Students with credit for MUS 253 cannot receive credit for this course.~~

Change course hours from 3L-1P to 3L.

Rationale: The proposed changes will make the class more accessible to BA Music and BMus students not specializing in voice. Mus 253 was closed as of September 2005 and no longer needs to be referenced.

Music Education

Minor program revisions
Bachelor of Music Honours and Four-year in Music Education
Add MUS 204.3 and MUS 300.3 to the G2 Music requirement, and add EMUS 300.3 and EMUS 301.3 as options in the G6 Music Education requirement as shown below.

Bachelor of Music Honours (Music Education) (B.Mus.(Mus.Ed.)) - Early/Middle Years
G2 Music (41 credit units)
...
Music Theory or Music History Elective

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

- **MUS 204.3** The Music of Women Composers
- **MUS 300.3** String Literature
- MUS 303.3
- **MUS 307.3** Orchestration I
- **MUS 311.3** History of Opera
- **MUS 346.3** Pre Baroque Counterpoint
- **MUS 352.3** Music Politics and Power
- MUS 363.3
- MUS 364.3
- MUS 365.3
- MUS 367.3
- **MUS 368.3** Music in Canada
- **MUS 386.3** Jazz Arranging
- **MUS 447.3** Structural Musical Analysis
- MUS 450.3
- **MUS 453.3** Seminar in Choral Literature and Materials
- **MUS 457.3** Music 1900-2000
- **MUS 458.3** Introduction to Music and the Supernatural
- **MUS 459.3** Introduction to Music Gender and Sexuality
- **MUS 463.3** Seminar in Wind Literature and Materials
- **MUS 463.3** Seminar in Wind Literature and Materials
- **MUS 464.3** Research Seminar in Musicology I
- **MUS 465.3** Research Seminar in Musicology II
- MUS 472.3
- **MUS 485.3** Introduction to Schenkerian Analysis

G6 Music Education (21 credit units)

- **EMUS 238.3** Classroom Instruments
- **EMUS 431.3** Teaching Music in the Elementary School

Choose **8-9 credit units** from the following:

- EMUS 270.3
- **EMUS 300.3** Orff Schulwerk Level I
- **EMUS 301.3** String Techniques
- **EMUS 302.2** Classroom Guitar Techniques for Music Majors
- **EMUS 333.3** Brass Techniques
- **EMUS 335.3** Woodwind Techniques
- **EMUS 337.3** Jazz Pedagogy
- **EMUS 339.3** Percussion Techniques
- **EMUS 438.3** Choral Music Teaching in the Secondary School
- **EMUS 442.3** Organization and Administration of School Music Program
- **EMUS 448.3** Instrumental Music Teaching in the Secondary School

Choose **6-7 credit units** selected from the above list, from any MUS course, and/or from **MUAP 201.1** Wind Orchestra-**MUAP 212.1** Symphony Orchestra.

Bachelor of Music Honours (Music Education) (B.Mus.(Mus.Ed.)) - Secondary

G2 Music (41 credit units)

...

Music Theory or Music History Elective

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

- **MUS 204.3** The Music of Women Composers
- **MUS 300.3** String Literature
- MUS 303.3
- **MUS 307.3** Orchestration I
- **MUS 311.3** History of Opera
- **MUS 346.3** Pre Baroque Counterpoint
- **MUS 352.3** Music Politics and Power
- MUS 363.3
- MUS 364.3
- MUS 365.3
- MUS 367.3
- **MUS 368.3** Music in Canada
- **MUS 386.3** Jazz Arranging
- **MUS 447.3** Structural Musical Analysis
- MUS 450.3
- **MUS 453.3** Seminar in Choral Literature and Materials
- **MUS 457.3** Music 1900-2000
- **MUS 458.3** Introduction to Music and the Supernatural
- **MUS 459.3** Introduction to Music Gender and Sexuality
- **MUS 463.3** Seminar in Wind Literature and Materials
- **MUS 464.3** Research Seminar in Musicology I
- **MUS 465.3** Research Seminar in Musicology II
- MUS 472.3
- **MUS 485.3** Introduction to Schenkerian Analysis

G6 Music Education (24 credit units)

- **EMUS 438.3** Choral Music Teaching in the Secondary School or **EMUS 448.3** Instrumental Music Teaching in the Secondary School
- **EMUS 442.3** Organization and Administration of School Music Program

Choose **14-15 credit units** from the following:

- **EMUS 238.3** Classroom Instruments
- EMUS 270.3
- **EMUS 300.3** Orff Schulwerk Level I
- **EMUS 301.3** String Techniques
- **EMUS 302.2** Classroom Guitar Techniques for Music Majors
- **EMUS 333.3** Brass Techniques
- **EMUS 335.3** Woodwind Techniques
- **EMUS 337.3** Jazz Pedagogy
- **EMUS 339.3** Percussion Techniques
- **EMUS 431.3** Teaching Music in the Elementary School

Choose **3-4 credit units** selected from the above list, from any MUS course, and/or from **MUAP 201.1** Wind Orchestra-**MUAP 212.1** Symphony Orchestra.

Bachelor of Music (Music Education) (B.Mus.(Mus.Ed.)) - Early/Middle Years
G2 Music (41 credit units)

...

Music Theory or Music History Elective

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

- **MUS 204.3** The Music of Women Composers
- **MUS 300.3** String Literature
- MUS 303.3
- **MUS 307.3** Orchestration I
- **MUS 311.3** History of Opera
- **MUS 346.3** Pre Baroque Counterpoint
- **MUS 352.3** Music Politics and Power
- MUS 363.3
- MUS 364.3
- MUS 365.3
- MUS 367.3
- **MUS 368.3** Music in Canada
- **MUS 386.3** Jazz Arranging
- **MUS 447.3** Structural Musical Analysis
- MUS 450.3
- **MUS 453.3** Seminar in Choral Literature and Materials
- **MUS 457.3** Music 1900-2000
- **MUS 458.3** Introduction to Music and the Supernatural
- **MUS 459.3** Introduction to Music Gender and Sexuality

- **MUS 463.3** Seminar in Wind Literature and Materials
- **MUS 464.3** Research Seminar in Musicology I
- **MUS 465.3** Research Seminar in Musicology II
- MUS 472.3
- **MUS 485.3** Introduction to Schenkerian Analysis

G6 Music Education (21 credit units)

- **EMUS 238.3** Classroom Instruments
- **EMUS 431.3** Teaching Music in the Elementary School

Choose **8-9 credit units** from the following:

- EMUS 270.3
- **EMUS 300.3** Orff Schulwerk Level I
- **EMUS 301.3** String Techniques
- **EMUS 302.2** Classroom Guitar Techniques for Music Majors
- **EMUS 333.3** Brass Techniques
- **EMUS 335.3** Woodwind Techniques
- **EMUS 337.3** Jazz Pedagogy
- **EMUS 339.3** Percussion Techniques
- **EMUS 438.3** Choral Music Teaching in the Secondary School
- **EMUS 442.3** Organization and Administration of School Music Program
- **EMUS 448.3** Instrumental Music Teaching in the Secondary School

Choose **6-7 credit units** selected from the above list, from any MUS course, and/or from **MUAP 201.1** Wind Orchestra-**MUAP 212.1** Symphony Orchestra.

Bachelor of Music (Music Education) (B.Mus.(Mus.Ed.)) - Secondary

G2 Music (41 credit units)

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Music Theory or Music History Elective

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

- **MUS 204.3** The Music of Women Composers
- **MUS 300.3** String Literature
- MUS 303.3
- **MUS 307.3** Orchestration I
- **MUS 311.3** History of Opera
- **MUS 346.3** Pre Baroque Counterpoint
- **MUS 352.3** Music Politics and Power
- MUS 363.3
- MUS 364.3
- MUS 365.3
- MUS 367.3
- **MUS 368.3** Music in Canada

- **MUS 386.3** Jazz Arranging
- **MUS 447.3** Structural Musical Analysis
- MUS 450.3
- **MUS 453.3** Seminar in Choral Literature and Materials
- **MUS 457.3** Music 1900-2000
- **MUS 458.3** Introduction to Music and the Supernatural
- **MUS 459.3** Introduction to Music Gender and Sexuality
- **MUS 463.3** Seminar in Wind Literature and Materials
- **MUS 463.3** Seminar in Wind Literature and Materials
- **MUS 464.3** Research Seminar in Musicology I
- **MUS 465.3** Research Seminar in Musicology II
- MUS 472.3
- **MUS 485.3** Introduction to Schenkerian Analysis

G6 Music Education (24 credit units)

- **EMUS 438.3** Choral Music Teaching in the Secondary School or **EMUS 448.3** Instrumental Music Teaching in the Secondary School
- **EMUS 442.3** Organization and Administration of School Music Program

Choose **14-15 credit units** from the following:

- **EMUS 238.3** Classroom Instruments
- EMUS 270.3
- **EMUS 300.3** Orff Schulwerk Level I
- **EMUS 301.3** String Techniques
- **EMUS 302.3** Classroom Guitar Techniques for Music Majors
- **EMUS 333.3** Brass Techniques
- **EMUS 335.3** Woodwind Techniques
- **EMUS 337.3** Jazz Pedagogy
- **EMUS 339.3** Percussion Techniques
- **EMUS 431.3** Teaching Music in the Elementary School

Choose **3-4 credit units** selected from the above list, from any MUS course and/or from **MUAP 201.1** Wind Orchestra - **MUAP 212.1** Symphony Orchestra

Rationale: EMUS 300 is proposed concurrently and the MUS 204, 300 and EMUS 301 have been recently approved. Adding these courses will provide additional choice for students in the programs.

New course
EMUS 300.3 Orff Schulwerk Level I
SP/SU This course is an extensive hands-on examination and experience of the teaching and learning processes of Orff Schulwerk. Participants will critically engage with the Orff Schulwerk philosophy and pedagogy and gain facility in its sequential, four-stage learning/teaching process: imitation, exploration, improvisation, and literacy. In addition to building a repertoire of age and grade level appropriate songs, singing games, and activities, participants will extend their musicianship and gain facility in elemental orchestration techniques. Students will also explore pathways to inspire creativity through the integration of speech, song, movement, and instruments.
Prerequisite(s): MUS 121.2 or permission from the School for the Arts Music.
Note: Carl Orff Canada requires that students achieve a grade of 80% in each component of the class to receive their endorsement. No additional fees are required to receive the endorsement.

Instructor: New hire in elementary music or Sessional Lecturer.
Rationale: After completing their B.Mus. (Mus.Ed.), many music educators seek to get Orff Schelwerk Level I Certification so that they can teach Orff Techniques to their students. This certification is required by Carl Orff Canada in order to teach these techniques. However, this certification is not offered in Saskatchewan which means teachers in this province must travel to obtain the certification. Partnering with Carl Orff Canada will allow the School for the Arts to fill this educational gap as well as provide more 300-Level Music Education electives for majors.
This course is planned to be offered in Spring/Summer which provides an "off-season" option for undergraduate majors, provides a course option for Master's in Music Education students, and will make the course more available for working teachers seeking this credential.

Physics

Minor program revision
Bachelor of Science Honours, Double Honours, Four-year and Three-year in Physics
Add PHYS 455 as a restricted elective in the C4 Major Requirement and as an optional course in the Specialization in Nuclear Science, and fix the credit unit revision that was missed in the revisions submitted to the October 2024 UCC. (Changes from the October UCC are shown in orange.)

Bachelor of Science Honours (B.Sc. Honours) - Physics
C4 Major Requirement (54 credit units)

- **EP 202.3** Electric and Magnetic Fields and Circuits
- ~~**EP 253.1** Modern Physics Laboratory I~~
- **PHYS 115.3** Physics and the Universe
- **PHYS 117.3** Physics for the Life Sciences or **PHYS 125.3** Physics and Technology
- **PHYS 223.3** Mechanics I
- ~~**PHYS 230.1** Electricity and Magnetism Laboratory~~
- ~~**PHYS 231.1** Optics Laboratory~~
- **PHYS 252.3** Foundations of Modern Physics
- **PHYS 323.3** Mechanics II
- **PHYS 356.3** Intermediate Electromagnetism
- **PHYS 371.3** Statistical and Thermal Physics
- **PHYS 383.3** Quantum Mechanics I
- **PHYS 490.0** Physics Seminars

Choose **27 credit units** from the following:

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

- **ASTR 213.3** Astronomical Photometry
- **ASTR 214.3** Astronomical Spectroscopy
- **ASTR 310.3** Galactic Astronomy and Cosmography
- **ASTR 312.3** Theoretical Models of Stars and Stellar Evolution
- **ASTR 411.3** Gravitation and Cosmology
- **EE 221.3** Analog Electronics
- **EP 228.3** Computer Tools for Engineering Physics
- **EP 253.1** Modern Physics Laboratory I
- **EP 271.3** Heat Kinetic Theory and Thermodynamics
- **EP 317.3** Applied Physics of Materials

- **EP 325.3** Optical Systems Design
- **EP 353.2** Modern Physics Laboratory II
- **EP 354.2** Modern Physics Laboratory III
- **EP 417.3** Advanced Materials Science with Applications
- **EP 421.3** Advanced Optics
- **EP 428.3** Computational Engineering Physics
- **PHYS 255.3** Concepts of Radiation Physics
- **PHYS 322.3** Introduction to Atmospheric Science and Meteorology
- **PHYS 402.3** Techniques of Theoretical Physics
- **PHYS 403.3** Topics in Theoretical Physics
- **PHYS 404.3** Techniques of Experimental Physics
- **PHYS 422.3** Atmospheric and Solar Terrestrial Physics
- **PHYS 452.3** Introduction to Nuclear and Particle Physics
- **PHYS 453.2** Modern Physics Laboratory IV
- **PHYS 455.3 Nuclear Techniques**
- **PHYS 456.3** Electricity and Magnetism II
- **PHYS 461.3** Physics of Plasmas and Fluids
- **PHYS 470.3** Solid State Physics
- **PHYS 471.3** Synchrotron Physics
- **PHYS 472.3** Particle Accelerator Physics and Synchrotron Radiation
- **PHYS 473.3** High Energy Particle Accelerators for Physics Research
- **PHYS 481.3** Quantum Mechanics II
- **PHYS 482.3** Quantum Mechanics III
- **PHYS 491.3** Physics Research Project
- **PHYS 493.6** Extended Research Project in Physics
- **PHYS 498.3** Special Topics
- **PHYS 499.6** Special Topics

A student may choose to complete a Specialization as part of the B.Sc. (Honours) in Physics. In this case the student must complete the Required Core Courses and the requirements for the chosen Specialization, and then choose additional courses from the above list as necessary to earn the minimum 48 credit units in the Major Requirement. A completed Specialization will be noted on the student's transcript.

Specialization in Astronomy

No change

Specialization in Atmospheric, Space, and Plasma Sciences

No change

Specialization in Materials Science

No change

Specialization in Nuclear Science

- **PHYS 255.3** Concepts of Radiation Physics Concepts of Radiation Physics
- **PHYS 452.3** Introduction to Nuclear and Particle Physics Introduction to Nuclear and Particle Physics

- **PHYS 493.6** Extended Research Project in Physics Extended Research Project in Physics or **PHYS 497.15** Research Term in Physics research project in Nuclear Science

If you take **PHYS 493.6** Extended Research Project in Physics Extended Research Project in Physics choose 6 credit units from the following list:

- **EP 353.2** Modern Physics Laboratory II Modern Physics Laboratory II
- **EP 354.2** Modern Physics Laboratory III Modern Physics Laboratory III
- **PHYS 402.3** Techniques of Theoretical Physics Techniques of Theoretical Physics
- **PHYS 453.2** Modern Physics Laboratory IV Modern Physics Laboratory IV
- **PHYS 455.3 Nuclear Techniques**
- **PHYS 471.3** Synchrotron Physics Synchrotron Physics
- **PHYS 472.3** Particle Accelerator Physics and Synchrotron Radiation Particle Accelerator Physics and Synchrotron Radiation
- **PHYS 481.3** Quantum Mechanics II Quantum Mechanics II
- **PHYS 482.3** Quantum Mechanics III Quantum Mechanics III

PHYS Special Topics Courses can be used with departmental approval.

Specialization in Theoretical Physics

No change

Bachelor of Science Four-year (B.Sc. Four-year) - Physics
C4 Major Requirement (42 credit units)

- **EP 202.3** Electric and Magnetic Fields and Circuits
- ~~**EP 253.1** Modern Physics Laboratory I~~
- **PHYS 115.3** Physics and the Universe
- **PHYS 117.3** Physics for the Life Sciences or **PHYS 125.3** Physics and Technology
- **PHYS 223.3** Mechanics I
- ~~**PHYS 230.1** Electricity and Magnetism Laboratory~~
- ~~**PHYS 231.1** Optics Laboratory~~
- **PHYS 252.3** Foundations of Modern Physics
- **PHYS 323.3** Mechanics II
- **PHYS 356.3** Intermediate Electromagnetism
- **PHYS 371.3** Statistical and Thermal Physics
- **PHYS 383.3** Quantum Mechanics I
- **PHYS 490.0** Physics Seminars

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

- **ASTR 213.3** Astronomical Photometry
- **ASTR 214.3** Astronomical Spectroscopy
- **ASTR 310.3** Galactic Astronomy and Cosmography
- **ASTR 312.3** Theoretical Models of Stars and Stellar Evolution
- **ASTR 411.3** Gravitation and Cosmology
- **EE 221.3** Analog Electronics
- **EP 228.3** Computer Tools for Engineering Physics
- **EP 253.1** Modern Physics Laboratory I
- **EP 271.3** Heat Kinetic Theory and Thermodynamics
- **EP 317.3** Applied Physics of Materials

- **EP 325.3** Optical Systems Design
- **EP 353.2** Modern Physics Laboratory II
- **EP 354.2** Modern Physics Laboratory III
- **EP 417.3** Advanced Materials Science with Applications
- **EP 421.3** Advanced Optics
- **EP 428.3** Computational Engineering Physics
- **PHYS 255.3** Concepts of Radiation Physics
- **PHYS 322.3** Introduction to Atmospheric Science and Meteorology
- **PHYS 402.3** Techniques of Theoretical Physics
- **PHYS 403.3** Topics in Theoretical Physics
- **PHYS 404.3** Techniques of Experimental Physics
- **PHYS 422.3** Atmospheric and Solar Terrestrial Physics
- **PHYS 422.3** Atmospheric and Solar Terrestrial Physics
- **PHYS 452.3** Introduction to Nuclear and Particle Physics
- **PHYS 453.2** Modern Physics Laboratory IV
- **PHYS 455.3 Nuclear Techniques**
- **PHYS 456.3** Electricity and Magnetism II
- **PHYS 461.3** Physics of Plasmas and Fluids
- **PHYS 470.3** Solid State Physics
- **PHYS 471.3** Synchrotron Physics
- **PHYS 472.3** Particle Accelerator Physics and Synchrotron Radiation
- **PHYS 473.3** High Energy Particle Accelerators for Physics Research
- **PHYS 481.3** Quantum Mechanics II
- **PHYS 482.3** Quantum Mechanics III
- **PHYS 491.3** Physics Research Project
- **PHYS 493.6** Extended Research Project in Physics
- **PHYS 498.3** Special Topics
- **PHYS 499.6** Special Topics

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

C4 Major Requirement (30 credit units)

- **PHYS 115.3** Physics and the Universe
- **PHYS 117.3** Physics for the Life Sciences or **PHYS 125.3** Physics and Technology
- **EP 202.3** Electric and Magnetic Fields and Circuits
- ~~**EP 253.1** Modern Physics Laboratory I~~
- **PHYS 223.3** Mechanics I
- ~~**PHYS 230.1** Electricity and Magnetism Laboratory~~
- ~~**PHYS 231.1** Optics Laboratory~~
- **PHYS 252.3** Foundations of Modern Physics

