Academic Programs Committee of Council

University Course Challenge

Scheduled posting: May 2023

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

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

College of Arts and Science
College of Engineering
College of Graduate and Postdoctoral Studies
College of Pharmacy and Nutrition

Approval: Date of circulation: May 16, 2023,
Date of effective approval if no challenge received: May 31, 2023

Next scheduled posting:

The next scheduled posting will be June 15, 2023, with a submission deadline of **June 13, 2023.** Urgent items can be posted on request.

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

University Course Challenge – May 2023
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)

Linguistics

New course(s):
LING 405.3 Structure of a Non Indo European Language
1/2 (3S) This course introduces students to the description and research on a non-Indo-European language. The specific language and topic changes according to the respective instructor's area of expertise. Students learn about the traditions and current practices of describing understudied languages, learn current field research methods, and read primary literature on descriptions and analyses. This course provides an in-depth introduction to the research of languages that have little to no research focus compared to major languages such as English.
Prerequisite(s): LING 111 or LING 114; plus 9 credit units of LING courses at the 200-level or higher.
Note: Students may take this course more than once for credit, provided that the language covered is sufficiently different each time. Students must consult the department to ensure that the language is sufficiently different. Students with credit for LING 498.3 The Grammar of Inuktitut may not take this course for credit if the language covered is Inuktitut."
Instructor(s): Chantale Cenerini, Martin Kohlberger, Olga Lovick, Bettina Spreng, Jesse Stewart
Rationale: This course gives students an overview of the description of a non-Indo-European language. The choice of language will change depending on the expertise of the instructor. A version of this course was offered as a Special Topics course in the winter term 2023 and had three times the expected number of enrolments. Therefore, the department believes a course like this will be popular with future students, and would like to offer it on a regular basis.
This course is being proposed to provide an undergraduate-level option, cross-listed with LING 816 (Topics in the Grammar of Non-Indo European Languages). In comparison with the graduate students, undergraduate students will write a final exam (30%) instead of a term paper. They will learn from the graduate students' class presentations of the readings on how to write an article summary and evaluation for their final exam. Their analysis submissions and participation to the discussions of the readings will be worth more than for the graduate students, reflecting their exposure to rather advanced primary literature. The analysis assignments will have different questions from the ones posed to the graduate students (according to their level), however, the data to be analyzed/described will be the same. The Department of Linguistics is hoping to increase the exposure of linguistic research on indigenous languages for undergraduate students and to encourage them to pursue research in this area.
Students will be allowed to take this course twice for credit, providing that a different language is covered in each class the student takes.

Palaeobiology

Minor program revisions
Bachelor of Science Honours and Four-year in Palaeobiology
Add GEOL 343.3 as a required course; remove ANTH 111.3 as a required course; and add GEOL 205.3/GEOL 405.3 as optional courses in Category C.

Bachelor of Science Honours (B.Sc. Honours) – Palaeobiology
C4 Major Requirement (66 credit units)

Junior course requirements:

- ~~**ANTH 111.3** One World Many Peoples Introduction to Cultural Anthropology~~
- **ARCH 112.3** The Human Journey Introduction to Archaeology and Biological Anthropology
- **BIOL 120.3** The Nature of Life
- **BIOL 121.3** The Diversity of Life
- **GEOL 121.3** Earth Processes
- **GEOL 122.3** Earth History

Senior course requirements:

- **BIOL 222.3** The Living Plant
- **BIOL 224.3** Animal Body Systems or **PBIO 230.3** On the Origin and Life of Animals
- **GEOL 206.3** Earth Systems
- **GEOL 245.3** Introduction to Sedimentary Rocks
- **GEOL 247.3** Palaeontology
- **GEOL 343.3** Sedimentary Environments

Choose 33 credit units to be selected from Categories A, B, C, and D, such that at least 18 credit units are chosen at the 300-400 level, of which at least 12 credit units must be at the 400-level. Students must complete a minimum of 6 credit units from each of Categories A, B, and C.