Physics Electives

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

- **ASTR 213.3** Astronomical Photometry
- **ASTR 214.3** Astronomical Spectroscopy
- **ASTR 310.3** Galactic Astronomy and Cosmography
- **ASTR 312.3** Theoretical Models of Stars and Stellar Evolution
- **ASTR 411.3** Gravitation and Cosmology
- **EE 221.3** Analog Electronics
- **EP 228.3** Computer Tools for Engineering Physics

- **EP 253.1** Modern Physics Laboratory I
- **EP 317.3** Applied Physics of Materials
- **EP 325.3** Optical Systems Design
- **EP 353.2** Modern Physics Laboratory II
- **EP 354.2** Modern Physics Laboratory III
- **EP 271.3** Heat Kinetic Theory and Thermodynamics
- **EP 417.3** Advanced Materials Science with Applications
- **EP 421.3** Advanced Optics
- **EP 428.3** Computational Engineering Physics
- **PHYS 255.3** Concepts of Radiation Physics
- **PHYS 322.3** Introduction to Atmospheric Science and Meteorology
- **PHYS 323.3** Mechanics II
- **PHYS 356.3** Intermediate Electromagnetism
- **PHYS 371.3** Statistical and Thermal Physics
- **PHYS 383.3** Quantum Mechanics I
- **PHYS 402.3** Techniques of Theoretical Physics
- **PHYS 403.3** Topics in Theoretical Physics
- **PHYS 404.3** Techniques of Experimental Physics
- **PHYS 422.3** Atmospheric and Solar Terrestrial Physics
- **PHYS 452.3** Introduction to Nuclear and Particle Physics
- **PHYS 453.2** Modern Physics Laboratory IV
- **PHYS 455.3 Nuclear Techniques**
- **PHYS 456.3** Electricity and Magnetism II
- **PHYS 461.3** Physics of Plasmas and Fluids
- **PHYS 470.3** Solid State Physics
- **PHYS 471.3** Synchrotron Physics
- **PHYS 472.3** Particle Accelerator Physics and Synchrotron Radiation
- **PHYS 473.3** High Energy Particle Accelerators for Physics Research
- **PHYS 481.3** Quantum Mechanics II
- **PHYS 482.3** Quantum Mechanics III
- **PHYS 498.3** Special Topics
- **PHYS 499.6** Special Topics

Bachelor of Science Double Honours - Physics - Major 1
C4 Major Requirement (42 credit units)

- **EP 202.3** Electric and Magnetic Fields and Circuits
- **PHYS 115.3** Physics and the Universe
- **PHYS 117.3** Physics for the Life Sciences or **PHYS 125.3** Physics and Technology
- **PHYS 223.3** Mechanics I
- **PHYS 252.3** Foundations of Modern Physics
- **PHYS 356.3** Intermediate Electromagnetism
- **PHYS 383.3** Quantum Mechanics I
- **PHYS 490.0** Physics Seminars
- **MATH 331.3** Applied Differential Equations

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

MATH 223.3 Calculus III for Engineers recommended

- **MATH 223.3** Calculus III for Engineers
- **MATH 225.3** Intermediate Calculus I

- **MATH 276.3** Vector Calculus I

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

MATH 224.3 Calculus IV for Engineers recommended

- **MATH 224.3** Calculus IV for Engineers
- **MATH 226.3** Intermediate Calculus II
- **MATH 238.3** Introduction to Differential Equations

Choose ~~15~~ 12 **credit units** from the following:

Physics Electives

- **ASTR 213.3** Astronomical Photometry
- **ASTR 214.3** Astronomical Spectroscopy
- **ASTR 310.3** Galactic Astronomy and Cosmography
- **ASTR 312.3** Theoretical Models of Stars and Stellar Evolution
- **ASTR 411.3** Gravitation and Cosmology
- **EE 221.3** Analog Electronics
- **EP 253.1** Modern Physics Laboratory I
- **EP 317.3** Applied Physics of Materials
- **EP 353.2** Modern Physics Laboratory II
- **EP 354.2** Modern Physics Laboratory III
- **EP 271.3** Heat Kinetic Theory and Thermodynamics
- **EP 421.3** Advanced Optics
- ~~**PHYS 230.1** Electricity and Magnetism Laboratory~~
- ~~**PHYS 231.1** Optics Laboratory~~
- **PHYS 255.3** Concepts of Radiation Physics
- **PHYS 255.3** Concepts of Radiation Physics
- **PHYS 323.3** Mechanics II
- **PHYS 371.3** Statistical and Thermal Physics
- **PHYS 402.3** Techniques of Theoretical Physics
- **PHYS 422.3** Atmospheric and Solar Terrestrial Physics
- **PHYS 452.3** Introduction to Nuclear and Particle Physics
- **PHYS 453.2** Modern Physics Laboratory IV
- **PHYS 455.3 Nuclear Techniques**
- **PHYS 456.3** Electricity and Magnetism II
- **PHYS 461.3** Physics of Plasmas and Fluids
- **PHYS 470.3** Solid State Physics
- **PHYS 471.3** Synchrotron Physics
- **PHYS 472.3** Particle Accelerator Physics and Synchrotron Radiation
- **PHYS 473.3** High Energy Particle Accelerators for Physics Research
- **PHYS 481.3** Quantum Mechanics II
- **PHYS 482.3** Quantum Mechanics III
- **PHYS 491.3** Physics Research Project
- **PHYS 493.6** Extended Research Project in Physics

Physics - Double Honours - Major 2

Requirements (42 credit units)

- **EP 202.3** Electric and Magnetic Fields and Circuits
- **MATH 331.3** Applied Differential Equations
- **PHYS 115.3** Physics and the Universe
- **PHYS 125.3** Physics and Technology or **PHYS 117.3** Physics for the Life Sciences
- **PHYS 223.3** Mechanics I
- **PHYS 252.3** Foundations of Modern Physics
- **PHYS 356.3** Intermediate Electromagnetism
- **PHYS 383.3** Quantum Mechanics I
- **PHYS 490.0** Physics Seminars

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

MATH 223.3 Calculus III for Engineers recommended

- **MATH 223.3** Calculus III for Engineers
- **MATH 225.3** Intermediate Calculus I
- **MATH 276.3** Vector Calculus I

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

MATH 224.3 Calculus IV for Engineers recommended

- **MATH 224.3** Calculus IV for Engineers
- **MATH 226.3** Intermediate Calculus II
- **MATH 238.3** Introduction to Differential Equations

Physics Electives

Choose ~~**15**~~ **12** **credit units** from the following, with at least 3 credit units at 400-level:

- **ASTR 213.3** Astronomical Photometry
- **ASTR 214.3** Astronomical Spectroscopy
- **ASTR 310.3** Galactic Astronomy and Cosmography
- **ASTR 312.3** Theoretical Models of Stars and Stellar Evolution
- **ASTR 411.3** Gravitation and Cosmology
- **EE 221.3** Analog Electronics
- **EP 253.1** Modern Physics Laboratory I
- **EP 271.3** Heat Kinetic Theory and Thermodynamics
- **EP 317.3** Applied Physics of Materials
- **EP 353.2** Modern Physics Laboratory II
- **EP 354.2** Modern Physics Laboratory III
- **EP 421.3** Advanced Optics
- ~~**PHYS 230.1** Electricity and Magnetism Laboratory~~
- ~~**PHYS 231.1** Optics Laboratory~~
- **PHYS 255.3** Concepts of Radiation Physics
- **PHYS 323.3** Mechanics II
- **PHYS 371.3** Statistical and Thermal Physics

- **PHYS 402.3** Techniques of Theoretical Physics
- **PHYS 422.3** Atmospheric and Solar Terrestrial Physics
- **PHYS 452.3** Introduction to Nuclear and Particle Physics
- **PHYS 453.2** Modern Physics Laboratory IV
- **PHYS 455.3 Nuclear Techniques**
- **PHYS 456.3** Electricity and Magnetism II
- **PHYS 461.3** Physics of Plasmas and Fluids
- **PHYS 470.3** Solid State Physics
- **PHYS 471.3** Synchrotron Physics
- **PHYS 472.3** Particle Accelerator Physics and Synchrotron Radiation
- **PHYS 473.3** High Energy Particle Accelerators for Physics Research
- **PHYS 481.3** Quantum Mechanics II
- **PHYS 482.3** Quantum Mechanics III
- **PHYS 491.3** Physics Research Project
- **PHYS 493.6** Extended Research Project in Physics

Bachelor of Science Double Honours - Physics and Biochemistry - Majors 1 and 2

Double Honours Major Averages

The major average for Biochemistry will be calculated using the grades in BMIS 310, BMIS 340, BMIS 405, BMIS 412, BMIS 430, BMIS 435, BMIS 436, BMIS 489; all CHEM courses; BMSC 200; BMSC 210; BMSC 220; BMSC 230; BMSC 240; and BMSC 320.

The major average for Physics will be calculated using the grades in all PHYS courses; MATH 116 or MATH 177; and any courses taken from EP 253, EP 271, EP 317, EP 353, EP 354, EP 421, EP 431, EP 464.

Double Honours Residency Requirements

To meet the residency requirement for the Biochemistry major students must complete at least two-thirds (to the nearest highest multiple of 3 credit units) of BMIS 310; **BMIS 340.3** Introductory Molecular Biology; BMIS 400; 6 credit units from BMIS 405, BMIS 412, BMIS 430, BMIS 435, and BMIS 436; BMSC 200; BMSC 210; BMSC 220; BMSC 230; BMSC 240; **BMSC 320.3** Nucleic Acids From Central Dogma to Human Disease; CHEM 112; CHEM 250; and BMIS 489 (if chosen) from the University of Saskatchewan. BMIS 489 will count as part of residency requirement only if chosen.

To meet the residency requirement for the Physics major students must complete at least two-thirds (to the nearest highest multiple of 3 credit units) of MATH 116 or MATH 177; PHYS 115; PHYS 117 or PHYS 125; PHYS 223; PHYS 252; PHYS 356; PHYS 371; PHYS 383; PHYS 490; and 18 credit units from EP 253, EP 317, EP 353, EP 354, EP 271, EP 421, EP 431, EP 464, ~~PHYS 230, PHYS 231,~~ PHYS 323, PHYS 255, PHYS 402, PHYS 403, PHYS 452, PHYS 455, PHYS 456, PHYS 461, PHYS 470, PHYS 471, PHYS 481, PHYS 482, PHYS 492, PHYS 498, and PHYS 499; and PHYS 493 (if chosen) from the University of Saskatchewan. PHYS 493 will count as part of residency requirement only if chosen.

No more than 6 credit units from one subject may be used in Requirements C1 to C3. An exception will be made to this rule to allow a student to choose to take 9 credit units in the same subject to fulfill the English Language Writing and Indigenous Learning Requirements (in the C1 College Requirement). Students who make this choice will be required to take 3 additional credit units of Fine Arts Program Type, Humanities Program Type, Social Science Program Type, or Arts and Sci No Program Type courses, in a different subject, within the C5 Electives Requirement.

C4 Major Requirement (84 credit units)

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Senior courses:

- **BMIS 310.3** Proteins and Enzymes
- **BMIS 340.3** Introductory Molecular Biology
- **BMIS 400.0** Seminar in Biochemistry Microbiology and Immunology (attendance is required in both term 1 and 2)
- **BMSC 200.3** Biomolecules
- **BMSC 210.3** Microbiology
- **BMSC 220.3** Cell Biology
- **BMSC 230.3** Metabolism
- **BMSC 240.3** Laboratory Techniques
- **BMSC 320.3** Nucleic Acids From Central Dogma to Human Disease
- **MATH 116.3** Calculus II or **MATH 177.3** Advanced Calculus II
- **PHYS 223.3** Mechanics I
- **PHYS 252.3** Foundations of Modern Physics
- **PHYS 356.3** Intermediate Electromagnetism
- **PHYS 371.3** Statistical and Thermal Physics
- **PHYS 383.3** Quantum Mechanics I
- **PHYS 490.0** Physics Seminars

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

- **BMIS 405.3** Structure and Function of Biomolecules
- **BMIS 412.3** Protein Structure Function and Engineering
- **BMIS 430.3** Biochemistry of Cancer
- **BMIS 435.3** Human Metabolism and Disease
- **BMIS 436.3** Advanced Molecular Biology

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

- **EP 202.3** Electric and Magnetic Fields and Circuits
- **EP 253.1** Modern Physics Laboratory I
- **EP 317.3** Applied Physics of Materials
- **EP 353.3** Modern Physics Laboratory II
- **EP 354.3** Modern Physics Laboratory III
- **EP 271.3** Heat Kinetic Theory and Thermodynamics
- **EP 421.3** Advanced Optics
- ~~**PHYS 230.1** Electricity and Magnetism Laboratory~~
- ~~**PHYS 231.1** Optics Laboratory~~
- **PHYS 255.3** Concepts of Radiation Physics
- **PHYS 323.3** Mechanics II
- **PHYS 402.3** Techniques of Theoretical Physics
- **PHYS 403.3** Topics in Theoretical Physics
- **PHYS 422.3** Atmospheric and Solar Terrestrial Physics
- **PHYS 452.3** Introduction to Nuclear and Particle Physics
- **PHYS 455.3 Nuclear Techniques**
- **PHYS 456.3** Electricity and Magnetism II

- **PHYS 461.3** Physics of Plasmas and Fluids
- **PHYS 470.3** Solid State Physics
- **PHYS 471.2** Synchrotron Physics
- **PHYS 473.3** High Energy Particle Accelerators for Physics Research
- **PHYS 481.3** Quantum Mechanics II
- **PHYS 482.3** Quantum Mechanics III
- **PHYS 492.3**
- **PHYS 498.3** Special Topics
- **PHYS 499.6** Special Topics
- **PHYS 499.6** Special Topics

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Rationale: PHYS 455.3 Nuclear Techniques will be relevant to the field and provide students with additional options. The C4 Major Requirement for Double Honours Major 1 and the Requirements for Double Honours Major 2 must be the same.

New course(s)
PHYS 455.3 Nuclear Techniques
1/2 (1L-2P) This course is an introduction to the physics of interactions of diverse types of nuclear radiation (alpha, beta, gamma rays, neutrons and heavy ions) with matter. It provides hands-on laboratory experience in the measurements of alpha, beta and gamma ray spectroscopy using scintillation counters, surface barrier detectors and high resolution high purity germanium (HPGe) detectors. Fast time coincidence measurement techniques will also be introduced.
Prerequisite(s): Minimum of 81 credit units university coursework including 45 credit units in Science or Engineering courses at the 200- or 300-level; and EP 253.1 or equivalent.
Instructor(s): Chary Rangacharyulu
Rationale: Nuclear technologies are used for vast varieties of applications such as agriculture, environmental assessments, health for both diagnostics and therapy. With an increasing demand for professionals with adequate understanding of the underlying science and technology, there is a need to train our students to become future professionals in this area in the province and within Canada. This course will introduce students to these aspects, which they can use as stepping stones to build further expertise.

Minor course revision
PHYS 156.3 Electromagnetism and Waves for Engineering
Prerequisite change:
Current prerequisite: PHYS 152 and GE 102 and MATH 133.
New prerequisite: PHYS 152.1 and MATH 133.4.
Rationale: GE 102 is a pre- or co-requisite for PHYS 152 and does not need to be listed again for PHYS 156.

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.

Biochemistry, Microbiology and Immunology

Minor course revisions
BMIS 405.3 Structure and Function of Biomolecules
New course number: **455.3**
New long/short title: Mechanisms of Protein Function
Change to Note:
Current Note: Students with credit for BMST 305 or BIOC 405 will not receive credit for this course.
New Note: Students with credit for BMIS 405, BMST 305, or BIOC 405 will not receive credit for this course.
Rationale: In the biomedical sciences BMSC 405, CPPS 405 and NEUR 405 are all current topics courses, while BMIS 405 is not. As the BMI department handles both BMIS 405 and BMSC 405, there is a preference for renumbering BMIS 405 to BMIS 455 to avoid any confusion by faculty or students. Additionally, the title "Structure and Function of Biomolecules" is both too vague as the course deals with proteins and not other biomolecules and it is too similar to BMIS 412 Protein Structure Function and Engineering. The new title Mechanisms of Protein Function will be more distinct.

BMIS 425.3 Molecular Basis of Microbial Pathogenesis
Prerequisite change:
Current prerequisite: BMIS 320.3
New prerequisite: BMIS 325.3 or permission of the department.
Rationale: BMIS 325.3 is offered for the first time in 2024-25 (which was previously half of the content of BMIS 308.3 which was expanded into BMIS 317.3 and 325.3). Replacing BMIS 320 by BMIS 325 as the prerequisite will reduce some redundancy. Students who have taken BMIS 308 cannot take BMIS 325, so “permission of the department” is added to signal to these students that an override can be granted.

Drama

Alternate admissions pathway
The B.F.A. programs in Drama are Honours programs and therefore usually require students to have completed 60 credit units prior to admission. Students interested in these programs enter the B.A. programs in Drama instead but this can cause difficulties with understanding program requirements. To address this an alternate admissions pathway will be introduced for students with sufficient background in either of the two subfields. These students will still be required to meet all Honours standards upon graduation.

These changes only affect admission to the B.F.A. Honours program in Drama and are not changes to the admissions standards for the college. Students can still be admitted to the BFA programs after 2 years, but this new pathway recognizes that some students arrive with developed skills.

Bachelor of Fine Arts Honours (B.F.A. Honours) - Acting

The B.F.A. programs are intended for students who wish to acquire a thorough knowledge of one of the performance-oriented areas of theatre as part of their general education and for those who wish to prepare for graduate schools or conservatories in areas of acting or design.

Area 1: *Acting* - concerned with the practice of acting in various media.

Area 2: *Design* - concerned with the practice of scenic, lighting, and costume design for the stage.

1. **Admission**

Students may be admitted directly to the B.F.A. Honours program with a minimum admission average of 70%, have completed Drama 30 (or its equivalent*) and:

1. A complete admission package including a letter of intent outlining your motivation for pursuing acting and performance at the university level and a resume listing your relevant acting experience - include anything you have done during or since high school.

2. Successful completion of an audition with the School for the Arts Drama degree selection committee, including a prepared monologue and interview. Information about audition requirements and what to expect at the audition will be provided. The School for the Arts Drama holds an audition day for high school students, as well as those students not applying directly from high school, during a weekend in February and/or March.

Contact the School for the Arts Drama (**drama@usask.ca**) if you have questions.

**Possible equivalents for Drama 30 would include: acting roles in high school theatre productions, workshops with artists from the professional theatre community, or acting roles community theatre groups such as Persephone Theatre Youth Company.*

Students who wish to pursue this program but do not meet these requirements upon admission to the College of Arts & Science ~~Students interested in entering the B.F.A. program in Drama~~ should contact the School for the Arts no later than the end of their first year. By that time, students should have completed as many of ENG 112, and DRAM 110, DRAM 113, DRAM 118, and DRAM 119 as possible. Formal admission to the B.F.A. program must ~~should~~ be made on an Application for Honours form~~, after the completion of at least 60 credit units~~. (This form is available online ~~from the Undergraduate Student Office~~.) In order to qualify for admission, students must have/be about to complete 60 credit units and have obtained a Cumulative Weighted Average of at least 70% overall and a Major ~~Cumulative Weighted~~ Average of 70% ~~in all drama courses taken~~.

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Bachelor of Fine Arts Honours (B.F.A. Honours) - Design

The B.F.A. programs are intended for students who wish to acquire a thorough knowledge of one of the performance-oriented areas of theatre as part of their general education and for those who wish to prepare for graduate schools or conservatories in areas of acting or design.

Area 1: *Acting* - concerned with the practice of acting in various media.

Area 2: *Design* - concerned with the practice of scenic, lighting, and costume design for the stage.

1. **Admission**

Students may be admitted directly to the B.F.A. Honours program with a minimum admission average of 70%, have completed Drama 30 (or its equivalent*) and:

1. A complete admission package including a letter of intent outlining your motivation for pursuing design and technical theatre at the university level and a resume listing your relevant visual experience - include anything you have done during or since high school.