Category A

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

- *No change*

Category B

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

- *No change*

Category C

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

- **GEOL 308.3** Field School Sedimentary Rocks
- **GEOL 442.3** Sedimentary Petrology
- **GEOL 446.3** Advanced Sedimentology
- **GEOL 447.3** Ichnology Animal Substrate Interactions in the Stratigraphic Record
- **GEOL 448.3** Sequence Stratigraphy
- GEOL 450.3
- **GEOL 205.3** or **GEOL 405.3** International Field School

Category D

- *No change*

Bachelor of Science Four-year (B.Sc. Four-year) - Palaeobiology
C4 Major Requirement (66 credit units)

Junior course requirements:

- ~~**ANTH 111.3** One World Many Peoples Introduction to Cultural Anthropology~~
- **ARCH 112.3** The Human Journey Introduction to Archaeology and Biological Anthropology
- **BIOL 120.3** The Nature of Life
- **BIOL 121.3** The Diversity of Life
- **GEOL 121.3** Earth Processes
- **GEOL 122.3** Earth History

Senior course requirements:

- **BIOL 222.3** The Living Plant
- **BIOL 224.3** Animal Body Systems or **PBIO 230.3** On the Origin and Life of Animals
- **GEOL 206.3** Earth Systems
- **GEOL 245.3** Introduction to Sedimentary Rocks
- **GEOL 247.3** Palaeontology
- **GEOL 343.3** Sedimentary Environments

Choose 33 credit units to be selected from Categories A, B, C, and D, such that at least 18 credit units are chosen at the 300-400 level, of which at least 12 credit units must be at the 400-level. Students must complete a minimum of 6 credit units from each of Categories A, B, and C.

Category A

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

- *No change*

Category B

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

- *No change*

Category C

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

- **GEOL 308.3** Field School Sedimentary Rocks
- **GEOL 442.3** Sedimentary Petrology
- **GEOL 446.3** Advanced Sedimentology
- **GEOL 447.3** Ichnology Animal Substrate Interactions in the Stratigraphic Record
- **GEOL 448.3** Sequence Stratigraphy
- **GEOL 450.3**
- **GEOL 205.3** or **GEOL 405.3** International Field School

Category D

- *No change*

Rationale: Students will now be better served by choosing one of the Certificate programs available in French (Intermediate French Language and Culture, Advanced French Language and Culture, or French-English Translation), especially as “Recognition” programs are not widely understood at other institutions or outside of a university setting. New students are not being accepted to this program in 2023-24.

Sociology

Minor course revisions
SOC 409.3 Sociology of Development
Update course description: Sociological analysis of historical and contemporary perspectives on development and underdevelopment. Critical assessment of approaches to globalization, industrialization, and regional development across nations with diverse cultures, politics, and social and economic systems. Roles of states and non-state actors, and prospects for degrowth and other transformational changes in the context of inequalities and environmental crises.
Prerequisite change:
Old prerequisite(s): 12 credit units SOC plus two of any of SOC 344, SOC 360, HIST 303, POLS 341, POLS 362
New prerequisite(s): 12 credit units SOC or permission of instructor
Add Note: **Departmental approval required.**
Rationale: The current prerequisites for this course result in it being very difficult for students in related disciplines to register. This change will allow for a wider audience, but students will need permission to register so the department can ensure they have the necessary background to be successful in the course. The course description is updated to match current developments in the field.

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

Linguistics

Minor course revisions
LING 253.3 Indigenous Languages of Canada
Add the Humanities (HUM) attribute to this course.
Rationale: LING 253 employs theories and methods from the Social Sciences and the Humanities, so it is appropriate that the attributes reflect both areas.

College of Engineering - University Course Challenge Submission, May 2023

The following changes have been approved through the College of Engineering and are now being submitted to University Course Challenge.

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

Minor Course Revision for Approval

1). MOTION: that the Department of Mechanical Engineering change the pre and corequisites for ME 113 Engineering Analysis I as follows, beginning in 2023-24.

Current: Prerequisite(s): MATH 134 (taken) and GE 123 (taken)

Revised: Prerequisite(s) or Corequisite(s): MATH 134 (taken) and GE 123 (taken)

RATIONALE: The current pre-requisites for ME 113 can be problematic as grades for these two courses may not be available until after ME 113 starts in early April. Besides students who satisfied the prerequisites in previous years, students who are registered for MATH 134 or GE 123 at the time they are enrolled in ME 113 would also be eligible to take the course if grades are not available for these courses prior to the start of ME 113.

For Information

Minor Program Revision – Mechanical Engineering

MOTION: The Department of Mechanical Engineering offers ME 498.3 "Orthopaedic Biomechanics" and ME 498.3 "Three Dimensional (3D) Bioprinting for Bioengineering" special topics course offerings as technical electives in 2023-24. Per the terms of the Special Topics Policy, these topics will be offered a maximum of two times within 5 years. If permanent offerings are required, the college will approve regularized courses.