2. A portfolio to be reviewed at your interview with the School for the Arts Drama degree selection committee. The School for the Arts Drama holds an audition day/portfolio review for high school

students, as well as those students not applying directly from high school, during a weekend in February and/or March.

Contact the School for the Arts Drama (**drama@usask.ca**) if you have questions.

**Possible equivalents for Drama 30 would include: acting roles in high school theatre productions, workshops with artists from the professional theatre community, or acting roles community theatre groups such as Persephone Theatre Youth Company.*

Students who wish to pursue this program but do not meet these requirements upon admission to the College of Arts & Science ~~Students interested in entering the B.F.A. program in Drama~~ should contact the School for the Arts no later than the end of their first year. By that time, students should have completed as many of ENG 112, and DRAM 110, DRAM 113, DRAM 118, and DRAM 119 as possible. Formal admission to the B.F.A. program must ~~should~~ be made on an Application for Honours form~~, after the completion of at least 60 credit units~~. (This form is available online ~~from the Undergraduate Student Office~~.) In order to qualify for admission, students must have/be about to complete 60 credit units and have obtained a Cumulative Weighted Average of at least 70% overall and a Major ~~Cumulative Weighted~~ Average of 70% ~~in all drama courses taken~~.

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Rationale: This change will align Drama admissions with those in the other areas in the School for the Arts (Art and Music), and will allow the USask program to better compete for students with other institutions across the country that offer direct entry options. Students will benefit from getting early access to Degree Works and access to major-restricted seats in 100-level Drama courses.

College of Education
December 2024 University Course Challenge

The following changes were approved by the College of Education at the December 6, 2024 Faculty Council meeting and are now being submitted to University Course Challenge for information and approval.

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

1) **The addition of EFDT 265.3 Foundations for First Nations Metis and Inuit Teaching and Learning or ECUR 265.3 Teaching for Reconciliation in the K to 12 Curricula as part of the B.Ed. – Sequential Music – Secondary Program.**

Rationale: The Saskatchewan Professional Teachers Regulatory Board (SPTRB) has proposed changes to "Schedule F - Academic Requirements" that educators must meet to obtain a Professional A Teacher's Certificate. The "Requirements Specific to the Secondary Route" will outline a professional component that includes, "a methods (curriculum and instruction) course related to aligning planning, instruction and Saskatchewan curricular outcomes in order to respond to learner needs in developmentally appropriate and culturally response ways." To this end, the SPTRB has agreed that the following requirement will suffice and, thus, is being added to the B.Ed. Sequential Music – Secondary program route:

- EFDT 265.3 Foundations for First Nations Metis and Inuit Teaching and Learning or ECUR 265.3 Teaching for Reconciliation in the K to 12 Curricula

The requirement of EFDT 265.3 or ECUR 265.3 will replace 3 credit units of Education elective coursework. This change will reduce the number of Education electives in this program route from 9 credit units to 6 credit units.

Bachelor of Education (B.Ed.) – Sequential Music - Secondary Program

Program Requirements

- Completion of the Bachelor of Music degree in Music Education (This satisfies 60 credit units of the B.Ed. Sequential Music program).

Note: For detailed information about the Bachelor of Music degree in Music Education, please see Music Education in this Course and Program Catalogue.

The following 60 credit units are required:

Year 1 (30 credit units)

- EDLC 201.0 Education Learning Community Discovering Saskatchewan
- EDLC 202.0 Education Learning Community Global Community
- EPSE 202.3 Psychological Foundations of Teaching and Learning
- EFDT 265.3 Foundations for First Nations Metis and Inuit Teaching and Learning **or** ECUR 265.3 Teaching for Reconciliation in the K to 12 Curricula
- ECUR 320.3 Literacy Across the Secondary Curriculum
- ECUR 325.3 Relational Curriculum Making in the Secondary Context
- EFDT 301.3 Educator Identity in Contexts Anti Oppressive and Ethical Beginnings

- EFDT 313.3 Pedagogies of Place Context Based Learning
- EPSE 348.3 Essentials of Assessing Student Learning
- EPSE 390.3 Exceptional Learners
- EDST 321.3 Field Experience Learning in Contexts

~~**Choose 3 credit units of Education electives from the following:**~~

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

Choose 3 credit units of Education methods for Teaching Area 2:

- EART 331.3 Methods in Secondary Visual Art
- ECUR 318.3 Methods in Secondary Mathematics
- ECUR 326.3 Methods for Teaching Science in Secondary School
- ECUR 349.3 Methods in Middle Years and Secondary Drama
- ECUR 362.3 Introduction to Principles and Practices of Second Language Teaching
- ECUR 379.3 Introductory Methods in Secondary English Language Arts
- ECUR 386.3 Methods in Secondary Social Studies

Spring Term (after Year 1) (3 credit units)

- EDST 322.3 Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing

Year 2 (27 credit units)

Choose an Extended Practicum option from the following:

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

Education Courses

- EADM 303.3 Education in Society Structures Systems and Stakeholders

Choose 3 credit units of the following:

- EADM 411.3 Inquiry Project and Community Learning Field Experience
- ECUR 411.3 Inquiry Project and Community Learning Field Experience
- EFDT 411.3 Inquiry Project and Community Learning Field Experience
- EPSE 411.3 Inquiry Project and Community Learning Field Experience

- EMUS 490.3 Seminar in Music Education

Choose 6 credit units of Education electives from the following:

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

2) **For EDLC 403.3: Peer Mentoring: Leading to Teach to be a regular offering in the College of Education, effective the 2025-2026 academic year.**

Rationale: The Special Topics course, EDLC 498.3: Peer Mentoring: Leading to Teach, was offered in the 2024 Winter Term and is being offered for a second time in the 2025 Winter Term. As such, this course has been approved as regular course offering: EDLC 403.3: Peer Mentoring: Leading to Teach.

EDLC 403.3 may be used to fill an Education elective requirement for the B.Ed. program. It acknowledges students' facilitation of Year 1 and Year 2 Education Learning Communities as peer mentors while also allowing them to connect their contributions as peer mentors to their experiences in the extended practicum. Teacher candidates will have the opportunity to reflect on how their experiences will impact their identity as future educators. This course will be taught online by the Education Learning Communities Coordinator in the Undergraduate Programs Office.

> **EDLC 403.3: Peer Mentoring: Leading to Teach**
> In this course, teacher candidates will think critically about the role of peer mentor as a leader in the College of Education. Peer mentors, through training and experience, will reflect on the broad issues of education that they have explored through a minimum of three terms of peer mentoring.
> **Restriction:** Course only open to students in the College of Education, final year of the program.
> **Prerequisite(s):** Two terms of Peer Mentoring in the College of Education for Education Learning Communities. Completion of the B.Ed. Extended Practicum (EXPR 422.15 or EXPR 423.3 and EXPR 425.12 or EXPR 424.3 and EXPR 425.12).
> **Corequisite(s):** Peer Mentoring for Education Learning Communities for the term in which this course is taken.
> **Notes:** Departmental approval is required. Students with credit for the Special Topics EDLC 493: Peer Mentoring: Leading to Teach will not receive credit for this course.

3) **To require the Year 2 Education Learning Communities (EDLC 201.0: Education Learning Community Discovering Saskatchewan and EDLC 202.0: Education Learning Community Global Community) for students in the B.Ed. – Technical Vocational Stream, effective the 2025-2026 academic year.**

Rationale: As part of the various B.Ed. program routes, students are required to complete Education Learning Communities (EDLC). The EDLC requirement has not yet been added to the Bachelor of Education – Technical Vocational Stream. Students admitted to this program have their Journeyperson Certificate, which counts as 30 credit units and Year 1 of the program. Therefore, they start in Year 2 of the program, which takes three years to complete. The Year 2 Education Learning Communities will be required for students in this program route in 2025-2026 on.

Bachelor of Education (B.Ed.) - Technical Vocational Stream

This four-year program is for students who wish to specialize in Technical Vocational education.

Information about the courses that count towards the Secondary Teaching Areas 1 and 2 is available under the Bachelor of Education (B.Ed.) program listing in this Catalogue (see Secondary Teaching Areas).

Year 1 - 30 credit units

- Journeyperson Certificate (The Journeyperson Certificate is equivalent to 30 credit units of the Technical Vocational Degree and is the Teaching Area 1).

Please note: the following list of acceptable Saskatchewan Journeyperson Certificates: Agricultural Mechanic, Automotive Service Technician, Bricklayer, Cabinetmaker, Carpentry, Commercial Cook, Construction Electrician, Electrician, Electronics (formerly Radio and Television Repair), Esthetician-Skin Care Technician, Hairstylist, Heavy Duty Equipment Mechanic, Industrial Mechanic (Millwright), Ironworker, Machinist, Plumbing, and Welding. Among acceptable Diplomas in Technology or the Applied Arts are: Civil Technology, Drafting Technology, Electrical Technology, Electronics Technology, and Mechanical and Architectural Technology.

Year 2 - 30 credit units

- **EDLC 201.0 Education Learning Community Discovering Saskatchewan**
- **EDLC 202.0 Education Learning Community Global Community**
- EFDT 101.3 Introduction to Education
- ECUR 165.3 Introduction to Teaching in Secondary Schools

Choose 3 credit units of Indigenous Studies:

INDG 107.3 Introduction to Canadian Indigenous Studies: Introduction to Canadian Indigenous Studies is recommended.

- INDG — 100-Level, 200-Level, 300-Level, 400-Level
- ANTH 202.3 Anthropology and Indigenous Peoples in Canada
- ANTH 350.3 Introduction to Boreal Forest Archaeology
- AREC 220.3 History of Indigenous Agriculture in Canada

- DRAM 111.3 Practicum I Indigenous Performance Methods
- ENG 242.3 Indigenous Storytelling of the Prairies
- ENG 243.3 Introduction to Indigenous Literatures
- ENG 335.3 The Emergence of Indigenous Literatures in Canada
- ENG 338.3 Contemporary North American Indigenous Literatures
- GEOG 465.3 Environment and Health in Indigenous Communities
- HIST 193.3 History Matters Topics in Canadian History
- HIST 195.3 History Matters Indigenous Perspectives on Canadian History
- HIST 257.3 The Canadian Prairie to 1905
- HIST 315.3 Indigenous Health History
- HIST 316.3 History of the Metis in Twentieth Century Prairie Canada
- HIST 366.3 Indigenous Womens Life Stories in Early North America
- HIST 367.3 Early Indigenous North American Diasporas
- HIST 432.3 Turtle Island Stories From Erasure to Empowerment in Early North American Ethnohistories
- HIST 468.3 Topics in Urban History Saskatoon Indigenous History
- KIN 306.3 Introduction to Indigenous Wellness
- LING 114.3 Indigenous Languages and Stories Introduction to the Structure of Language
- LING 253.3 Indigenous Languages of Canada
- PLAN 445.3 Planning with Indigenous Communities
- POLS 222.3 Indigenous Governance and Politics
- POLS 323.3 Indigenous 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 of English:

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

Choose 15 credit units from the following:

- Teaching Area 2 (choose from the approved Teaching Area 2 options)

Spring Term (after Year 2)

- EDST 213.0 Student Teaching in Rural and First Nations Schools

Year 3 - 27 credit units

- EPSE 202.3 Psychological Foundations of Teaching and Learning
- ECUR 320.3 Literacy Across the Secondary Curriculum
- ECUR 325.3 Relational Curriculum Making in the Secondary Context
- ECUR 340.3 Introduction to Teaching Practical and Applied Arts
- ECUR 341.3 Curriculum and Evaluation in Practical and Applied Arts
- EDST 321.3 Field Experience Learning in Contexts
- EFDT 301.3 Educator Identity in Contexts Anti Oppressive and Ethical Beginnings
- EFDT 313.3 Pedagogies of Place Context Based Learning

Choose 3 credit units of Teaching Area 2 methods from the following:

- EART 331.3 Methods in Secondary Visual Art
- ECUR 318.3 Methods in Secondary Mathematics
- ECUR 326.3 Methods for Teaching Science in Secondary School
- ECUR 349.3 Methods in Middle Years and Secondary Drama
- ECUR 362.3 Introduction to Principles and Practices of Second Language Teaching
- ECUR 379.3 Introductory Methods in Secondary English Language Arts
- ECUR 386.3 Methods in Secondary Social Studies

Spring Term (after Year 3) (3 credit units)

- EDST 322.3 Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing

Year 4 - 30 credit units

Choose an Extended Practicum option from the following:

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

Education Courses:

- EFDT 265.3 Foundations for First Nations Metis and Inuit Teaching and Learning or ECUR 265.3 Teaching for Reconciliation in the K to 12 Curricula
- EADM 303.3 Education in Society Structures Systems and Stakeholders
- EPSE 348.3 Essentials of Assessing Student Learning
- EPSE 390.3 Exceptional Learners

Choose 3 credit units from the following:

- EADM 411.3 Inquiry Project and Community Learning Field Experience
- ECUR 411.3 Inquiry Project and Community Learning Field Experience
- EFDT 411.3 Inquiry Project and Community Learning Field Experience
- EPSE 411.3 Inquiry Project and Community Learning Field Experience

4) **To remove the MATH 99.0 requirement from the SUNTEP Saskatoon – Early/Middle Years and SUNTEP Saskatoon – Secondary program routes.**

Rationale: SUNTEP Saskatoon has removed Math 99.0 from the program requirements because students are no longer being admitted with a need for this refresher, 0 credit unit, Mathematics course. In recent years, approximately 85% of students are being admitted to SUNTEP Saskatoon just out of high school. At one time 50% of the student intake would need the refresher course in Mathematics as most of the students were not coming from high school.

SUNTEP Saskatoon – B.Ed. Early/Middle Years (120 credit units):

Year 1 (27 credit units)

Non-Credit Support Courses:

- ENG 99.0
- ~~**MATH 99.0**~~

Education Learning Communities:

- EDLC 101.0 Education Learning Community On Campus
- EDLC 102.0 Education Learning Community in Our City

Required Courses:

- EFDT 101.3 Introduction to Education
- EFDT 265.3 Foundations for First Nations Metis and Inuit Teaching and Learning or ECUR 265.3 Teaching for Reconciliation in the K to 12 Curricula

Choose 3 credit units of Mathematics or Statistics:

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

Choose 3 credit units of Indigenous Studies Courses:

INDG 107.3 Introduction to Canadian Indigenous Studies: Introduction to Canadian Indigenous Studies is recommended.

- INDG — 100-Level, 200-Level, 300-Level, 400-Level
- ANTH 202.3 Anthropology and Indigenous Peoples in Canada
- ANTH 350.3 Introduction to Boreal Forest Archaeology
- AREC 220.3 History of Indigenous Agriculture in Canada
- DRAM 111.3 Practicum I Indigenous Performance Methods
- ENG 242.3 Indigenous Storytelling of the Prairies
- ENG 243.3 Introduction to Indigenous Literatures
- ENG 335.3 The Emergence of Indigenous Literatures in Canada

- ENG 338.3 Contemporary North American Indigenous Literatures
- GEOG 465.3 Environment and Health in Indigenous Communities
- HIST 193.3 History Matters Topics in Canadian History
- HIST 195.3 History Matters Indigenous Perspectives on Canadian History
- HIST 257.3 The Canadian Prairie to 1905
- HIST 315.3 Indigenous Health History
- HIST 316.3 History of the Metis in Twentieth Century Prairie Canada
- HIST 366.3 Indigenous Womens Life Stories in Early North America
- HIST 367.3 Early Indigenous North American Diasporas
- HIST 432.3 Turtle Island Stories From Erasure to Empowerment in Early North American Ethnohistories
- HIST 468.3 Topics in Urban History Saskatoon Indigenous History
- KIN 306.3 Introduction to Indigenous Wellness
- LING 114.3 Indigenous Languages and Stories Introduction to the Structure of Language
- LING 253.3 Indigenous Languages of Canada
- PLAN 445.3 Planning with Indigenous Communities
- POLS 222.3 Indigenous Governance and Politics
- POLS 323.3 Indigenous 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 of English:

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

**Only 3 credit units of English are required if Languages, Cree or French is a Teaching Area.*

Choose 3 credit units of Fine Arts:

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

Choose 3 credit units of Social Sciences/Social Studies:

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

Choose 3 credit units of Kinesiology:

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

Spring Term (after Year 1) (3 credit units)

- ECUR 235.3 Michif Language Learning and Epistemology

….Years 2, 3, 4….

SUNTEP Saskatoon – B.Ed. Secondary (120 credit units):
Year 1 (27 credit units)

Non-Credit Support Courses:

- ENG 99.0
- ~~**MATH 99.0**~~

Education Learning Communities:

- EDLC 101.0 Education Learning Community On Campus
- EDLC 102.0 Education Learning Community in Our City

Required Courses:

- EFDT 101.3 Introduction to Education
- EFDT 265.3 Foundations for First Nations Metis and Inuit Teaching and Learning or ECUR 265.3 Teaching for Reconciliation in the K to 12 Curricula

Choose 3 credit units from the following:

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

Choose 3 credit units of Indigenous Studies courses:

INDG 107.3 Introduction to Canadian Indigenous Studies: Introduction to Canadian Indigenous Studies is recommended.

- INDG — 100-Level, 200-Level, 300-Level, 400-Level
- ANTH 202.3 Anthropology and Indigenous Peoples in Canada
- ANTH 350.3 Introduction to Boreal Forest Archaeology
- AREC 220.3 History of Indigenous Agriculture in Canada
- DRAM 111.3 Practicum I Indigenous Performance Methods
- ENG 242.3 Indigenous Storytelling of the Prairies
- ENG 243.3 Introduction to Indigenous Literatures
- ENG 335.3 The Emergence of Indigenous Literatures in Canada
- ENG 338.3 Contemporary North American Indigenous Literatures
- GEOG 465.3 Environment and Health in Indigenous Communities
- HIST 193.3 History Matters Topics in Canadian History
- HIST 195.3 History Matters Indigenous Perspectives on Canadian History
- HIST 257.3 The Canadian Prairie to 1905
- HIST 315.3 Indigenous Health History
- HIST 316.3 History of the Metis in Twentieth Century Prairie Canada
- HIST 366.3 Indigenous Womens Life Stories in Early North America

- HIST 367.3 Early Indigenous North American Diasporas
- HIST 432.3 Turtle Island Stories From Erasure to Empowerment in Early North American Ethnohistories
- HIST 468.3 Topics in Urban History Saskatoon Indigenous History
- KIN 306.3 Introduction to Indigenous Wellness
- LING 114.3 Indigenous Languages and Stories Introduction to the Structure of Language
- LING 253.3 Indigenous Languages of Canada
- PLAN 445.3 Planning with Indigenous Communities
- POLS 222.3 Indigenous Governance and Politics
- POLS 323.3 Indigenous 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 of English:

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

Choose 3 credit units from the following:

- Secondary - Teaching Area 1* (100-level)
- HIST 193.3 History Matters Topics in Canadian History*

**SUNTEP – Saskatoon Secondary students who have chosen Indigenous Studies as their Teaching Area 1 may use HIST 193.3 History Matters Topics in Canadian History with the topic Turtle Island: A History of North America's Ancient Civilizations towards the Indigenous Studies Teaching Area.*

Choose 3 credit units from the following:

- Secondary - Teaching Area 2* (100-level)

Choose 3 credit units from the following:

- Open Elective 100-400 level (Open Electives must be compiled using 3 or 6 credit units courses.)

Spring Term (after Year 1) (3 credit units)

- ECUR 235.3 Michif Language Learning and Epistemology

….Years 2, 3, 4….

5) **To allow INDG 270.6: Literature of Native North America as a prerequisite for ECUR 379.3: Introductory Methods in Secondary English Language thereby adding "or 6 credit units in English and INDG 270.6" to the list of prerequisite courses.**

Rationale: B.Ed. students with English Language Arts as a teaching area are permitted to use INDG 270.6: Literature of Native North America to meet up to 6 credit units of their English Language Arts teaching area requirements. As such, the motion below proposes to add INDG 270.6 to the list of pre-requisites for **ECUR 379.3: Introductory Methods in Secondary English Language Arts**. It is common for ITEP and SUNTEP students enrolling in INDG 270.6 to use this course to meet English Language Arts teaching area requirements.