The special topics offerings will be included in the B.E. in Mechanical Engineering program, as follows:

Mechanical Engineering

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

Year 1 (41-44 credit units)

All Engineering programs have a **common** first year.

Year 2 (36 credit units)

Fall Term

- GE 210.3 Probability and Statistics
- GE 213.3 Mechanics of Materials
- MATH 223.3 Calculus III for Engineers
- ME 214.3 Introduction to Materials and Manufacturing
- ME 227.3 Thermodynamics I

Winter Term

- MATH 224.3 Calculus IV for Engineers
- ME 215.3 Fluid Mechanics I
- ME 226.3 Mechanics III
- ME 229.3 Introduction to Mechanical Engineering Design
- RCM 200.3 Effective Professional Communication

Fall or Winter Term

- 3 credit units Junior Humanities or Social Science Elective
- 3 credit units Science Elective

Year 3 (36 credit units)

Fall Term

- ME 313.3 Mechanics of Materials I
- ME 321.3 Engineering Analysis II
- ME 324.3 Engineering Materials
- ME 327.3 Heat Transfer
- ME 330.3 Manufacturing Processes

Winter Term

- ME 314.3 Machine Design I
- ME 323.3 Mechanics of Materials II
- ME 328.3 Mechanical Engineering Laboratory I
- ME 329.3 Collaborative Design and Manufacturing
- ME 335.3 Fluid Mechanics II
- ME 352.3 Engineering Analysis III

Fall Term or Winter Term

- GE 348.3 Engineering Economics

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:

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

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

Electives

Science Elective

- ASTR 213.3 Astronomical Photometry
- ASTR 214.3 Astronomical Spectroscopy
- BIOL 120.3 The Nature of Life
- CHEM 221.3 Analytical Chemistry I
- CHEM 231.3 Inorganic Chemistry I
- CHEM 242.3 Thermodynamics and Kinetics
- CHEM 250.3 Introduction to Organic Chemistry
- EVSC 203.3 Sampling and Laboratory Analysis
- EVSC 210.3 Environmental Physics
- GEOG 120.3 Introduction to Global Environmental Systems
- GEOL 121.3 Earth Processes
- GEOL 224.3 Mineralogy
- GEOL 245.3 Introduction to Sedimentary Rocks
- GEOL 258.3 Structural Geology
- PHYS 125.3 Physics and Technology

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 Petroleum Geomechanics

Term 2

- BLE 313.3 Instrumentation
- CHE 464.3 Petroleum Production Engineering
- EE 471.3 Introduction to Micro and Nanotechnology
- GEOE 380.3 Mine Ventilation
- ME 460.3 Automation and Robotics in Manufacturing
- ME 461.3
- ME 463.3
- ME 472.3
- ME 475.3 Introduction to Mechatronics
- ME 477.3 Engineering Materials II
- ME 478.3 Introduction to Fire Protection Engineering

Term 1 or Term 2

- CHE 453.3 Corrosion Engineering
- ME 450.3 Finite Element Analysis
- ME 462.3 Structure and Properties of Polycrystalline Materials
- ME 464.3 Introduction to Composite Materials
- ME 471.3 Introduction to Aerodynamics
- ME 473.3 Introduction to Computational Fluid Dynamics
- ME 476.3 Multiphase Flow and Heat Transfer
- ME 488.3 Mechanical Engineering Research Project
- ME 498.3 Orthopaedic Biomechanics
- ME 498.3 3D Bioprinting for Bioengineering
- approved senior course(s) from science or engineering

Correction for Information:

Bachelor of Science in Engineering (B.E.) - Engineering Physics (151 credit units)

- **Year 1 (41-44 credit units)**
- **Year 2 (37 credit units)**
- **Year 3 (34 credit units)**
- **Year 4 (36 credit units)**

  Fall Term

  - **EP 413.3** Instrumentation and Design Instrumentation and Design
  - **EP 417.3** Advanced Materials Science with Applications Advanced Materials Science with Applications
  - **EP 421.3** Advanced Optics Advanced Optics
  - **GE 348.3** Engineering Economics Engineering Economics
  - **PHYS 456.3** Electricity and Magnetism II Electricity and Magnetism II
  - 3 credit units of Engineering Physics Requirements

Winter Term

- **GE 449.3** Engineering in Society Engineering in Society
- **EP 428.3** Computational Engineering Physics Computational Engineering Physics
- ~~6 credit units of Engineering Physics Requirements~~ 3 credit units of Complementary Studies courses and 3 credit units of Senior Humanities/Social Science courses. See the lists below under the Engineering Physics Requirements section.

Fall Term and Winter Term

- **EP 495.6** Capstone Design Project Capstone Design Project
- **PHYS 490.0** Physics Seminars Physics Seminars

Engineering Physics Requirements

Engineering Science or Engineering Design List

3 credit units from the following list:

- **CE 317.3** Structural Analysis
- **CME 331.3** Microprocessor Based Embedded Systems
- **CME 341.3** Logic Design Using FPGAs
- **CME 342.3** Introduction to Digital Integrated Circuits and System on Chip
- **EE 241.3** Introduction to Electric Power Systems
- **EE 322.3** Microwave and RF Circuits
- **EE 341.3** Electric Machines Fundamentals
- **EE 342.3** Transmission of Electrical Energy
- **EE 343.3** Power Electronics
- **EE 442.3** Power Systems Operation and Control
- **EE 471.3** Introduction to Micro and Nanotechnology
- **EE 472.3** Optoelectronics and Photonics
- **ENVE 201.3** Principles of Environmental Engineering
- **EP 440.3** Space Systems Design
- **GE 213.3** Mechanics of Materials
- **GEOE 377.3** Fundamentals of Mining and Mineral Processing
- or any other approved elective

Senior Science Requirement

6 credit units from the Engineering Science or Engineering Design list, or CMPT, CHEM, GEOL courses at 200 level or higher, or PHYS, ASTR, MATH, STAT courses at 300 level or higher, or any other approved elective. At least 3 credit units must be at 400 level.

Complementary Studies Elective (3 credit units)

- **ANTH — 100-Level, 200-Level, 300-Level, 400-Level**
- **ARBC — 100-Level, 200-Level, 300-Level, 400-Level**
- **ARCH — 100-Level, 200-Level, 300-Level, 400-Level**

- **ARTH — 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**
- **CMRS — 100-Level, 200-Level, 300-Level, 400-Level**
- **COMM 201.3** Introduction to Financial Accounting
- **COMM 203.3** Introduction to Finance
- **COMM 204.3** Introduction to Marketing
- **COMM 205.3** Introduction to Operations Management
- **COMM 210.3** Introduction to Management Accounting
- **COMM 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 308.3** Cost Management Systems
- **COMM 321.3** Corporate Financial Reporting I
- **COMM 323.3** Corporate Financial Reporting II
- COMM 329.3
- **COMM 337.3** Business Information and Accounting Systems
- **COMM 340.3** Introduction to International Business
- **COMM 342.3** Organization Structure and Design
- **COMM 343.3** Recruitment Selection and Engagement
- **COMM 345.3** Business and Public Policy
- **COMM 346.3** Technology Commercialization
- **COMM 347.3** Indigenous Business in Canada
- **COMM 348.3** Leadership
- **COMM 349.3** Introduction to Entrepreneurship
- **COMM 352.3** Marketing Strategy
- **COMM 354.3** Consumer Behaviour
- **COMM 357.3** Marketing Research
- **COMM — 100-Level**
- **CREE — 100-Level, 200-Level, 300-Level, 400-Level**
- **ECON 111.3** Introductory Microeconomics
- **ECON 114.3** Introductory Macroeconomics
- **ECON 211.3** Intermediate Microeconomics
- **ECON 214.3** Intermediate Macroeconomics
- **ECON 221.3** Women and the Economy
- **ECON 223.3** Labour Economics
- **ECON 227.3** Wage Determination
- **ECON 231.3** Co operatives
- **ECON 234.3** Economics of Health Care
- **ECON 254.3** International Trading System
- **ECON 256.3** International Monetary System
- **ECON 270.3** Development in Non Industrialized Countries
- ECON 272.3
- **ECON 275.3** Economics of Natural Resources
- **ECON 277.3** Economics of the Environment
- **ECON 280.3** Classical Economics
- **ENG — 100-Level, 200-Level, 300-Level, 400-Level**