> **ECUR 379.3: Introductory Methods in Secondary English Language Arts**
> An introduction to classroom instruction in English language arts, with a special focus on preparation for the Extended Practicum. Topics include provincial curriculum, materials selection and preparation; instructional strategies for English language arts, integration of literature, language, reading, writing, speaking, viewing, representing, listening and student assessment.
> **Weekly hours:** 3 Lecture hours
> **Prerequisite(s):** 12 credit units in English **or 6 credit units in English and INDG 270.6.**
> **Prerequisite(s) or Corequisite(s):** Students pursuing the B.Ed. Direct Entry Program must complete EFDT 101.3; ECUR 163.3 or ECUR 164.3 or ECUR 165.3; EFDT 265.3 or ECUR 265.3; EPSE 202.3.

6) **Changes to the Faculty Action policy outlined below for the 2025-2026 academic year.**

Rationale: As a result of a review of Faculty Action policies of other direct entry colleges at the University of Saskatchewan and in an effort to add clarity and uphold academic standards befitting of a professional college, the following changes to the Faculty Action policy for students enrolled in one of the B.Ed. program routes were approved.

Faculty Actions

These provisions apply to all students who at any time between May 1 and April 30 each year ~~during the September to April period~~ are registered in 18 or more credit units (discounting field experiences). Students not meeting the averages necessary for promotion will be placed on *Probation* or *Required to Discontinue*. The sessional weighted average is the average used for determining promotion, Probation, or the Requirement to Discontinue.

Students should be aware that meeting these standards does not ensure graduation; rather, these are the minimum standards required to continue studies on a full-time basis.

0-30 Credit Units (~~while enrolled in~~ after being admitted to the College of Education)
60% - Promotion
55-59.9% - Probation
<55% Required to Discontinue

31+ Credit Units (~~while enrolled in~~ after being admitted to the College of Education)
60% - Promotion

57-59.9% - Probation
<57% - Required to Discontinue

***Probation*:** Students on *Probation* will receive a warning letter. Probationary action cannot be formally appealed.

***Required to Discontinue*:** Students who are *Required to Discontinue* from the College of Education are not eligible to register in the college for a period of one academic year. Students *Required to Discontinue* for the first time may reapply to the College of Education. Students *Required to Discontinue* more than once could be permanently discontinued and must receive approval from the Student Affairs and Academic Standards Committee of the College of Education before being considered for readmission.

Warning: Part-time students who attempt fewer than 18 credit units between May 1 and April 30 will be assigned a *Warning* if their yearly average falls below 60%. No official faculty action will be assigned; however, a letter will be sent to these students indicating that their average is below the minimum standard and that the grades will carry forward.

Students on probation for two consecutive years or students who receive a warning for two consecutive years will be *Required to Discontinue*.

~~College of Education policies may require teacher candidates to discontinue their studies, at any point in the program, on academic or other grounds if such action is considered to be in the best interest of the teacher candidate, the college and/or the profession.~~

When such action is considered to be in the best interest of the teacher candidate, the college and/or the profession, the College of Education requires teacher candidates to discontinue their studies, at any point in the program, on academic or other grounds. This Faculty Action policy may also apply to students registered in fewer than 18 credit units.

Students have the right to appeal faculty actions; however, appeals will only be accepted if extenuating circumstances can be shown to account for poor academic performance. Appeals are ruled on by the Student Affairs and Academic Standards Committee (SAASC) and must be submitted, in writing, no later than June 20 to SAASC. Teacher candidates are notified in writing of Committee decisions and appeal procedures.

7) **To remove the paragraph from the Graduation Standards section of the Academic Policies in the Course and Program Catalogue that reads, "Teacher candidates may take up to 18 additional credit units to raise one or more of these averages to the required 60%. Courses taken for this purpose must be approved in advance by an academic advisor. Such courses may not be used for a further degree or certificate and may not be used to release a course previously used for credit as meeting the requirements for a degree."**

Rationale: In the Academic Policies section of the Course and Program Catalogue, there is a paragraph included in the Graduation Standards that is irrelevant and is no longer necessary (https://programs.usask.ca/education/policies.php#GraduationStandards).

Since students must have an External Weighted Average and Education Weighted Average of at least 60% prior to moving to the Extended Practicum in the final year of the B.Ed. program and it seems impractical for the College of Education to prohibit other colleges or certificate programs from using particular course(s) for a future credential(s), this paragraph will be removed.

Graduation Standards

1. Cumulative Weighted Average (C.W.A.) of at least 60%
2. External Weighted Average (EX.W.A.) of at least 60%
3. Education Weighted Average (ED.W.A.) of at least 60%
4. Teacher candidates in the Secondary program route must have a minimum average of 60% in each of Teaching Areas I and II.

~~Teacher candidates may take up to 18 additional credit units to raise one or more of these averages to the required 60%. Courses taken for this purpose must be approved in advance by an academic advisor. Such courses may not be used for a further degree or certificate and may not be used to release a course previously used for credit as meeting the requirements for a degree.~~

8) Changes to Field Experiences

Rationale: In preparation for the Spring Term field experiences, the Field Experiences Team must place nearly 700 teacher candidates for the two-week, 0-credit unit EDST 213.0: Student Teaching in Rural and First Nations Schools and the three-week, 3 credit unit EDST 321.3: Field Experience Learning in Contexts. Given the increasing demands on our partners in the field and recent job action, it is becoming increasingly difficult to find placements for B.Ed. students who require field placements in the Spring Term of each year. Furthermore, the cost of time, energy, and human resources required to support a zero-tuition course is unsustainable for a small field experiences team. Therefore, the motion below proposes removing the EDST 213.0 requirement from select B.Ed. program routes and approving a new equivalent for EDST 322.3: Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing that incorporates learning in a rural and First Nations schools.

Program directors/heads for the ITEP, SUNTEP-SK, and SUNTEP-PA program routes have been consulted and do not wish to make changes to their field experiences at this time.

a) Removal of EDST 213.0: Student Teaching in Rural and First Nations Schools for particular B.Ed. program routes (Early/Middle Years, Secondary, Language Teacher Education Program*, Sequential Music – Early/Middle Years, Sequential Music – Secondary, and Technical Vocational Stream) effective the 2025-2026 catalogue.

Although intake for the Language Teacher Education is currently on hold, this B.Ed. program route is still in the catalogue and, as such, is being included with these changes.

b) Revision of the prerequisites for EDST 321.3: Field Experience Learning in Contexts to include Year 2 Education Learning Communities–EDLC 201.0: Education Learning Community Discovering Saskatchewan and EDLC 202.0: Education Learning Community Global Community–for those program routes that require them.

Rationale: With the removal of EDST 213.0: Student Teaching in Rural and First Nations Schools and to ensure upper year transfer students are unable to enrol in the EDST 321.3 field experience immediately upon entering the B.Ed. program, the pre-requisites of EDLC 201.0: Education Learning Community Discovering Saskatchewan and EDLC 202.0: Education Learning Community Global Community (for those program routes that require them) are being proposed.

EDST 321.3: Field Experience Learning in Contexts
This component of field study focuses on community and place-based learning in alternate sites of educational practice that offer an integrated and orienting place-based experience. In addition, teacher candidates will engage in weekly school-based experiences where they will engage with learners to more deeply understand and apply learning in contexts including instruction strategies, planning and adapting, assessment and evaluation, and the effective use of technology.
Weekly hours: 3 Lecture hours
Prerequisite(s): EDST 213.0 (for only those students pursuing B.Ed. program routes that require EDST 213.0) or EDLC 201.0 and EDLC 202.0 (for only those students pursuing B.Ed. program routes that require Year 2 Education Learning Communities).
Prerequisite(s) or Corequisite(s): Students pursuing the B.Ed. Direct Entry Program must complete EFDT 101.3; ECUR 163.3 or ECUR 164.3 or ECUR 165.3; EFDT 265.3 or ECUR 265.3; EPSE 202.3.
Note: Students with credit for EDUC 321 will not receive credit for this course.

c) To approve EDST 375.3: Field Experience in Rural and First Nations Schools.

Rationale: The proposed course description for **EDST 375.3: Field Experience in Rural and First Nations Schools** is below. This course is proposed as an equivalent to EDST 322.3: Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing.

> **EDST 375.3: Field Experience in Rural and First Nations Schools**
> Teacher candidates will engage in this three-week school-based field experience that involves directed observation and participation in a school classroom in rural Saskatchewan or a First Nations community. With attention to community context, teacher candidates will engage with learners, peers and collaborating teachers in practice to more deeply understand curriculum making, languages of knowing, socio-culturally responsive pedagogies and implications in planning and assessment.
> **Prerequisite(s) or Corequisite(s):** Students pursuing the B.Ed. Direct Entry Program must complete EFDT 101.3; ECUR 163.3 or ECUR 164.3 or ECUR 165.3; EFDT 265.3 or ECUR 265.3; EPSE 202.3.
> **Prerequisite(s):** EDST 321.3.
> **Note:** Students in the B.Sc. Kinesiology/B.Ed. Combined Program route are permitted to have this prerequisite waived (only if necessitated by the program requirements at the time of admission).
> **Note:** Students with credit for EDUC 322 or EDST 322 will not receive credit for this course.

d) To replace EDST 322.3: Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing with EDST 375.3: Field Experience in Rural and First Nations Schools for particular B.Ed. program routes (Early/Middle Years, Secondary, Language Teacher Education Program, Sequential Music – Early/Middle Years, Sequential Music – Secondary, and Technical Vocational Stream) to be listed in the 2025-2026 catalogue for implementation in the 2027-2028 academic year.

**Although intake for the Language Teacher Education is currently on hold, this B.Ed. program route is still in the catalogue and, as such, is being included with these changes.*

9) To approve the following Field Experience changes to the B.Sc. Kinesiology / B. Education Combined Program:

a) Remove EDST 213.0: Student Teaching in Rural and First Nations Schools effective the 2025-2026 catalogue year.

b) Require EDST 321.3: Field Experience Learning in Contexts in Year 4 of the program necessitating the removal of ECUR 165.3: Introduction to Teaching in Secondary Schools in Year 1.

c) Require EDST 375.3: Field Experience in Rural and First Nations Schools instead of EDST 322.3: Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing in Spring Term after Year 4.

Course and Program Catalogue Markups

B.Ed. – Early/Middle Years
Year 1 & Year 2 …

Spring Term (after Year 2)

- ~~EDST 213.0 Student Teaching in Rural and First Nations Schools~~

Year 3 (27 credit units)
Education Courses

- EDST 321.3 Field Experience Learning in Contexts
- EFDT 301.3 Educator Identity in Contexts Anti Oppressive and Ethical Beginnings
- EFDT 313.3 Pedagogies of Place Context Based Learning
- EPSE 348.3 Essentials of Assessing Student Learning

Early Years	Middle Years	Early/Middle Years
ECUR 307.3 Early Literacy Prekindergarten to Grade 3	ECUR 309.3 Introduction to Elementary English Language Arts	ECUR 307.3 Early Literacy Prekindergarten to Grade 3 and ECUR 308.3 Reading and Writing Development Prekindergarten to Grade 3 or ECUR 309.3 Introduction to Elementary English Language Arts and ECUR 310.3 Literacy Across the Elementary Curriculum Assessment and Planning in a Relational Context
ECUR 308.3 Reading and Writing Development Prekindergarten to Grade 3	ECUR 310.3 Literacy Across the Elementary Curriculum Assessment and Planning in a Relational Context	
ECUR 314.3 Mathematics in the Early Years	ECUR 312.3 Methods in Elementary Mathematics	ECUR 312.3 Methods in Elementary Mathematics or ECUR 314.3 Mathematics in the Early Years
ECUR 323.3 Science in the Early Years	ECUR 322.3 Methods in Elementary Science	ECUR 322.3 Methods in Elementary Science or ECUR 323.3 Science in the Early Years
ECUR 383.3 Social Studies in the Early Years	ECUR 382.3 Methods in Elementary Social Studies	ECUR 382.3 Methods in Elementary Social Studies or ECUR 383.3 Social Studies in the Early Years

Spring Term (after Year 3) (3 credit units)

- ~~EDST 322.3 Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing~~

- EDST 375.3: Field Experience in Rural and First Nations Schools

Year 4….

B.Ed. – Secondary

Year 1 & Year 2 …
Spring Term (after Year 2)

- ~~EDST 213.0 Student Teaching in Rural and First Nations Schools~~

Year 3 (27 credit units)
Education Courses

- ECUR 320.3 Literacy Across the Secondary Curriculum
- ECUR 325.3 Relational Curriculum Making in the Secondary Context
- EDST 321.3 Field Experience Learning in Contexts
- EFDT 301.3 Educator Identity in Contexts Anti Oppressive and Ethical Beginnings
- EFDT 313.3 Pedagogies of Place Context Based Learning
- EPSE 348.3 Essentials of Assessing Student Learning
- EPSE 390.3 Exceptional Learners

Education Methods

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

- EART 331.3 Methods in Secondary Visual Art
- ECUR 318.3 Methods in Secondary Mathematics
- ECUR 326.3 Methods for Teaching Science in Secondary School
- ECUR 349.3 Methods in Middle Years and Secondary Drama
- ECUR 357.3 Methods in Secondary Physical Education
- ECUR 362.3 Introduction to Principles and Practices of Second Language Teaching
- ECUR 379.3 Introductory Methods in Secondary English Language Arts
- ECUR 386.3 Methods in Secondary Social Studies

Spring Term (after Year 3) (3 credit units)

- ~~EDST 322.3 Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing~~
- EDST 375.3: Field Experience in Rural and First Nations Schools

Year 4 …

B.Ed. - Language Teacher Education Program
Years 1 and 2 (60 credit units) …

Spring Term (after Year 2)

- ~~EDST 213.0 Student Teaching in Rural and First Nations Schools~~

Year 3 (27 credit units)

Education Courses

- EFDT 301.3 Educator Identity in Contexts Anti Oppressive and Ethical Beginnings
- EFDT 313.3 Pedagogies of Place Context Based Learning
- EDST 321.3 Field Experience Learning in Contexts
- EPSE 348.3 Essentials of Assessing Student Learning

Cree Language Stream **Education Methods Courses**	**French Language Stream** **Education Methods Courses**
ECUR 307.3 Early Literacy Prekindergarten to Grade 3	ECUR 309.3 Introduction to Elementary English Language Arts
ECUR 304.3 Cree Literacy in the Early Years	ECUR 306.3 Methods in Teaching Early Middle Years French Language Arts
ECUR 315.3 Cree Mathematics in the Early Years	ECUR 319.3 Methods in Teaching Early Middle Years French Mathematics
ECUR 321.3 Cree Science in the Early Years	ECUR 329.3 Methods in Teaching Early Middle Years Science in French
ECUR 384.3 Cree Social Studies in the Early Years	ECUR 385.3 Methods in Teaching Early Middle Years French Social Studies

Spring Term (after Year 3) (3 credit units)

- ~~EDST 322.3 Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing~~
- EDST 375.3: Field Experience in Rural and First Nations Schools

Year 4…

B.Sc. Kinesiology/B.Education Combined Program

Year 1 (27 ~~30~~ credit units)

Education Learning Communities:

- EDLC 101.0 Education Learning Community On Campus
- EDLC 102.0 Education Learning Community in Our City

Required Courses:

- BIOL 120.3 The Nature of Life
- BIOL 224.3 Animal Body Systems
- EFDT 101.3 Introduction to Education
- ~~ECUR 165.3 Introduction to Teaching in Secondary Schools~~
  ~~(ECUR 165.3 is not required if Practical and Applied Arts is your Teaching Area 2.)~~
- KIN 121.3 Functional Basis of Physical Activity
- KIN 122.3 Social Behavioral Foundations of Physical Activity
- KIN 150.3 How Body Moves I
- KIN 250.3 How the Body Moves II
- MATH 104.3 Elementary Calculus or MATH 110.3 Calculus I

Choose 3 English credit units from the following:

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

Spring Term (after Year 1) (6 credit units)

Choose 6 credit units from the following:

- KIN 225.3 Introduction to Exercise Physiology Neuromuscular and Metabolic Aspects
- KIN 226.3 Introduction to Exercise Physiology Cardiorespiratory Obesity Thermoregulation
- KIN 231.3 Social Psychological Foundations of Physical Activity
- KIN 232.3 Physical Activity in Society

Year 2 (33 credit units)

Education Learning Communities:

- EDLC 201.0 Education Learning Community Discovering Saskatchewan
- EDLC 202.0 Education Learning Community Global Community

Required Courses:

- CPPS 221.3 Gross Anatomy
- EPSE 202.3 Psychological Foundations of Teaching and Learning
- KIN 225.3 Introduction to Exercise Physiology Neuromuscular and Metabolic Aspects or KIN 232.3 Physical Activity in Society

- KIN 226.3 Introduction to Exercise Physiology Cardiorespiratory Obesity Thermoregulation or KIN 231.3 Social Psychological Foundations of Physical Activity
- KIN 222.3 Biomechanics I
- KIN 240.3 Pedagogy in Physical Activity Setting I Theory

Choose 3 English credit units from the following:

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

Choose 3 Kinesiology Activity credit units from the following:

- KIN 310.3 Rhythm and Dance Movement Fundamentals
- KIN 311.3 Aquatics
- KIN 324.3 Athletics
- KIN 325.3 Combatives

Choose 3 credit units from the following:

- STAT 245.3 Introduction to Statistical Methods
- PLSC 214.3 Statistical Methods
- PSY 233.3 Statistical Methods in Behavioural Sciences A

Choose 6 Teaching Area 2 credit units:

For information about what classes may count towards Teaching Area 2, please see the Bachelor of Education (B.Ed.) Secondary - Teaching Area 2 list.

*It is recommended that students contact an academic advisor in the College of Education for assistance with choosing courses for this teaching area.

Spring Term (after Year 2) (3 credit units)

- EDST 213.0 Student Teaching in Rural and First Nations Schools
- KIN 320.3 Physical Growth and Development of Children

Year 3 (30 credit units)

- EFDT 265.3 Foundations for First Nations Metis and Inuit Teaching and Learning or ECUR 265.3 Teaching for Reconciliation in the K to 12 Curricula
- KIN 306.3 Introduction to Indigenous Wellness
- KIN 321.3 Acute Sport Injury Care and Prevention
- KIN 322.3 Motor Learning and Control
- KIN 341.3 Pedagogy in Physical Activity Setting II Practice
- KIN 380.3 Research Methods in Kinesiology

Choose 3 Kinesiology Activity credit units from the following:

- KIN 310.3 Rhythm and Dance Movement Fundamentals

- KIN 311.3 Aquatics
- KIN 324.3 Athletics
- KIN 325.3 Combatives

Choose 9 Teaching Area 2 credit units:

For information about what classes may count towards Teaching Area 2, please see the Bachelor of Education (B.Ed.) Secondary - Teaching Area 2 list.

*It is recommended that students contact an academic advisor in the College of Education for assistance with choosing courses for this teaching area.