- **FREN — 100-Level, 200-Level, 300-Level, 400-Level**
- **GE 431.3** Engineering Entrepreneurship Capstone
- **GE 450.3** Technology Innovation Management
- **GEOG 130.3** Environment Health and Planning
- **GEOG 202.3** Regional Geography of Canada
- **GEOG 204.3** Geography of the Prairie Region
- **GEOG 208.3** World Regional Development
- **GEOG 240.3** Sustainable Cities and Regions
- **GEOG 280.3** Environmental Geography
- **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**
- **HNDI — 100-Level, 200-Level, 300-Level, 400-Level**
- **INDG — 100-Level, 200-Level, 300-Level, 400-Level**
- **IS — 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**
- **LIT — 100-Level, 200-Level, 300-Level, 400-Level**
- **MUS 101.3** Fundamentals of Music I Exploring Foundations
- **PHIL 120.3** Knowledge Mind and Existence
- **PHIL 121.3** Introduction to World Philosophies
- **PHIL 133.3** Introduction to Ethics and Values
- **PHIL 140.3** Critical Thinking
- **PHIL 202.3** Philosophy of Religion
- **PHIL 206.3** Early Modern Philosophy
- **PHIL 208.3** Ancient Philosophy Presocratics to Plato
- **PHIL 209.3** Ancient Philosophy Aristotle to Plotinus
- **PHIL 210.3** Medieval Philosophy I From Rome to Baghdad and Paris
- **PHIL 211.3** Philosophy and Faith Medieval Philosophy II
- PHIL 215.3
- **PHIL 218.3** Existentialism
- **PHIL 219.3** Phenomenology
- **PHIL 224.3** Philosophy of Sexuality
- **PHIL 226.3** Environmental Philosophy
- **PHIL 227.3** Feminist Philosophy
- **PHIL 231.3** Moral Problems
- **PHIL 233.3** Ethical Theory
- **PHIL 234.3** Biomedical Ethics
- **PHIL 235.3** Business and Professional Ethics
- **PHIL 236.3** Ethics and Technology
- **PHIL 237.3** Law and Morality
- **PHIL 238.3** Ethical Issues in Scientific Research
- **PHIL 251.3** Philosophy of Science
- **PHIL 262.3** Social and Political Philosophy
- **PHIL 265.3** Decision and Choice Theory
- **PHIL 271.3** Aesthetics and Philosophy of Art

- **PHIL 281.3** Theory of Knowledge
- **PHIL 285.3** Persons Minds and Bodies
- **PHIL 292.3** Metaphysics Reality Existence and Change
- **PHIL 294.3** Philosophy of Human Nature
- PHIL 296.3
- **POLS — 100-Level, 200-Level, 300-Level, 400-Level**
- **PSY — 100-Level, 200-Level, 300-Level, 400-Level**
- **RCM — 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**

Exception: **COMM 121.3** Business Mathematics is restricted to Edwards School of Business students.

Note: Special Topics courses cannot be used to meet a Complementary Studies Elective Requirement (any
course ending in 98 or 99).

Senior Humanities or Social Science Elective (3 credit units)

- **ANTH — 200-Level, 300-Level, 400-Level**
- **ARCH — 200-Level, 300-Level, 400-Level**
- **CLAS — 200-Level, 300-Level, 400-Level**
- **ECON — 200-Level, 300-Level, 400-Level**
- **ENG — 200-Level, 300-Level, 400-Level**
- **GEOG 202.3** Regional Geography of Canada
- **GEOG 204.3** Geography of the Prairie Region
- **GEOG 208.3** World Regional Development
- **GEOG 240.3** Sustainable Cities and Regions
- **GEOG 280.3** Environmental Geography
- **HIST — 200-Level, 300-Level, 400-Level**
- **INDG — 200-Level, 300-Level, 400-Level**
- **IS — 200-Level, 300-Level, 400-Level**
- **PHIL — 200-Level, 300-Level, 400-Level**
- **POLS — 200-Level, 300-Level, 400-Level**
- **PSY — 200-Level, 300-Level, 400-Level**
- **RLST — 200-Level, 300-Level, 400-Level**
- **SOC — 200-Level, 300-Level, 400-Level**
- **WGST — 200-Level, 300-Level, 400-Level**
- **Exception**: ECON 204 cannot be used to meet the Complementary Studies, Senior Humanities or Social Science elective requirements of the program.