Spring Term (after Year 3) (3 credit units)

- KIN 451.3 Community Service Learning in a School Setting

Year 4 (30 ~~27~~ credit units)

- EFDT 301.3 Educator Identity in Contexts Anti Oppressive and Ethical Beginnings
- EFDT 313.3 Pedagogies of Place Context Based Learning
- ECUR 320.3 Literacy Across the Secondary Curriculum
- ECUR 325.3 Relational Curriculum Making in the Secondary Context
- ECUR 357.3 Methods in Secondary Physical Education
- EPSE 348.3 Essentials of Assessing Student Learning
- EPSE 390.3 Exceptional Learners
- EDST 321.3 Field Experience Learning in Contexts

Choose 3 Education methods credit units (Teaching Area 2) from the following:
(Choose 6 credit units if Practical and Applied Arts is your Teaching Area 2)

- EART 331.3 Methods in Secondary Visual Art
- ECUR 318.3 Methods in Secondary Mathematics
- ECUR 326.3 Methods for Teaching Science in Secondary School
- ECUR 349.3 Methods in Middle Years and Secondary Drama
- ECUR 362.3 Introduction to Principles and Practices of Second Language Teaching
- ECUR 379.3 Introductory Methods in Secondary English Language Arts

- ECUR 386.3 Methods in Secondary Social Studies
- Teaching Area 2 of Practical and Applied Arts: ECUR 340.3: Introduction to Teaching Practical and Applied Arts **and** ECUR 341.3: Curriculum and Evaluation in Practical and Applied Arts

Choose 3 Kinesiology Activity credit units from the following:

- KIN 310.3 Rhythm and Dance Movement Fundamentals
- KIN 311.3 Aquatics
- KIN 324.3 Athletics
- KIN 325.3 Combatives

Spring Term (after Year 4) (3 credit units)

- ~~EDST 322.3 Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing~~
- EDST 375.3: Field Experience in Rural and First Nations Schools

Year 5 (30 credit units)

Term 1
Choose an Extended Practicum option from the following:

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

Term 2

- EADM 303.3 Education in Society Structures Systems and Stakeholders
- KIN 423.3 Adapted Physical Activity
- KIN 432.3 Ethics and Values in Sport and Physical Activity

Complete one of the following:
(EADM/ECUR/EFDT/EPSE 411.3 is not required if Practical and Applied Arts is your Teaching Area 2.)

- EADM 411.3 Inquiry Project and Community Learning Field Experience
- ECUR 411.3 Inquiry Project and Community Learning Field Experience
- EFDT 411.3 Inquiry Project and Community Learning Field Experience
- EPSE 411.3 Inquiry Project and Community Learning Field Experience

Choose 3 Kinesiology Activity credit units from the following:

- KIN 310.3 Rhythm and Dance Movement Fundamentals
- KIN 311.3 Aquatics
- KIN 324.3 Athletics
- KIN 325.3 Combatives

Bachelor of Education (B.Ed.) – Sequential Music - Early/Middle Years Program

Program Requirements

- Completion of the Bachelor of Music degree in Music Education (This satisfies 60 credit units of the B.Ed. Sequential Music program).

Note: For detailed information about the Bachelor of Music degree in Music Education, please see Music Education in this Course and Program Catalogue.

The following 60 credit units are required:

Year 1 (30 credit units)

- EDLC 201.0 Education Learning Community Discovering Saskatchewan
- EDLC 202.0 Education Learning Community Global Community
- EPSE 202.3 Psychological Foundations of Teaching and Learning
- EFDT 301.3 Educator Identity in Contexts Anti Oppressive and Ethical Beginnings
- EFDT 313.3 Pedagogies of Place Context Based Learning
- EPSE 348.3 Essentials of Assessing Student Learning
- EDST 321.3 Field Experience Learning in Contexts

Early Years	Middle Years	Early/Middle Years
		ECUR 307.3 Early Literacy Prekindergarten to Grade 3 and ECUR 308.3 Reading and Writing Development Prekindergarten to Grade 3 or ECUR 309.3 Introduction to Elementary English Language Arts and ECUR 310.3 Literacy Across the Elementary Curriculum Assessment and Planning in a Relational Context
ECUR 307.3 Early Literacy Prekindergarten to Grade 3	ECUR 309.3 Introduction to Elementary English Language Arts	
ECUR 308.3 Reading and Writing Development Prekindergarten to Grade 3	ECUR 310.3 Literacy Across the Elementary Curriculum Assessment and Planning in a Relational Context	
ECUR 314.3 Mathematics in the Early Years	ECUR 312.3 Methods in Elementary Mathematics	ECUR 312.3 Methods in Elementary Mathematics or ECUR 314.3 Mathematics in the Early Years
ECUR 323.3 Science in the Early Years	ECUR 322.3 Methods in Elementary Science	ECUR 322.3 Methods in Elementary Science or ECUR 323.3 Science in the Early Years

ECUR 383.3 Social Studies in the Early Years	ECUR 382.3 Methods in Elementary Social Studies	ECUR 382.3 Methods in Elementary Social Studies or ECUR 383.3 Social Studies in the Early Years

Spring Term (after Year 1) (3 credit units)

- ~~EDST 322.3 Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing~~
- EDST 375.3: Field Experience in Rural and First Nations Schools

Year 2 (27 credit units)

Choose an Extended Practicum option from the following:

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

Education Courses

- EADM 303.3 Education in Society Structures Systems and Stakeholders
- EPSE 390.3 Exceptional Learners

Choose 3 credit units of the following:

Early Years	Middle Years	Early/Middle Years
EART 304.3 Arts Education in the Early Years	EART 303.3 Methods in Elementary Visual Art	EART 303.3 Methods in Elementary Visual Art or EART 304.3 Arts Education in the Early Years
ECUR 353.3 Physical Education in the Early Years	ECUR 352.3 Methods in Elementary Physical Education	ECUR 352.3 Methods in Elementary Physical Education or ECUR 353.3 Physical Education in the Early Years
ECUR 451.3 Health in the Early Years	ECUR 450.3 Elementary Health Methods	ECUR 450.3 Elementary Health Methods or ECUR 451.3 Health in the Early Years

Choose 3 credit units of the following:

- EADM 411.3 Inquiry Project and Community Learning Field Experience
- ECUR 411.3 Inquiry Project and Community Learning Field Experience

- EFDT 411.3 Inquiry Project and Community Learning Field Experience
- EPSE 411.3 Inquiry Project and Community Learning Field Experience
- EMUS 490.3 Seminar in Music Education

Year 2 …

Bachelor of Education (B.Ed.) – Sequential Music - Secondary Program

Program Requirements

- Completion of the Bachelor of Music degree in Music Education (This satisfies 60 credit units of the B.Ed. Sequential Music program).

Note: For detailed information about the Bachelor of Music degree in Music Education, please see Music Education in this Course and Program Catalogue.

The following 60 credit units are required:

Year 1 (30 credit units)

- EDLC 201.0 Education Learning Community Discovering Saskatchewan
- EDLC 202.0 Education Learning Community Global Community
- EPSE 202.3 Psychological Foundations of Teaching and Learning
- EFDT 265.3 Foundations for First Nations Metis and Inuit Teaching and Learning **or** ECUR 265.3 Teaching for Reconciliation in the K to 12 Curricula
- ECUR 320.3 Literacy Across the Secondary Curriculum
- ECUR 325.3 Relational Curriculum Making in the Secondary Context
- EFDT 301.3 Educator Identity in Contexts Anti Oppressive and Ethical Beginnings
- EFDT 313.3 Pedagogies of Place Context Based Learning
- EPSE 348.3 Essentials of Assessing Student Learning
- EPSE 390.3 Exceptional Learners
- EDST 321.3 Field Experience Learning in Contexts

Choose 3 credit units of Education methods for Teaching Area 2:

- EART 331.3 Methods in Secondary Visual Art
- ECUR 318.3 Methods in Secondary Mathematics
- ECUR 326.3 Methods for Teaching Science in Secondary School
- ECUR 349.3 Methods in Middle Years and Secondary Drama
- ECUR 362.3 Introduction to Principles and Practices of Second Language Teaching
- ECUR 379.3 Introductory Methods in Secondary English Language Arts
- ECUR 386.3 Methods in Secondary Social Studies

Spring Term (after Year 1) (3 credit units)

- ~~EDST 322.3 Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing~~
- EDST 375.3: Field Experience in Rural and First Nations Schools

Year 2 ….

Bachelor of Education (B.Ed.) - Technical Vocational Stream

Year 1 & Year 2…

~~**Spring Term (after Year 2)**~~

- ~~EDST 213.0 Student Teaching in Rural and First Nations Schools~~

Year 3 - 27 credit units

- EPSE 202.3 Psychological Foundations of Teaching and Learning
- ECUR 320.3 Literacy Across the Secondary Curriculum
- ECUR 325.3 Relational Curriculum Making in the Secondary Context
- ECUR 340.3 Introduction to Teaching Practical and Applied Arts
- ECUR 341.3 Curriculum and Evaluation in Practical and Applied Arts
- EDST 321.3 Field Experience Learning in Contexts
- EFDT 301.3 Educator Identity in Contexts Anti Oppressive and Ethical Beginnings
- EFDT 313.3 Pedagogies of Place Context Based Learning

Choose 3 credit units of Teaching Area 2 methods from the following:

- EART 331.3 Methods in Secondary Visual Art
- ECUR 318.3 Methods in Secondary Mathematics
- ECUR 326.3 Methods for Teaching Science in Secondary School
- ECUR 349.3 Methods in Middle Years and Secondary Drama
- ECUR 362.3 Introduction to Principles and Practices of Second Language Teaching
- ECUR 379.3 Introductory Methods in Secondary English Language Arts
- ECUR 386.3 Methods in Secondary Social Studies

Spring Term (after Year 3) (3 credit units)

- ~~EDST 322.3 Field Experience Relational Curriculum Making in Practice Planning Adapting and Assessing~~
- EDST 375.3: Field Experience in Rural and First Nations Schools

Year 4…

College of Engineering - University Course Challenge Submission, December 2024

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

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

Minor Course Revisions

Mechanical Engineering Program

1). MOTION: To merge the design and technical elective course lists into a single unified technical elective list, effective 2025-26 academic year.

RATIONALE: Currently, students in Mechanical Engineering program are required to take 12 credit units (CU) of technical/design elective courses, with at least 6 CU from the department's list of design elective courses. These design elective courses have a significant number of Engineering Design (ED) Accreditation Units (Aus) and contribute to the department's AU requirements in this category.

The department's ED AUs come from first-year courses, three design courses; ME 229.3 (Introduction to Mechanical Engineering Design), ME 329.3 (Collaborative Design and Manufacturing), and ME 495.6 (Industrial Design Project), two core ME courses; ME 314 (Machine Design I), and ME 431 (Control Systems) and the minimum ED path for design elective courses.

Following a recent review of the revised Canadian Engineering Accreditation Board (CEAB) definition of design and the minimum number of ED AUs that can be counted in individual courses, ME 329.3 was changed to count for 100% ED AUs, which increased the department's total ED AU count to 228 AUs, slightly exceeding the CEAB minimum of 225 AUs

In addition, the department has begun to identify other core courses where ED AUs can be allocated, particularly since there is no longer a requirement for courses to have a minimum of 25% AUs in a specific category to count toward that category's total AU count. This year, changes are being made to ME 313 (Mechanics of Materials I), and ME 314 (Machine Design I), which are expected to add 15.5 ED AUs, raising the department's total AU count to 243.5 AUs, which is 108% of the CEAB minimum requirements. Furthermore, other core courses are expected to contribute additional ED AUs next year. With these recent and planned changes, the department is confident that the ED AUs from the core program alone can exceed the CEAB minimum of 225 AUs by a comfortable margin, which would eliminate the need for students to take designated design elective courses.

This change would significantly increase flexibility for students and simplify bookkeeping for accreditation purposes. By meeting the CEAB ED requirements through the core program itself—similar to the current approach for other categories—it also underscores the importance of design in Mechanical Engineering program.

The requirement for students to take two design electives has posed challenges, particularly when faculty members responsible for teaching these courses are on leave. For instance, during the 2024-25 academic year, all Mechanical Engineering design elective courses are close to or over their registration limits due to the instructor for ME 491 (Thermal Systems Design) being on leave.

Additionally, a single list of technical electives will make it easier for the department to develop course offerings in specific areas of specialization, such as biomedical engineering or energy. Feedback from representatives of the Mechanical Engineering Students Association (MESA) on the Mechanical Engineering undergraduate committee, as well as from other students informed about this plan, has been very positive.

Bachelor of Science in Engineering (B.E.) - Mechanical Engineering (152 credit units)

- **Year 1 (41-44 credit units)**
- **Year 2 (36 credit units)**
- **Year 3 (36 credit units)**

Year 4 (36 credit units)

Fall Term

- **ME 417.3** Thermodynamics II
- **ME 418.3** Mechanical Engineering Laboratory II
- **ME 431.3** Control Systems

Winter Term

- **GE 449.3** Engineering in Society

Fall Term and Winter Term

Choose 6 credit units from the following:

- **ME 495.6** Industrial Design Project
- **GE 495.6** Technological Innovation Capstone Design Project (Department permission required)

Fall Term or Winter Term

- 12 credit units Technical ~~and Design~~ Electives ~~(of which 6 credit units must be from the Design Elective list)~~
- 3 credit units Complementary Studies Elective
- 3 credit units Senior Humanities or Social Science Elective

Technical Electives

Department Technical Electives are offered ~~in alternating calendar years,~~ subject to minimum enrolment limits and staffing considerations. Consult the current Course Offerings to determine the availability of specific electives.

Term 1

- **GEOE 377.3** Fundamentals of Mining and Mineral Processing
- ~~**GEOE 466.3** Geomechanics of Energy Production and Storage~~

Term 2

- ~~**CHE 464.3** Petroleum Production Engineering~~
- **EE 471.3** Introduction to Micro and Nanotechnology
- **GEOE 466.3** Geomechanics of Energy Production and Storage

Term 1 and Term 2

- GE 496.3 Technological Innovation Design Project
- ME 494.3

Term 1 or Term 2

- **CHE 453.3** Corrosion Engineering
- CHE 464.3 Petroleum Production Engineering
- EP 440.3 Space Systems Design
- GEOE 380.3 Mine Ventilation
- ME 450.3
- ME 452.3 Imaging Biomechanics
- ME 460.3 Automation and Robotics in Manufacturing
- ME 461.3
- **ME 462.3** Structure Texture and Properties of Engineering Materials
- ME 463.3
- **ME 464.3** Introduction to Composite Materials
- **ME 471.3** Introduction to Aerodynamics
- ME 472.3
- **ME 473.3** Introduction to Computational Fluid Dynamics
- ME 475.3 Introduction to Mechatronics
- **ME 476.3** Multiphase Flow and Heat Transfer
- ME 477.3 Engineering Materials II
- ME 478.3 Introduction to Fire Protection Engineering
- **ME 488.3** Mechanical Engineering Research Project
- ME 490.3 Design of Fluid Power Circuits
- ME 491.3 Thermal Systems Design
- ME 492.3 Materials in Engineering Design
- ME 493.3 Advanced Mechanical Design
- ME 496.3 Machine Design II
- ME 497.3 Acoustics and Vibrations in Design
- approved senior course(s) from science or Engineering

~~**Design Electives**~~

~~Design Electives are offered subject to minimum enrolment limits and staffing considerations. Consult the current Course Offerings to determine the availability of specific electives. Students must take a minimum of 6 credit units from the list of Design Electives.~~

~~**Term 1**~~

- ~~**ME 496.3** Machine Design II~~

~~**Term 2**~~

- ~~**ME 490.3** Design of Fluid Power Circuits~~
- ~~**ME 492.3** Materials in Engineering Design~~

~~**Term 1 and Term 2**~~

- ~~**GE 496.3** Technological Innovation Design Project~~
- ~~ME 494.3~~

~~**Term 1 or Term 2**~~

- ~~**ME 491.3** Thermal Systems Design~~
- ~~**ME 493.3** Advanced Mechanical Design~~
- ~~**ME 497.3** Acoustics and Vibrations in Design~~

2). MOTION: To change the Prerequisite of ME 471.3 from

Prerequisite(s): ME 335

to

Prerequisite(s): ME 335.3 or (EP 271.3 and PHYS 323.3)

RATIONALE: The new prerequisites will allow students in the Engineering Physics program to take the class as one of their Engineering Physics Requirements. EP 271.3 Heat Kinetic Theory and Thermodynamics (formerly EP 370) is a thermal-fluids course. PHYS 323.3 Mechanics II has content on fluid mechanics. It is expected that most EP students taking ME 471.3 would have also completed MATH 331.3 Applied Differential Equations, which has content similar to, but extending beyond, ME 321.3 Engineering Analysis II. It is expected that one or two students from Engineering Physics might take ME 471.3 in a given year. The current enrollment limit of 40 students would be able to handle any additional students from EP. The ME 471.3 instructor has consulted with Prof. Doug Degenstein in Engineering Physics and he agreed that these prerequisites are reasonable and would not be a problem for their upper-year students.

3). MOTION: To change the Prerequisite of ME 476.3 from:

Prerequisite(s): ME 215 and ME 327

to

Prerequisite(s): (ME 215.3 or CHE 210.3) and (ME 327.3 or CHE 324.3)

RATIONALE: We have contacted Prof. Evitts, the UG Chair of Chemical Engineering, to inform him about the proposed changes to the ME 476.3 course name and description. He has indicated that this course may be of interest to CHE students as a technical elective. Therefore, we have modified the prerequisites so that CHE students will be able to take the course

University Course Challenge – December 2024
The curricular revisions listed below were approved through the Graduate Programs Committee of the College of Graduate and Postdoctoral Studies and are now submitted to the University Course Challenge for approval.

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

CHEMICAL AND BIOLOGICAL ENGINEERING

New Courses:

CHE 868.3 Advanced Downstream Bioprocessing

Catalogue description: This course focuses on both theoretical understanding and practical application of downstream bioprocessing techniques with industry relevance. It covers the fundamentals and advanced contents of downstream bioprocessing processes, including removal of solids (or recovery), isolation of product, purification, and polishing. Final bioproduct formulation, packaging, and storage will also be introduced. The key unit operation techniques for the above-mentioned stages will be learnt through engineering analysis and design. Integration of the downstream process, economics, and environmental impacts will be discussed.
Terms offered: T1 and T2
Weekly hours: 3 Lecture hours
Note: Students with credit for CHE 468 will not receive credit for this course
Rationale: Agri-food exports remain a key component of Saskatchewan and Canada's trade-driven economy. Given the increasing significance of the bioeconomy and the concentration of biological expertise already present on campus, introducing a course on advance downstream bioprocessing focused on biomaterial processing, as well as biotechnology-based production, is essential. This addition would enhance and complement the current programs and research & development efforts on campus.
This course teaches important concepts and techniques about downstream processes commonly used in the bioprocessing industry for bioproduct separation and purification, pelletization, storage, and more. Such knowledge is crucial for graduate students in biological engineering and chemical engineering programs hosted in the Department of Chemical and Biological Engineering (CBE), as well as in additional graduate programs such as food and bioproduction, mechanical engineering, biomedical engineering, and others in the College of Engineering, College of Agriculture, and additional colleges across the campus, to support their research and skill development for future careers.
In addition, there has been feedback from graduate students in the CBE indicating a preference for additional and diversified graduate courses in bioprocessing to enhance their learning experience. Based on the aforementioned aspects and additional requests, CHE868.3 was proposed to be created.
This course will be cross-listed with the undergraduate course, CHE 468.

ECONOMICS

New course:

ECON 810.3 Microeconometrics

Catalogue description: Considers estimation and inference in different econometrics models. The focus is on microeconometrics topics, such as panel data, discrete choice, limited dependent

variables, treatment effects, difference-in-difference, and decomposition methods. Particular topics are chosen based on the instructor's research interests. Practical components of this course provide the opportunity to apply these techniques.
Weekly hours: 3 Lecture hours
Proposed instructor: Nazmi Sari
Rationale: The Econ Department is currently offering a main grad econometrics sequence consisting of ECON 808.3(Econometrics I) and ECON 809.3 (Econometrics II). ECON 808 is a required course for all ECON MA students and is offered in the fall term, while ECON 809, offered in the winter, is a more advanced topics course in econometrics, which MA students can optionally take as one of their field courses. It is a very popular course, though, and most of our MA students take ECON 809.
Beyond the ECON graduate programs, MSc students in Agricultural Economics take ECON 808 as a required course and ECON 809 as a popular option, and PhD students in both Agricultural Economics and the APEC program are required to take two econometrics courses, a requirement which is currently fulfilled by taking ECON 808 and ECON 809.
Depending on who teaches the course, ECON 809 either has a focus on time series econometrics or on microeconometrics. We are planning to introduce a formal distinction between the two versions by giving them different course numbers. A revised ECON 809 will be the time series course going forward, and this new ECON 810 course will cover microeconometrics. We will continue to offer one of the two advanced econometrics courses in term 2, and we intend to switch back and forth between ECON 809 and ECON 810 from year to year, if possible. ECON 809 and 810 will be equivalent for the purpose delivering advanced econometrics content, but they will not be mutually exclusive for students as they cover different topics. The new setup will have a few advantages: (1) It will be clearer and more transparent what content is being taught in a particular year, simply based on the course description; this should simplify planning for students and advising for supervisors and grad chairs. (2) PhD students will be in a position to pick the advanced econometrics course that is most suitable to their needs. (3) Students will be able to take both advanced econometrics courses; this should be particularly interesting to PhD students, as there is now practically one extra ECON econometrics course available to anyone who is able to take courses in two consecutive years, for a total of 3 (ECON808, 809, 810). Some ECON MA or AREC MSc students may find this useful, too.
Neither the ECON MA nor the APEC PhD programs need to be modified for students to take advantageof the proposed change. Students taking ECON 810 after previously having taken a microeconometrics-focused version of the (pre-modification) ECON 809 is not a practical concern, as ECON 809 has been consistently taught as a time series course since at least 2019.