- **Exception**: PSY 233 and PSY 236 cannot be used to meet the Complementary Studies, Senior Humanities or Social Science elective requirements of the program.
- **Exception**: PHIL 241 cannot be used to meet the Senior Humanities or Social Science elective requirements of the program.
- **Exception**: SOC 225 cannot be used to meet the Complementary Studies, Senior Humanities or Social Science elective requirements of the program.
- **Note**: The following Engineering courses will also satisfy the Humanities/Social Science elective requirement: RCM 400, RCM 401, RCM 402, RCM 403, RCM 404, RCM 405, RCM 406, RCM 407, RCM 408, RCM 409, RCM 410, and RCM 495.

Rationale: Complementary Studies and Senior Humanities/Social Science Courses fall under the larger umbrella of "Engineering Physics Requirements," however, using this broad category in the catalogue here could be confusing to students. The college requires students to satisfy courses specifically from the sub-lists of "Complementary Studies" and "Senior Humanities/Social Sciences." The above correction will make the requirement clearer to students.

College of Graduate and Postdoctoral Studies, University Course Challenge – May 2023

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

Contact: CGPS Academic Affairs Specialist (gradprograms.academicaffairs@usask.ca)

Computer Science

New Course:
CMPT 885.3: Human Centric Software Renovation
An advanced course in software engineering that explores redesigning, renovating, and maintaining large complex software systems with a focus on scientific software and human aspects of software engineering. Topics include collaboration in software engineering, computer supported cooperative work, provenance, and workflow support in scientific software systems, software comprehension, software renovation and restructuring, and usability engineering.
Instructor(s): Dr. Banani Roy
Rationale: This will be a new addition to the Computer Science graduate curricula with the focus on software renovation or re-engineering, keeping a human in the loop. Currently, no course that offers the proposed topics exists in the department. The instructor Dr. Banani Roy has been teaching the content of the course since 2019 as a CMPT 898 special topics course and students have been learning state-of-the-art techniques for re-engineering software systems in a human centric fashion. This course focuses on modern methods, tools, and techniques to assist in the design, development, comprehension, and restructuring of large complex software systems, with a focus on scientific software and human related aspects of software engineering.

Food Science

Course Modification:
FDSC 866.3: Advanced Food Carbohydrates
Current note: None
Proposed note: This course is a hybrid course with FAB 466, and this course cannot be taken for credit after previously taking FABS 466.
Rationale: This carbohydrate course heavily focuses on food chemistry. There is a major overlap in the content between FABS 466 and FDSC 866. It is an efficient use of time for students and the instructor to cross-list the two courses into one.

French

New Course:
FREN 865.3: Portraying Youth French and Francophone Cinema
This course is designed to introduce students to French and Francophone cinema, from the 1930s' to the present time. We will more particularly focus on the topic of youth to observe the main aesthetic and thematic trends that have shaped French and francophone cinema over time. Students in this class will also be provided with the necessary knowledge and vocabulary to analyze film and film images. One of

the main objectives of this course is to enable students to move from a purely plot-based analysis of a film to a critical and analytical study that considers the mise-en-scène and the overall aesthetic qualities of the image to offer a nuanced and personal examination of the films studied.
Instructor(s): Dr. Romain Chareyron
Rationale: This new course is intended to provide graduate students with a larger array of courses and fields of study in the MLLCS Dept. The department currently offers an undergraduate course on this topic, but no graduate course. With this course, graduate students will gain in-depth knowledge of some of the most prominent French and Francophone directors, as well as of some of the most significant films on the topic of youth, from the 1930s' to the present time. Through the topic of youth, student will be introduced to some of the most significant societal issues and changes that shaped French and Francophone societies within the past century. The topic of youth will also enable students to observe the most significant aesthetic and narrative trends that have shaped French and Francophone cinema over time. Student will be provided with the necessary vocabulary to analyze film images, as one of the main objectives is to enable students to think critically about images and representation and to gain the necessary knowledge to think critically about film.

Geography

Course modification:
GEOG 881.3: Land Use and Transportation Planning
Current course title: Land Use and Transportation Planning
Proposed course title: Advanced Land Use and Transportation Planning
Current note:
Proposed note: This course is a hybrid course with PLAN 481, and this course cannot be taken for credit after previously taking PLAN 481.
Rationale:

Mathematics

Program modification:
Master of Science (M.Sc.) - Thesis-based

Admission Requirements

- A cumulative weighted average of at least 70% (U of S grade system equivalent) in the last two years of study (i.e. 60 credit units).
- A four-year honors degree, or equivalent, from a recognized college or university in an academic discipline relevant to the proposed field of study.
- Language Proficiency Requirements: Proof of English proficiency may be required for international applicants and for applicants whose first language is not English.