KINESIOLOGY
Changes to Degree requirements

Kinesiology Doctor of Philosophy (Ph.D.) - Non-Direct
Degree Requirements
Students must maintain continuous registration in the 996 course.

- **GPS 960.0** Introduction to Ethics and Integrity
- **GPS 961.0** Ethics and Integrity in Human Research, if research involves human subjects
- **GPS 962.0** Ethics and Integrity in Animal Research, if research involves animal subjects
- **KIN 990.0** Seminar
- **KIN 996.0** Research – Dissertation

- a minimum 3 credit units
- dissertation defense
- doctoral candidacy assessment
- ~~residency requirement of 2 academic terms (Sept-April)~~

Kinesiology Doctor of Philosophy (Ph.D.) - Direct Entry
Degree requirements
Students must maintain continuous registration in the KIN 996 course.

- **GPS 960.0** Introduction to Ethics and Integrity
- **GPS 961.0** Ethics and Integrity in Human Research, if research involves human subjects
- **GPS 962.0** Ethics and Integrity in Animal Research, if research involves animal subjects
- at least ~~9~~ 6 credit units of course work at the graduate level must be successfully completed in the first year of the program.

A minimum of ~~15~~ 12 credit units, including the following:

- **KIN 807.3** Research Methods in Kinesiology (or another course in research methods approved by the supervisor and advisory committee)
- **KIN 808.3** Univariate Statistics Note: it is permissible, with the supervisor's and advisory committee's permission, to substitute another course in data analysis for **KIN 808.3** Univariate Statistics
- **KIN 990.0** Seminar
- **KIN 996.0** Research – Dissertation
- Student must enroll in **KIN 990.0** Seminar until the research proposal is presented.
- Students must select, either from the College of Kinesiology or another College, an additional 9 credit units of courses related to area of study. These 9 credit units of course work must be approved by both the supervisor and advisory committee.
- Write a research grant; and have exposure to teaching during their time of residence in the program.
- Write and successfully defend a dissertation based on original investigation.
- doctoral candidacy assessment

Kinesiology Transfer from M.Sc. to Ph.D.
Degree Requirements
Students must maintain continuous registration in the 996 course.

- **GPS 960.0** Introduction to Ethics and Integrity
- **GPS 961.0** Ethics and Integrity in Human Research, if research involves human subjects
- **GPS 962.0** Ethics and Integrity in Animal Research, if research involves animal subjects
- ~~a residency requirement of 2 academic terms (Sept-April)~~
- ~~comprehensive exam~~ doctoral candidacy assessment

A minimum of ~~15~~ 12 credit units, including the following:

- **KIN 807.3** Research Methods in Kinesiology (or another course in research methods approved by the supervisor and advisory committee)

- **KIN 808.3** Univariate Statistics (or another course in data analysis approved by the supervisor and advisory committee)
- **KIN 990.0** Seminar
- **KIN 996.0** Research – Dissertation

Kinesiology Master of Science (M.Sc.) - Thesis-based
Degree Requirements
Students must maintain continuous registration in the 994 course.

- **GPS 960.0** Introduction to Ethics and Integrity
- **GPS 961.0** Ethics and Integrity in Human Research, if research involves human subjects
- **GPS 962.0** Ethics and Integrity in Animal Research, if research involves animal subjects
- ~~residency requirement of two four-month terms~~

A minimum of 9 credit units, including the following:
- **KIN 807.3** Research Methods in Kinesiology (or another course in research methods approved by the supervisor and advisory committee)
- **KIN 808.3** Univariate Statistics (or another course in data analysis approved by the supervisor and advisory committee)
- **KIN 990.0** Seminar
- **KIN 994.0** Research – Thesis
- an additional 3 credit units, either from the College of Kinesiology or another college, related to the area of study and approved by the supervisor and advisory committee.

Rationale: Credit units change: The Kinesiology M.Sc. program credit unit requirement was reduced from 12 credit units to 9 credit unit, effective for the 2022-23 Catalogue. The changes were not reflected in the credit unit requirements for Kinesiology Ph.D. – Direct Entry program or Kinesiology Transfer from M.Sc. to Ph.D. program. The changes will align the credit unit requirements for all Kinesiology graduate programs.
Course change: The requirement for KIN 807 is being updated to facilitate tailoring of study programs based on the desired learning outcomes, research skills, needs and competencies of each graduate student.
Residency requirement: To better align programs with CGPS policies, including EDI, to allow more flexibility and options for students, and contribute to decolonizing efforts by graduate programs in Kinesiology.

PHYSICIAN ASSISTANT STUDIES
Changes to Degree Requirements

Master of Physician Assistant Studies
Rationale: MPAS 801 and 802 run over three terms, 801 in year 1 and 802 in year 2. The courses were initially approved as 3 credits each and in further developing the curriculum, it was determined that the amount of work required by students in these courses correlated with a higher credit unit amount.
Program approval: University Council April 18, 2024

Degree Requirements
A minimum total of ~~141~~ 153 credit units are required to complete this program. Students must maintain continuous registration in MPAS 801 in year 1 and MPAS 802 in year 2.

- GPS 960.0 Introduction to Ethics and Integrity
- GPS 961.0 Ethics and Integrity in Human Research

Year 1: Clinical Sciences

- MPAS ~~801.3~~ 801.9 Research and Evidence Based Medicine I

Module 1

- MPAS 810.15 Medical Foundations I
- MPAS 811.11 Clinical & Procedural Skill I
- MPAS 812.3 Physician Assistant Professional Practice I

Module 2

- MPAS 820.15 Medical Foundations II
- MPAS 821.11 Clinical & Procedural Skill II
- MPAS 822.3 Physician Assistant Professional Practice II

Module 3

- MPAS 830.15 Medical Foundations III
- MPAS 831.11 Clinical & Procedural Skill III
- MPAS 832.3 Physician Assistant Professional Practice III

Year 2: Clinical Rotations

- MPAS ~~802.3~~ 802.9 Research and Evidence Based Medicine II
- MPAS 900.48 Physician Assistant Clinical Experiences

Course Catalogue Entries
MPAS 801 Research and Evidence Based Medicine
Current credit units: 3
Proposed credit units: 9
Currently Offered: Either Term 1 or Term 2
Proposed Offered: Terms 1, 2 and 3
Current Description: This course is intended to introduce the learner to research methodologies and approaches based on a research question. There will be a focus on quality improvement / quality assurance in clinical medicine and how data can inform clinical decision-making. The tenants of evidence-based medicine, informatics and an approach to literature appraisal will be covered. This course runs longitudinally over the entire MPAS program and will culminate in a capstone project that incorporates a research question, literature review, discussion of research methods, and data collection, analysis and presentation of the capstone project.
Proposed Description: This course introduces learners to the principles of evidence-based medicine for clinical decision-making – including formulating focused research questions, searching for and evaluating evidence, and integrating evidence with patient values and preferences. The course will focus on applying ethical research practices in quality

improvement/quality assurance in clinical medicine as well as on action research as a means of reflective practice for professional growth. We will critically appraise various qualitative and quantitative research methodologies, literature review approaches, and knowledge mobilization strategies. This course runs longitudinally over the entire MPAS program and will culminate in a capstone project that leverages a research question to guide literature review, research method, data collection and analysis, and communication of findings. Learners will also present their capstone projects to fellow scholars and colleagues.

MPAS 802 Research and Evidence Based Medicine II
Current credit units: 3
Proposed credit units: 9
Currently Offered: Either Term 1 or Term 2
Proposed Offered: Terms 1, 2 and 3
Current Prerequisite(s): n/a
Proposed Prerequisite(s): MPAS 801
Current Description: This course is intended to introduce the learner to research methodologies and approaches based on a research question. There will be a focus on quality improvement / quality assurance in clinical medicine and how data can inform clinical decision-making. The tenants of evidence-based medicine, informatics and an approach to literature appraisal will be covered. This course runs longitudinally over the entire MPAS program and will culminate in a capstone project that incorporates a research question, literature review, discussion of research methods, and data collection, analysis and presentation of the capstone project.
Proposed Description: This course introduces learners to the principles of evidence-based medicine for clinical decision-making – including formulating focused research questions, searching for and evaluating evidence, and integrating evidence with patient values and preferences. The course will focus on applying ethical research practices in quality improvement/quality assurance in clinical medicine as well as on action research as a means of reflective practice for professional growth. We will critically appraise various qualitative and quantitative research methodologies, literature review approaches, and knowledge mobilization strategies. This course runs longitudinally over the entire MPAS program and will culminate in a capstone project that leverages a research question to guide literature review, research method, data collection and analysis, and communication of findings. Learners will also present their capstone projects to fellow scholars and colleagues.

PSYCHOLOGY
New courses:

PSY 804.3 - Stories of Psychology: Critical Perspectives on History & Systems
Catalogue Description: This course covers major philosophical, historical, and systems underlying the discipline of psychology. Students will be introduced to subdisciplines such as critical psychology, liberation psychology, and Indigenous psychology. Students will develop an understanding of the links between historical developments and modern psychology.
Weekly hours: 3 Lecture hours
Note: Students with credit for PSY812 or PSY 822 will not receive credit for this course.
Rationale: New 3cu course to replace PSY812.6. Psychology no longer offers 6cu courses at the graduate level.

Course Deletion:

PSY 812.6 Historical and Philosophical Foundations of Psychology
Rationale: Psychology is no longer offering 6cu graduate courses. PSY 804.3 has been proposed to replace this course.

Degree Requirement Changes:

Psychology
Doctor of Philosophy (Ph.D.) - Applied Social Stream

Degree Requirements
Students must maintain continuous registration in the 996 course.

- **GPS 960.0** Introduction to Ethics and Integrity
- **GPS 961.0** Ethics and Integrity in Human Research, if research involves human subjects
- **GPS 962.0** Ethics and Integrity in Animal Research, if research involves animal subjects

A minimum of 9 credit units, including the following:

- One of **PSY 807.3** Statistics III Multivariate Statistics, **PSY 809.3** Qualitative Research, or ~~**PSY 812.3** Historical and Philosophical Foundations of Psychology~~ **PSY 804.3** Stories of Psychology: Critical Perspectives on History & Systems
- 6 credit units Advanced Seminar/Elective
- **PSY 900.0** Directed Research in Psychology
- **PSY 902.0** Practicum in Professional Psychology or **PSY 901.0** Individual Research
- **PSY 996.0** Research – Dissertation
- Doctoral candidacy assessment
- Dissertation defense

SCHOOL OF ENVIRONMENT AND SUSTAINABILITY
Degree requirement changes

Graduate Certificate in Sustainability Solutions

Certificate Requirements (10 credit units)
The certificate can be taken as a stand-alone program or the certificate can be applied to the completion of the Master of Sustainability (M.Ss).

Students are required to complete the following 10 credit units of coursework:

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

~~A minimum of **9 credit units**, comprised of the following:~~

- ~~**ENVS 850.1** Systems Thinking for Sustainability~~
- ~~**ENVS 851.2** Design Thinking for Sustainability~~
- **ENVS 852.3** From Systems to Design Thinking
- **ENVS 853.3** Regenerative Sustainability
- **ENVS 807.3** Sustainability in Theory and Practice

Rationale: SENS has combined the 1 credit unit (ENVS 850) and 2 credit unit (ENVS 851) courses into a single 3 credit unit course (ENVS 852). This change and the syllabus were previously approved through University Course Challenge (January 2024) for the Master of Sustainability program. SENS is proposing the same change to the Graduate Certificate in Sustainability Solutions to better align with the Master of Sustainability in Regenerative Sustainability since students can use the certificate to ladder into the master's program.

FOR INFORMATION

ARCHAEOLGY
ARCH 872.3: Advanced Paleopathology
Proposed Weekly hours: 3 Lecture hours
Proposed Terms offered: Term 1 or term 2

ECONOMICS

ECON 809 Econometrics II
Current title: Econometrics II
New title: Time-Series Econometrics
Current Description: Considers estimation and inference in different econometrics models. The first part deals with time-series econometrics and nonstationary data: unit root; cointegration; single-equation and system methods. The second part covers panel data and discrete choice. Additional topic is added based on instructor's current interests. Application of these techniques in applied projects.
Proposed Description: Considers estimation and inference in different econometrics models. The focus is on time-series econometrics, including topics such as nonstationarity and unit roots, cointegration, single-equation and system methods, VARs, VECMs, forecasting, simulation-based inference and bootstrapping methods. Particular topics are chosen based on the instructor's research interests. Practical components of this course provide the opportunity to apply these techniques.
Current note: Students with credit for BPBE 861 will not receive credit for this course.
Proposed note: n/a

University Course Challenge, College of Nursing

The following motions were approved at the November 4, 2024 College of Nursing Faculty Council meeting and are being proposed here for final approval:

Note: the changes below were approved on November 30, 2024 through University Course Challenge. The same changes were meant to be proposed for the Post-Degree Bachelor of Science in Nursing (PDBSN) Option, but were missed. As such, they are being proposed for the PDBSN here, as follows:

Post-Degree Bachelor of Science in Nursing (PDBSN) Option (94 credit units)

- **Year 1 (46 credit units)**
- **Year 2 (48 credit units)**
- **Restricted Electives List**

Restricted Electives List

To receive credit for a restricted elective, the course must have been completed within the last 6 years from the date of admission to the program. A grade of 60% will be required to receive credit from courses taken outside the College of Nursing.

University of Saskatchewan:

- **AGMD 800.3** Public Health and Agricultural Rural Ecosystem PHARE
- ARCH 472.3
- **CHEP 402.3** Global Health and Local Communities Issues and Approaches
- **CHEP 403.3** Global Health II
- **COMM 306.3** Ethics and Strategic Decision Making
- **COMM 384.3** Workplace Health and Safety
- **EFDT 301.3** Educator Identity in Contexts Anti Oppressive and Ethical Beginnings
- **EFDT 435.3** Critical Perspectives in Educational Thought and Values
- EFDT 335.3
- **ENVS 401.3** Sustainability in Action
- EPSE 302.3
- **INDG 230.3** Gender in Traditional and Contemporary Indigenous Societies
- **INDG 264.3** Aboriginal People and Canadian Politics
- **INDG 265.3** Aboriginal People and Development
- **KIN 232.3** Physical Activity in Society

- KIN 423.3 Adapted Physical Activity
- KIN 424.3 Aging and Activity
- KIN 426.3 Cardiovascular Exercise Pathophysiology
- NURS 405.3 Environmental Sustainability in Health Care
- NURS 410.3 History of Health Systems Public Health and Nursing in Canada
- NURS 478.3 Rural Nursing
- NURS 486.3 Forensic Nursing
- NUTR 200.3 Introduction to Nutrition in Fitness, Sport, and Health
- NUTR 310.3 Food Culture and Human Nutrition
- PHAR 351.3 Exploring Substance Use Disorders: Understanding, Treating, and Healing Through an Interdisciplinary Approach
- PHIL 224.3 Philosophy of Sexuality
- PHIL 231.3 Moral Problems
- PHIL 234.3 Biomedical Ethics
- PHIL 293.3 Philosophy of Death
- POLS 222.3 Indigenous Governance and Politics
- POLS 262.3 Global Governance
- PSY 207.3 Psychology of Death and Dying
- PSY 213.3 Child Development
- PSY 214.3 Adolescent Development
- PSY 216.3 Psychology of Aging
- PSY 222.3 Personality
- PSY 223.3 Abnormal Psychology
- PSY 226.3 Social Psychology
- PSY 227.3 Human Sexuality
- PSY 230.3 Criminal Behaviour
- PSY 246.3 Introduction to Human Neuropsychology
- PSY 253.3 Introduction to Cognitive Psychology
- PSY 260.3 Health Psychology

- **RLST 282.3** Religious Perspectives on Death and Dying
- **SOC 203.3** Race and Ethnic Relations in Canada
- **SOC 204.3** Rural Sociology and Rural Development
- **SOC 205.3** Comparative Race and Ethnic Relations
- **SOC 214.3** Social Control
- **SOC 227.6** Critical Issues in Canadian Society
- **SOC 219.3** Indigenous Peoples and Justice in Canada
- SOC 235.3
- **SOC 238.3** Sociology of Health Illness and Health Care
- **SOC 242.3** Introduction to Sociology of Womens Studies
- **SOC 415.3** Selected Problems in Social Control
- **TOX 402.3** Systemic Toxicology
- **WGST 201.3** Images of Gender and Sexuality in Popular Culture
- **WGST 210.3** Gendered Perspectives on Current Events

Athabasca University:

Saskatchewan Polytechnic:

University of Regina

Rationale: The courses have been reviewed by College of Nursing faculty and have been approved to be included in our restricted elective list. Saskatoon has a large student cohort that will benefit from the courses.

Contact: Donna Ludwar

University Course Challenge – December 2024

Contact: Alecia Galambos (Galambos@edwards.usask.ca)

The following items were approved by Edwards Faculty Council on December 10, 2024 and are now submitted to the University Course Challenge for approval.

New Courses for Approval

1. Introduce COMM 225.3 Introduction to Accounting and Financial Literacy for Entrepreneurs

   COMM 225.3: Introduction to Accounting and Financial Literacy for Entrepreneurs
   This introductory course is designed for students pursuing a degree in colleges other than the Edwards School of Business, who will use accounting information in the workplace, but are not primarily responsible for its preparation. Upon completion of this course, students should have a basic understanding of financial statements, and be able to develop the knowledge necessary to interpret the financial information being presented for decision-making purposes. To achieve this, the fundamental elements of accounting information will be studied, as well as the constraints imposed on the accumulation and reporting of financial information. This course will also cover budgeting and understanding the behaviour of costs in order to make informed internal business decisions. The use and interpretation of accounting information for investment, lending, and management decision making will be emphasized.
   This course is one of a set of accounting courses offered at the Edwards School of Business for students in colleges other than the Edwards School of Business.
   Note: This course is not open to students enrolled in the Bachelor of Commerce program and cannot be used for credit in the B.Comm. degree. Students can receive credit for one of COMM 201.3 or COMM 225.3. Students intending to pursue a B.Comm. should enroll in COMM 201.3. Students in the Certificate in Business, Certificate in Entrepreneurship, and Indigenous Business Administration Certificate should consult with an advisor before enrolling in this course.

   Rationale*:* The current COMM 201 course is widely taken as an elective by students from various non-business programs, such as Agribusiness, Business Economics, Computer Science, Nutrition, and others, as part of their program requirements. However, feedback and data suggest that many non-business students are facing challenges with the course, particularly in its focus on business-specific content. This has raised concerns that COMM 201 may not be well-suited to meet the educational goals or specific needs of these students. To address this, we have consulted with colleagues from these units and have developed a new introductory accounting course tailored specifically for non-business students, ensuring alignment with the educational goals and accreditation requirements of their programs. The attached syllabus reflects these consultations, offering foundational accounting knowledge that is more relevant and accessible to these students.

2. Introduce COMM 325.3 Corporate Reporting and Decision-Making for Non-Accountants

COMM 325.3: Corporate Reporting and Decision-Making for Non-Accountants
This course is designed for students pursuing a degree in colleges other than the Edwards School of Business and for Edwards School of Business students pursuing a non-accounting major. Upon completion of this course, students should understand corporate reporting and knowledge of analytical tools to enable financial statement analysis at the intermediate level. This course will focus on the role of accounting in facilitating the successful operation of business enterprises and in measuring, reporting and assessing business performance. This course is one of a set of accounting courses offered at the Edwards School of Business for students in colleges other than the Edwards School of Business, and for Edwards School of Business students other than accounting majors.
Prerequisite(s): COMM 225.3 or COMM 201.3
Note: This course is not open to students in the Accounting major. Students who take this course and subsequently transfer into the Accounting major may use this course to fill an elective in the B.Comm. program. This course does not serve as a prerequisite course for COMM 321.3 or COMM 323.3.

Rationale: Currently, many non-accounting majors are enrolled in COMM 321, which is primarily designed for accounting students. Non-accounting students would benefit more from an accounting course focused on the user perspective, rather than the preparer perspective emphasized in COMM 321. This would better align with their educational goals and career paths. The presence of non-accounting majors in COMM 321 has resulted in a bi-modal distribution of performance and engagement, which diminishes the overall educational experience for accounting majors. The differing levels of accounting background between the two groups often create challenges for both students and instructors. To address these issues, we propose establishing a new course, tentatively listed as COMM 398.3 (Special Topics), aimed at non-accountants who require intermediate accounting knowledge. This course would focus on the user side of accounting, providing more relevant skills and knowledge for both non-accounting (e.g., management majors) and non-business students. This new course will replace COMM 321 and 323 for non-accounting management students, who would no longer need to take these more specialized accounting courses.

3. Renumber COMM 405.3 to COMM 326.3 Taxation and Business Decisions

COMM 326.3 ~~COMM 405.3Taxation~~ and Business Decisions
Students acquire an understanding of the fundamentals of the Canadian tax system and its impact on business and personal decision-making. The Canadian income tax structure is examined, a theory for tax planning is developed and specific tax planning topics are discussed. This course is one of a set of accounting courses offered at the Edwards School of Business for students in colleges other than the Edwards School of Business, and for Edwards School of Business students other than accounting majors.
Prerequisite(s): COMM 201.3 or COMM 225.3
Note: Students may receive credit for only one of COMM 326.3 or COMM 405.3

Rationale: This motion to create a new course is necessary to renumber COMM 405 as COMM 326; it is the exact same course. The only modification is changing the prerequisite from COMM 210 to COMM 201 or COMM 205.

Course Changes for Approval

4. Changes to COMM 104.3 and COMM 207.3 as per the following:

- Remove GE 210.3, PLSC 214.3, STAT 245.3, and STAT 246.3 as equivalent courses in Banner for COMM 104.3.

- Remove AGEC 362.3, CRSC 314.3, ECON 204.6, PLSC 214.3, and PLSC 314.3, QUAN 295.3, SOC 240.3 as equivalent courses in Banner for COMM 207.3

- Change the wording of the "note" on the COMM 104.3 course description to read: Edwards students with credit for or seeking to take non-COMM statistics courses should refer to the programs section of the Catalogue as some courses can be used in place of COMM 104.3 and cannot be used as electives in the B.Comm. program. ~~EE 216.3, GE 210.3, PLSC 214.3, PSY 233.3, STAT 241.3, STAT 244.3, STAT 245.3, or STAT 246.3 may not receive credit for this course~~. Students who wish to use ~~this course~~ COMM 104.3 toward an Arts & Science credit should first refer to Statistics Course Regulations in the Arts & Science section of the Catalogue.
  Weekly hours: 3 Lecture hours
  Prerequisite(s): Foundations of Math 30, Pre-Calculus 30, or MATH 102.
  Note: Edwards students with credit for or seeking to take non-COMM statistics courses should refer to the programs section of the Catalogue as some courses can be used in place of COMM 104.3 and cannot be used as electives in the B.Comm. program. EE 216.3, GE 210.3, PLSC 214.3, PSY 233.3, STAT 241.3, STAT 244.3, STAT 245.3, or STAT 246.3 may not receive credit for this course. Students who wish to use this course COMM 104.3 toward an Arts & Science credit should first refer to Statistics Course Regulations in the Arts & Science section of the Catalogue.

- Change the wording of the "note" on COMM 207.3 to read: Edwards students with credit for or seeking to take non-COMM statistics courses should refer to the programs section of the Catalogue as some courses can be used in place of COMM 207.3 and cannot be used as electives in the B.Comm. program. Students who wish to use ~~this course~~ COMM 207.3 toward an Arts & Science credit should first refer to Statistics Course Regulations in the Arts & Science section of the Catalogue ~~Calendar~~
  Weekly hours: 3 Lecture hours
  Prerequisite(s): One of (COMM 121.3, MATH 110.3, MATH 121.3 or MATH 133.4) and COMM 104.3
  Note: Edwards students with credit for or seeking to take non-COMM statistics courses should refer to the programs section of the Catalogue as some courses can be used in place

of COMM 207.3 and cannot be used as electives in the B.Comm. program. Students who wish to use ~~this course~~ COMM 207.3 toward an Arts & Science credit should first refer to Statistics Course Regulations in the Arts & Science section of the Catalogue ~~Calendar~~.

Rationale*:* The Edwards School of Business allows B.Comm. students to take a number of non-COMM Statistics courses in place of COMM 104.3 and/or COMM 207.3. This accommodates students who transfer in from other schools/colleges and, on rare occasions, allows students who cannot enrol in COMM 104.3 or COMM 207.3 due to scheduling or capacity issues the opportunity to take a non-COMM Statistics course instead. These permissions and substitutions are published in the Course and Program Catalogue and substitutions are reviewed by our undergraduate advisors. The College of Arts & Science has recently updated their [Statistics%20Course%20Regulations] Statistics Regulations to provide students who switch between science programs and social science programs more flexibility to take the course(s) best suited for their programs. The student registration system currently blocks Arts & Science students from registering in certain Statistics courses due to equivalents Edwards has recognized for COMM 104.3 and COMM 207.3. The College of Arts & Science has requested that we update the system prerequisites on our courses to enable students in Arts & Science who have taken COMM 104.3 and/or COMM 207.3 the ability to register in other Statistics courses. This change will not impact the Statistics regulations within Edwards and should not further impact the registration experiences of our students as our advisors were already provided manual permissions due to the equivalents listed on the Arts & Science courses.

<u>Changes to Accounting Majors</u>

5. COMM 324.3 is a required course for the accounting major.

   Rationale*:* This course is required by the CPA program, and should now be a requirement for the major. It will decrease the number of free senior electives available for the accounting major to one which is not ideal.

6. Accounting majors are exempt from COMM 213.3 (Management Information Systems).

   Rationale*:* This change addresses the decreased senior elective issue in the prior motion. Accounting students take both COMM 337 (Accounting information systems) and COMM 324 (Accounting data analytics) so COMM 213 is redundant for the accounting major.

7. Accounting honours students (ACC 400.6) are exempt from COMM 447.3 (Entrepreneurship & Venture Development) and COMM 412.3 (Accounting Theory).

   Rationale*:* This change opens up room for students to take their honours project which is currently causing students to go over the required 120 credit units by 6 credit units due to the restrictiveness in the accounting major.

8. Accounting majors are exempt from COMM 306.3; replace this requirement with a Free Senior Elective.

   Rationale: Ethics is integral to accounting and is listed as an enabling competency as per the CPA competency map. Accordingly, ethics is integrated to the accounting profession and is integrated throughout the accounting major courses (COMM 321, 412,414, 421, 438, and 406/407). Indeed, it is even introduced in our introductory course (COMM 201). The major emphasizes applied ethics and has numerous faculty publishing in the top business ethics business journal in the world. Removing the requirement for this core class allows accounting majors more flexibility in their program planning to take other Edwards courses. Accounting major students are still encouraged to take this course if their program planning permits it.

Mark-up for Proposed Accounting Changes

Year 2 (30 credit units)

- COMM 201.3 Introduction to Financial Accounting
- COMM 203.3 Introduction to Finance
- COMM 205.3 Introduction to Operations Management
- COMM 207.3 Statistics for Business Decisions
- COMM 210.3 Introduction to Management Accounting
- COMM 304.3 Introduction to Business Law
- ~~COMM 213.3 Management Information Systems~~
- ECON 111.3 Introductory Microeconomics
- ECON 114.3 Introductory Macroeconomics

Choose 6 credit units from the following:

- non-Commerce electives

Note: Students interested in pursuing Accounting as a major should not take COMM 213.3 Management Information Systems in year 2 as they will be required to take COMM 337.3 Accounting Information Systems in year 3. Instead, they should register for COMM 304.3 Introduction to Business Law (or COMM 347 Indigenous Business in Canada). If a student is not successfully admitted to the Accounting major they will be required to complete COMM 213.3 in year 3. Students who do complete COMM 213.3 and subsequently enter into the Accounting major may use COMM 213.3 as a free senior elective.

Year 3 (30 credit units)

Core Requirements (~~9~~ 3 credit units)

- ~~COMM 304.3 Introduction to Business Law~~
- ~~COMM 306.3 Ethics and Strategic Decision Making~~
- COMM 347.3 Indigenous Business in Canada

Accounting Major Requirements (~~12~~ 15 credit units)

This program will be in effect for students entering the Accounting (ACC) major in the 2021-2022 2025-2026 academic year. Students currently in the ACC major will be allowed to complete the major requirements for the academic year in which they were admitted.

- COMM 308.3 Cost Management Systems
- COMM 321.3 Corporate Financial Reporting I
- COMM 323.3 Corporate Financial Reporting II
- COMM 324.3 Data Analytics for Accounting
- COMM 337.3 Business Information and Accounting Systems

Choose 3 credit units from the following:

- Any level non-Commerce elective OR
- 300-level or higher COMM

Choose 9 ~~6~~ credit units from the following:

- Free senior electives (200-level or higher non-Comm or 300 level or higher COMM)

Year 4 (30 credit units)

Core Requirements (6 credit units)

- COMM 401.3 Business Strategy
- COMM 447.3 Entrepreneurship & Venture Development or COMM 400.3 Accounting Honours Project*

Accounting Major Requirements (21 credit units)

This program will be in effect for students entering the Accounting (ACC) major in the 2021-2022 2025-2026 academic year. Students currently in the ACC major will be allowed to complete the major requirements for the academic year in which they were admitted.

- COMM 406.3 Liability for Tax and Computation of Net Income
- COMM 407.3 Individual and Corporate Taxes Payable and Tax Planning
- COMM 412.3 Accounting Theory or COMM 400.3 Accounting Honours Project*
- COMM 414.3 Integrative Analysis of Accounting Issues and Problems
- COMM 421.3 External Auditing
- COMM 433.3 Accounting for Equity Interests
- COMM 438.3 Management Planning and Control Systems

Choose 3 credit units from the following:

- Free senior electives (200-level or higher non-Comm or 300 level or higher COMM)

*** Accounting Honours Project:** Students who are accepted to complete an honours project may use COMM 400.6 in lieu of COMM 412.3 and COMM 447.3.

Prerequisite Changes

9. Change the prerequisites for COMM 321.3 from COMM 201 to pre-requisite COMM 201 and COMM 210. Permission of the Department Head is also necessary if not accepted into the accounting major.

   COMM 321.3: Corporate Financial Reporting I

   An intensive examination of professional pronouncements and practices regarding concepts, principles, and procedures for recognizing, measuring, and disclosing assets and related revenues and expenses which are presented in financial statements prepared for third parties. Within this knowledge base, skills regarding reading, analysis, diagnosis, evaluation and judgment are developed in a context of new and unfamiliar situations.
   Weekly hours: 1 Lecture hours and 2 Seminar/Discussion hours
   Permission of the department required.
   Prerequisite(s): COMM 201.3 and COMM 210.3

   Rationale*:* Students require prerequisite knowledge from COMM 210.3

10. Change the prerequisites for COMM 414.3 from COMM 308 or COMM 406 to pre-requisite or co-requisite COMM 421.3

    COMM 414.3: Integrative Analysis of Accounting Issues and Problems
    This course is a capstone in the accounting major. Through a variety of cases and experiential instructional resources, students will study topics in financial and managerial accounting, information systems, audit and taxation in an integrated and applied manner. Students will develop their analytical, problem-solving and communication skills and prepare for entry into the professional accounting education program following the completion of the major.
    Weekly hours: 3 Lecture hours
    Permission of the department is required.
    Restriction(s): Open to students in Edwards School of Business, pursuing the last year of their B.Comm. in Accounting.
    Prerequisite or corequisite(s): ~~COMM 308.3 or COMM 406.3~~ COMM 421.3

    Rationale*:* This course was designed to be a capstone case-based course for accounting students in their final year of study. Currently, students are taking the course too early without the necessary pre-requisite knowledge.

11. Change the prerequisites for COMM 406.3 from COMM 321 to COMM 323.

    COMM 406.3: Liability for Tax and Computation of Net Income
    Exposes students to the technical provisions of the Income Tax Act and their interpretation and application. In particular, the course examines the liability for tax and the computation of net

income for tax purposes. Emphasis is placed on learning how to read, understand and apply the legislation itself. Students are also introduced to the skills necessary to research a tax issue.
Weekly hours: 3 Lecture hours
Permission of the department required.
Prerequisite(s): ~~COMM 321.3~~ COMM 323.3
Note: Students may receive credit for only one of COMM 405.3 or COMM 406.3

Rationale*:* Prevents the students from taking 406 in their 3rd year

Department of Management and Marketing Changes

12. Removal of COMM 321.3 and COMM 323.3 from the list of Accounting elective options in the Management major, add COMM 325.3: Corporate Reporting and Decision-Making for Non-Accountants, and change COMM 405.3 to COMM 326.3 (previously COMM 405.3).

    Rationale for adding COMM 325.3/removal of 321.3 & 323.3: Currently, many non-accounting majors are enrolled in COMM 321, which is primarily designed for accounting students. Non-accounting students would benefit more from an accounting course focused on the user perspective, rather than the preparer perspective emphasized in COMM 321. This would better align with their educational goals and career paths. The presence of non-accounting majors in COMM 321 has resulted in a bi-modal distribution of performance and engagement, which diminishes the overall educational experience for accounting majors. The differing levels of accounting background between the two groups often create challenges for both students and instructors. To address these issues, we propose establishing a new course, COMM 325.3, aimed at non-accountants who require intermediate accounting knowledge. This course would focus on the user side of accounting, providing more relevant skills and knowledge for management majors and other non-accounting students. This new course will replace COMM 321 and 323 for non-accounting management students, who would no longer need to take these more specialized accounting courses.

Mark-up for Proposed Management Changes

Choose 15 credit units from Groups 1 to 6

NOTE: Within the total of 30 credit units required in the Management major:

- a maximum of 9 credit units can be chosen from each of Groups 1-5
- a minimum of 3 credit units must be chosen from at least 5 of the 6 subject groups
- at least 3 credit units must be at the 400-level

Group 2 - Accounting

- ~~COMM 321.3 Corporate Financial Reporting I~~
- ~~COMM 323.3 Corporate Financial Reporting II~~
- COMM 324.3 Data Analytics for Accountants

- COMM 325.3 Intermediate Accounting for Non-Accountants
- COMM 326.3 Taxation and Business Decisions
- COMM 398.3 Accounting Special Topics Course
- ~~COMM 405.3 Taxation and Business Decisions~~
- COMM 410.3 Financial Statements Analysis

Certificate in Business (CBUS) Changes

13. Update the list of the required courses for the Certificate in Business (CBUS) to COMM 225.3 Introduction to Accounting and Financial Literacy for Entrepreneurs or COMM 201.3 Introduction to Financial Accounting with a note that states Students interested in transferring to the Bachelor of Commerce program should complete COMM 201.3; COMM 225.3 cannot be used for credit in the B.Comm. program.

    Rationale*:* New accounting course for non-business students.

14. Add COMM 325.3 and 326.3 to the list of electives for the CBUS program.

    Rationale*:* New accounting courses for non-accounting students.

Mark-up for Proposed CBUS changes

Requirements (24 credit units)

Required Courses (15 credit units)

- COMM 101.3 Introduction to Business
- COMM 105.3 Introduction to Organizational Behaviour
- COMM 225.3 Introduction to Accounting and Financial Literacy for Entrepreneurs or COMM 201.3 Introduction to Financial Accounting*
- COMM 204.3 Introduction to Marketing
- COMM 306.3 Ethics and Strategic Decision Making

** Note: Students interested in transferring to the Bachelor of Commerce program should complete COMM 201.3; COMM 225.3 cannot be used for credit in the B.Comm. program.*

Electives (9 credit units)

- COMM 100.3 Business Communication
- COMM 203.3 Introduction to Finance
- COMM 205.3 Introduction to Operations Management
- COMM 210.3 Introduction to Management Accounting
- COMM 211.3 Human Resource Management

- COMM 229.3 Personal Financial Management
- COMM 304.3 Introduction to Business Law
- COMM 325.3 Corporate Reporting and Decision Making for Non-Accountants
- COMM 326.3 Taxation and Business Decisions
- COMM 340.3 Introduction to International Business
- COMM 345.3 Business and Public Policy
- COMM 347.3 Indigenous Business in Canada
- COMM 348.3 Leadership
- senior-level COMM electives approved at the discretion of the Edwards School of Business
- senior-level electives from other colleges approved at the discretion of the Edwards School of Business

Certificate in Entrepreneurship **(CENT) Changes**

15. Update the list of the required courses for the Certificate in Entrepreneurship (CENT) to COMM 225.3 Introduction to Accounting and Financial Literacy for Entrepreneurs or COMM 201.3 Introduction to Financial Accounting with a note that states Students interested in transferring to the Bachelor of Commerce program should complete COMM 201.3; COMM 225.3 cannot be used for credit in the B.Comm. program.

    Rationale*:* New accounting course for non-business students.

16. Add COMM 325.3 and 326.3 to the list of electives for the CENT program.

    Rationale*:* New accounting courses for non-accounting students.

Mark-up for Proposed CENT changes

Requirements (24 credit units)

Required Courses (15 credit units)

- COMM 101.3 Introduction to Business
- COMM 225.3 Introduction to Accounting and Financial Literacy for Entrepreneurs or COMM 201.3 Introduction to Financial Accounting*
- COMM 204.3 Introduction to Marketing
- COMM 341.3 Entrepreneurial Thinking and Innovation or COMM 346.3 Technology Commercialization
- COMM 349.3 Introduction to Entrepreneurship

** Note: Students interested in transferring to the Bachelor of Commerce program should complete COMM 201.3; COMM 225.3 cannot be used for credit in the B.Comm. program.*

Electives (9 credit units)

- COMM 104.3 Foundations of Business Statistics
- COMM 105.3 Introduction to Organizational Behaviour
- COMM 203.3 Introduction to Finance
- COMM 205.3 Introduction to Operations Management
- COMM 210.3 Introduction to Management Accounting
- COMM 211.3 Human Resource Management
- COMM 229.3 Personal Financial Management
- COMM 325.3 Corporate Reporting and Decision Making for Non-Accountants
- COMM 326.3 Taxation and Business Decisions
- COMM 352.3 Marketing Strategy

Indigenous Business Administration Certificate (IBAC) Changes

17. Update the list of the required courses for the Indigenous Business Administration Certificate (IBAC) to COMM 201.3 Introduction to Financial Accounting or COMM 225.3 Introduction to Accounting and Financial Literacy for Entrepreneurs with a note that states Students interested in transferring to the Bachelor of Commerce program should complete COMM 201.3; COMM 225.3 cannot be used for credit in the B.Comm. program.

    Rationale*:* New accounting course for non-business students.

Mark-up for Proposed IBAC changes

Requirements (48 credit units)

Year 1 - Fall Term and Winter Term

- COMM 115.0 Business School Life I

Year 2 - Fall and Winter Term

- COMM 120.0 Business School Life II

Required Courses (36 credit units)

- COMM 100.3 Business Communication
- COMM 101.3 Introduction to Business
- COMM 104.3 Foundations of Business Statistics
- COMM 105.3 Introduction to Organizational Behaviour
- COMM 201.3 Introduction to Financial Accounting or COMM 225.3 Introduction to Accounting and Financial Literacy for Entrepreneurs*
- COMM 203.3 Introduction to Finance

- COMM 204.3 Introduction to Marketing
- COMM 211.3 Human Resource Management
- COMM 229.3 Personal Financial Management
- ECON 114.3 Introductory Macroeconomics
- ECON 111.3 Introductory Microeconomics
- MATH 102.3 Precalculus Mathematics or COMM 121.3 Business Mathematics
- English Language Requirement (3 credit units)

** Note: Students interested in transferring to the Bachelor of Commerce program should complete COMM 201.3; COMM 225.3 cannot be used for credit in the B.Comm. program.*

Choose 3 credit units from the following:

- *100 level non-COMM electives list*

Non-Commerce Electives (6 credit units)

- Choose 6 credit units of 100-level non-COMM electives

Senior Commerce Elective (3 credit units)

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

The following items were approved by Edwards Faculty Council and are now submitted to the University Course Challenge for information.

Special topics courses

18. Introduce COMM 398.3: Special Topics: Sustainability Reporting, Accountability, and Non-Financial Disclosure

    COMM 398.3 (Special Topics): Sustainability Reporting, Accountability, and Non-Financial Disclosure
    An in-depth examination of corporate reporting of non-financial information and related topics with a focus on sustainability accounting, reporting, and ESG-related disclosure. Topics will cover foundational perspectives on sustainability reporting, relevant standard setters, standards, and frameworks. The role of accounting and accountants in relation to voluntary and mandatory non-financial reporting, assurance, business processes, and sustainable finance will be discussed.
    Prerequisite(s): Pre- or co-requisite COMM 321 or COMM 325

    Rationale: This course will consider topics such as sustainability and other cotemporary accounting issues. CPA competency developments require a new course to address these topics. Advancement in this area was being addressed in COMM 412 to compensate for the lack of content coverage in the major.

19. Introduce COMM 498 Finance Study Tour

    COMM 498.3 – International Finance Study Tour
    The finance study tour provides direct interaction with stakeholders in global financial markets. Through immersive discussions, experiential learning, and assignments, students will develop critical insights into how local and global factors influence finance practices and strategic decision-making. By engaging directly with financial experts in and around London, UK, students will gain firsthand knowledge of international finance. Upon completion of the course students should be better prepared to navigate the global business world confidently.

    Rationale*:* The International Finance Study Tour (Comm498.3) will give Edwards students opportunities for direct interaction with professionals and academics who practice and conduct research in global financial markets. With a focus on experiential learning and reflective assessments students will develop insight into global finance including markets, banking, financial services regulation, risk management, and other important finance areas. The course will be based in London, UK, where several companies and finance organizations have already expressed interest in hosting the Edwards student delegation in May 2025, the first iteration of this tour. Students have already expressed significant interest in taking this course, saying that they look forward to learning more about international business and finance through this unique experiential learning opportunity.

20. Introduce COMM 498.3 Special Topics: Fixed Income Securities

    COMM 498.3: Special Topics: Fixed Income Securities
    This course considers the financial concepts required to invest in fixed income securities. Topics include the valuation of fixed income cash flows, the yield curve in theory and practice, measuring and hedging fixed income portfolio risk, repurchase agreements, interest rate forward agreements, future contracts, and mortgage-backed securities.

    Rationale*:* This course is an undergraduate version of FIN 805. It is to be cross listed with FIN 805 so it can be taken by undergraduate Finance majors. If approved this will allow students to take an advanced fixed income course at Edwards which is a current deficiency in Edwards' offering.

    Note: COMM 207 will not be a prerequisite as it is already a requirement for COMM 306 and COMM 367.

21. Introduce COMM 498.3: Special Topics: Risk Analysis and Management

    COMM 498.3: Special Topics: Risk Analysis and Management
    This course gives students knowledge and skills necessary to identify, assess, monitor and limit risks in both public and private sectors. This course will cover risk management principles and

practices, expected to equip students with advanced understanding of risk assessment, risk treatment and risk financing practices.

Rationale: This is a new course for the finance major. If approved, students enrolled in this course will be able to gain advanced knowledge of risk management, risk assessment, risk analysis and treatment of risk (including risk financing). This course will expose students to industry practices and regulations. There are other courses offered in Edwards, such as COMM 419 and COMM 469, which cover risk management topic, but the treatment of risk management is narrowly focused. For example, in COMM 469, the focus is on how banks' specific risk is managed and COMM 419, is a derivative course, where the instructor discusses how derivatives can be used as a risk management tool. This course will fill the current deficiency in Edwards' offering of a risk analysis and management course. This course is developed in collaboration with RIMS (https://rims.org), it covers most of the topics of Canadian Risk Management (CRM) designation exam.

Course Title and Description Changes

22. Change the calendar course descriptions and weekly hours for COMM 100 as per the edits below.

COMM 100.3 – Business Communication
Revised course description:
Introduces students to the theory and practice of effective business communication for specific audiences and purposes in a changing business environment. Students will apply reasoned, practical, and ethical principles to producing and evaluating typical business messages. ~~Working in independent and group situations,~~ Students will conduct research, produce a portfolio of memos, ~~emails, letters,~~ and employment communication~~, write a group proposal and report,~~ and deliver oral presentations.
Weekly hours*:* ~~1 Lecture hours and 2 tutorial hours~~ 2 hours and 40 minutes of Lecture hours

Rationale*:* To improve accuracy and simplify wording. We also undertake the group-based work and assessment in COMM 105 and have removed overlap between this course and COMM 105 as part of curriculum renewal in our core courses.

23. Change the course title and description changes for COMM 201, 406, 407, 412 and 438 as submitted by the course instructors.

Rationale*:* These descriptions/titles haven't been updated in decades.

COMM 201.3 – Introduction to Financial Accounting
Previous course description:
~~This course will help you to understand, use and appreciate the limitations of information provided in an organization's financial statements. As such, the course examines what financial statements are, what they include and the means of deriving information for and from them. Specifically, the course will enable the student to: (1) link the results of management's financing, investing and operating decisions to financial statement reporting; (2) understand the boundaries and limitations of information in the financial statements; (3) demonstrate a basic but real awareness of financial accounting systems; and (4) use information in financial statements to help make various decisions about an organization.~~

Revised course description:
This introductory course is designed for students registered in the Edwards School of Business. Students pursuing a degree in colleges other than the Edwards School of Business should consider enrolling in Comm 225.3 Introduction to Accounting and Financial Literacy for Entrepreneurs.

Upon completion of this course, students should have a basic understanding of how to prepare financial statements for an organization, and the knowledge to understand, use and appreciate the limitations of information provided in these financial statements. This course will help you to understand, use and appreciate the limitations of information provided in an organization's financial statements. As such, the course examines what financial statements are, what they include and the means of deriving information for and from them. Specifically, the course will enable the student to: (1) link the results of management's financing, investing and operating decisions to financial statement reporting; (2) understand the boundaries and limitations of information in the financial statements; (3) demonstrate a basic but real awareness of financial accounting systems; and (4) use information in financial statements to help make various decisions about an organization.

Rationale:

1. With the new Comm 225 class (Introduction to Accounting and Financial Literacy for Entrepreneurs) it is important that the course description of Comm 201 indicate that it is applicable to Edwards students only. Some overrides may be given in the first year to help current non-Edwards students bridge their existing class choices.

2. Comm 201 focuses on the preparer and user side of financial statements, however it was felt that the old course description didn't cover the preparation of statements to the extent that it should have.

COMM 406.3 - Liability for Tax and Computation of Net Income

Revised course name: Liability for Tax~~, and~~ Computation of Net income and Individual Tax Payable

Revised course description:
Exposes students to the technical provisions of the Income Tax Act and their interpretation and application. In particular, the course examines the liability for tax and the computation of net income for tax purposes~~-~~ for both individuals and corporation, as well as taxes payable by the individual taxpayers. ~~Emphasis is placed~~The course covers ~~on learning~~ how to read, understand and apply the legislation itself. Students are also introduced to the skills necessary to research a tax issue.

Rationale: To clarify the focus of the course. -

COMM 407.3: Individual and Corporate Taxes Payable and Tax Planning

New course name: Comm 407.3: Corporate Tax, Non-income Taxes and Tax Planning for Taxpayers

Revised course description:

Further exposes students to the technical provisions of the Income Tax Act~~., with continued emphasis on learning to read the legislation with understanding. In particular, t~~The course examines the determination of taxable income and taxes payable for ~~individuals and~~ corporations, the application of the provisions of the Act to various business situations and reorganizations, non-income taxes, including GST/HST, as well as tax planning issues related to these topics. Students are given the opportunity to further develop their tax research skills.

Rationale: To clarify the focus of the course. Comm 407 no longer covers individual taxes payable as this is covered on Comm 406. The coverage of GST/HST is currently covered in Comm 407 along with other tax planning opportunities. Including non-income taxes it allows us the flexibility to adjust the course if significant additional taxes (such as carbon taxes or tariffs) are introduced in the future.

COMM 412.3 – Accounting Theory

Revised course description:

A critical examination of contemporary problem areas in financial accounting theory. Selected topics are covered in depth~~, and panel discussions and debates are a vital aspect~~. Specific skill development focuses on how to learn and think creatively about accounting issues, develop reasoned positions and justification thereof, express criticisms in a constructive manner, improve written and oral communication abilities and participate actively in discussions.

Rationale: Panel discussions and debates are pedagogical choices that may not fit every instructor's plan for course delivery. Class discussion is certainly a large part of developing various positions on accounting theory, but this does not necessarily require a panel discussion or a debate. At the same time, removing that phrase certainly does not prevent an instructor from incorporating those activities as a form of evaluation should the instructor so choose.

COMM 438.3: ~~Management Planning and Control Systems~~

New course name: Performance Measurement, Controls and Risk Management

Previous course description:

~~Based primarily on the case method of instruction, this course provides students with a conceptual framework, an exposure to the component parts and a systematic procedure so that they can begin to evaluate, design and implement management planning and control systems. Specific topics include: controlling discretionary expenditures, cost, profit and investment centres, transfer pricing, budgeting, performance measurement, innovation, compensation and instilling ethical behaviour in organizations.~~

New course description:

Performance measurement, employee incentive measures, controls, risk management, responsibility centres, and board governance are management tools that ensure the organizations' resources are used in economical, ethical, environmental, and socially responsible manner to maximize the execution of their selected strategies. Using primarily case-based instruction, the course builds students' competencies to use the appropriate tools to assess, analyze and advise on organizations' performance measurement, employee incentive, control, risk management, responsibility centre, transfer pricing, and board governance issues.

Rationale: Description and title have been updated based on the new CPA Competency Map that includes risk and board governance. Description had not been updated since the 1990s or earlier. Also included is the need for the organizations resources to be used economically, environmentally and socially responsible, as well as ethically, to reflect USask's updated learning goals and to align with what most likely will be included in the new Edwards learning goals.

24. Change the course description changes for COMM 121, COMM 104, COMM 207, COMM 213, COMM 363, COMM 395, COMM 495, COMM 497, COMM 467, and COMM 461 as submitted by the course instructors.

Rationale*:* Outdated course descriptions

COMM 121.3: Business Mathematics

Current description: ~~Teaches introductory mathematics for business students, including solving systems of two linear equations; simple and compound interest; polynomial, exponential, and trigonometric functions; exponential growth and decay; logarithms; elasticity of demand; marginal cost and revenue; limits, derivatives, and definite integrals, all in the context of business analysis. Spreadsheet-based mathematical functions and/or computer programs will be used to demonstrate the concepts and theory and to analyze practical business situations.~~

New course description: This course is designed for business students and introduces advanced mathematics essential for analyzing business scenarios. Initial topics cover foundational concepts, including cost, revenue, and profit functions, demand and supply curves, and basic function types such as polynomials, rational, exponential, and logarithmic functions. Building on this foundation, the course then focuses on calculus—emphasizing limits, derivatives, and integrals—as the core framework for applications in business. Students will explore how calculus applies to real-world scenarios like elasticity of demand, marginal analysis, consumer and producer surplus, as well as profit maximization and cost minimization. Throughout the course, students will employ calculus, algebra, and geometric methods to demonstrate and apply key concepts, theories, and practical strategies in various business contexts.

COMM 104.3: Foundations of Business Statistics

Previous course description~~: Teaches descriptive statistics, index numbers, probability concepts, probability distributions, sampling distributions, statistical inference - estimation and hypothesis testing, and introduces time series forecasting (moving averages and exponential smoothing). Spreadsheet-based statistical functions and/or computer programs will be used to demonstrate the concepts and theory and to analyze practical business situations.~~

New course description: Teaches descriptive statistics, data visualization, probability concepts, probability distributions, sampling distributions, and statistical inference - estimation and hypothesis testing. Spreadsheet-based statistical functions and/or computer programs will be used to demonstrate the concepts and theory and to analyze practical business situations.

COMM 207.3: Statistics for Business Decisions

Previous course description: ~~Teaches inferential statistics, chi-square contingency tests, goodness-of-fit tests, analysis of variance, simple linear regression and correlation, multiple regression and correlation, nonparametric statistics, statistical decision theory, and some statistical applications in quality control. Spreadsheet-based statistical functions and/or computer programs will be used to demonstrate the concepts and theory and to analyze practical business situations.~~

New course description: Teaches inferential statistics, chi-square tests, analysis of variance, simple linear regression and correlation, multiple regression, nonparametric statistics, statistical decision theory, and some statistical applications in quality control. Spreadsheet-based statistical functions and/or computer programs will be used to demonstrate the concepts and theory and to analyze practical business situations.

COMM 213.3: Management Information Systems

Description: This course is an introduction to how firms use information technology and systems to achieve corporate objectives, compete in today's business environment and improve performance. Students will also receive experiential training in relevant business applications. Permission of the department is required.

Note: Students pursuing the Accounting major should complete COMM 337.3 instead of COMM 213.3. Please refer to the Accounting program page for more information.

COMM 363.3: Intermediate Corporate Finance

Previous course description: ~~Deals with analytical techniques and theory of corporate finance. Covers investment and financing decisions including leasing, take-overs, corporate failures and reorganizations as well as other intermediate-level topics in the area of corporate finance. The concept of financial mobility is also emphasized.~~

New course description: Deals with the analytical techniques and theory of corporate finance. Covers investment and financing decisions including raising funds from the capital market, financial leverage, dividends and dividend policy, leasing, take-overs, corporate failures and reorganizations, and other intermediate-level topics in the area of corporate finance.

COMM 395.3: Business Forecasting

Previous course description: ~~The process of business forecasting involves the study of historical data to discover their underlying tendencies and patterns and the use of this knowledge to project the data into future time periods. Topic areas include moving averages and exponential smoothing methods, simple and multiple regression analysis, time series analysis, and Box-Jenkins (ARIMA) methodology. Each module is accompanied with a computer lab class where students get hands on experience in applying the associated forecasting technique. An important component of the course is a forecasting project where students choose a variable of interest and forecast it by applying the methods taught in the lectures and lab classes.~~

New course description: Forecasting is a structured approach to predict future outcomes by examining past data and trends. It employs data analysis tools to offer crucial insights for decision making, strategic planning, and resource distribution. This is vital to foresee market changes, refine operations, and make informed choices critical for staying competitive in the business arena.

This course equips participants with tools to create accurate forecasts, handle data variability, and maintain forecast precision. Each module is paired with a computer lab to provide practical experience with the forecasting methods covered. Additionally, the course features real-world case studies and discussions to assist you in:

- using time series analysis methods, assuming that future patterns will resemble past relationships;
- assessing the causation and correlation between variables for regression analysis;
- combining various forecasts to develop a unified forecast; and,
- generating forecasts using software packages.

These concepts will be applied to a real-world case as the class project.

COMM 495.3: Supply Chain Management

Previous course description: ~~Supply chain management and business logistics deal with the physical distribution of goods and services. Today's heavy dependence on the internet and E-commerce has made supply chain management central to business strategic planning. Supply chain management and logistics include the managing of acquisition, transportation, materials storage and handling, production scheduling, order processing, warehousing, and distribution both internally and among suppliers and customers. Today this planning must also take into account the internet and the distribution of goods and services electronically. Thus, the focus of this course is on the planning and control of both physical and electronic distribution systems. The required planning and analysis will make use of the different computer models and E-commerce options.~~

New course description: Today's global supply chains face numerous challenges, creating high demand for skilled professionals. Organizations rely on supply chain experts with practical skills and a comprehensive understanding of operations to remain competitive in a rapidly evolving business environment. This expertise is crucial to managing the complexities of modern supply chains and using advanced technologies for improved efficiency and innovation.

This course is designed to convey the knowledge necessary to become an effective supply chain manager capable of designing, evaluating, and improving supply chains that align with the strategic goals of an organization. This course includes interactive sessions, case studies, and discussions to guide you in:

- managing inventory;
- mitigating bullwhip and ripple effects;
- assessing risks; and,
- dealing with inherent uncertainty in supply and demand behavior.

Participants will use supply chain analytics to reduce costs, adjust inventory in response to

demand fluctuations, and make strategic decisions for resilient, sustainable, and agile supply chains.

COMM 497.3: Logistics Management

Previous course description: ~~Logistics management consists of various activities including movement, storage, and control of raw material, supplies and finished products across a supply chain in an efficient and effective manner. Hence, logistics management is an important part of supply chain management. The goal of this course is to provide a rigorous guide to the models the managers use in dealing with logistics problems in the real-world, including, but not limited to, cost/benefit trade-off analysis, choosing 3PLs, modeling logistics problems and solving the developed models using various approaches. This course reviews several past and current topics as well as the future trends in the realm of logistics management. Several case studies will be presented for class discussion.~~

New course description: Logistics management involves key tasks such as the transportation, storage and control of raw materials, supplies, and finished goods and is a vital component of supply chain management. Today's global supply chains face numerous logistical hurdles, increasing the need for skilled professionals who are essential to handle the complexities of modern systems and leverage advanced technologies for greater efficiency and innovation.

This course reviews several past and current evolutions as well as future trends in the field of logistics management. Through interactive sessions, case studies, and discussions, participants will receive a rigorous guide to the frameworks successful managers utilize for logistics challenges in the real world, including:

- cost/benefit and trade-off analysis of logistical solutions;
- benefits of outsourcing and guidelines for choosing a logistics provider;
- modeling diverse logistics problems from a supply chain management point of view; and,
- introducing the different approaches of solving and interpreting the built models.

COMM 467.3: Portfolio Theory and Management

Previous course description: ~~The theory of portfolio selection, analysis and management is studied. Topics include: diversification, efficient frontier, investor preferences, asset pricing and the use of computers as applied to portfolio management.~~

New course description: Access to timely and relevant data provides a firm foundation for critical decisions in portfolio theory and management. Bloomberg and Wharton Research Data Services (WRDS) are integrated into the learning experiences of this course. Graduates can get credit toward their Bloomberg Markets Concept Certificate, an important boost to any finance resume, while learning how to extract key data and firm information, ranging from returns to betas to Corporate Social Responsibility or ESG scores. Finally, Socially Responsible Investing and behavioral finance are explored in addition to the more traditional portfolio management topics. Graduates of this course will

have a firm practical and theoretical foundation for business or academic finance careers.

COMM 461.3: Corporate Finance Theory

Previous course description: ~~Intensive treatment is given to selected areas of finance, including capital budgeting; cost of capital and capital structure, dividend policy, evaluation of growth and expansion of business firms and evaluation of portfolio performance.~~

New course description: Intensive treatment is given to selected areas of finance including corporate governance, financing and firm valuation, capital structure, dividend policy, M&As, and restructuring of business firms.