For more information on language proficiency requirements, see the College of Graduate and Postdoctoral Studies **Academic Policies** for more information.

Degree Requirements

Students must maintain continuous registration in MATH 994.

- GPS 960.0
- GPS 961.0
- GPS 962.0
- MATH 990.0
- MATH 994.0
- a minimum of ~~9~~15 credit units course work
- ~~residency requirement of 1 year~~

Doctor of Philosophy (Ph.D.)

Admission Requirements

- A Master's degree, or equivalent, from a recognized university in an academic discipline relevant to the proposed field of study; under no circumstances may a prospective student holding a Bachelor's degree be admitted directly into a Ph.D. program.
- A cumulative weighted average of at least 70% (U of S grade system equivalent) in the last two years of study (i.e. coursework required in Master's program).
- Language Proficiency Requirements: Proof of English proficiency may be required for international applicants and for applicants whose first language is not English.

For more information on language proficiency requirements, see the College of Graduate and Postdoctoral Studies Academic Policies for more information.

Degree Requirements

Students must maintain continuous registration in the 996 course.

- GPS 960.0
- GPS 961.0
- GPS 962.0
- 9-18 credit units of course work beyond the M.Sc. level
- MATH 990.0
- MATH 996.0
- comprehensive Examination

- qualifying exams to demonstrate knowledge in three areas chosen from one of the specialization lists available on the department webpage. There are three possible specializations: Applied Mathematics; Mathematics; or Discrete Mathematics~~Statistics~~.

  ~~Residency requirement of 1 year~~

Rationale: As early as February 2022, the Graduate Committee in Mathematics & Statistics had discussed the possibility of reducing the current coursework requirement from 15 CU to 9 CU for the MSc in Mathematics for the following reasons:

- there have been systemic limitations in the number of graduate courses available and faculty required to deliver them, and 15 CUs is therefore increasingly unrealistic;
- the observation that most MSc students in Mathematics require two full years to complete the 5 courses, which means that they spend a significant portion of Year 2 working on courses instead of their theses (in some cases, we have had students finish their theses before finishing the courses);
- considering the prior point, MSc students have tended to be able to start writing their theses after 3 courses and the remaining 2 courses are usually extra topics chosen simply to fulfill the credit unit requirements;
- students who fully complete the MSc program and then stay for the PhD program take a total of 8 graduate courses in addition to Qualifying Exams that they must prepare for, which is a large burden for the student and compounds the issues around course availability;
- our coursework requirement is abnormal: we are the only science MSc program at USask that requires 15 CUs — of 25 programs, 17 require 9 CUs and 7 require 12 CUs — leading to the possible impression that we are a more teaching-oriented rather than research-oriented program.

At the same time, the vast majority of graduate programs, both MSc and PhD, at USask do not appear to have "residency requirements" that require students to be physically present in Saskatoon. The discussion in the CGPS Graduate Programs Committee (GPC) around the new Statistics programs led to questions about the residency requirement in our existing Mathematics MSc and PhD programs, which mention 12 months and 24 months of residency, respectively. During the pandemic, our residency requirements have been relaxed, allowing one MSc student to complete her degree entirely from a distance. Two PhD students are continuing to pursue their studies remotely, by their own choice and with the full support of their supervisors, as they maintain full-time careers parallel with their studies. It was noted by the GPC that these residency requirements may prevent future students from managing their programs in a similar way and may limit our ability to offer such flexibilities in support of our students. Further to this, we note that:

- removing the requirements will not preclude graduate students from being required to be physically present at USask in order to take required courses that have no online / hybrid option, nor will it preclude them from being required to be present in-person for TA assignments in fulfillment of funding requirements — removing the residency requirement simply leads to more flexibility when these activities are not in session;

- for international students, residency requirements that are imposed by Immigration Canada directly into student study permits are unaffected by this change (for instance, there may be stipulations in the permit that students must maintain their primary address in the province of Saskatchewan, independently of what we have stated or not stated in terms of program residency).

In any event, the proposed change will synchronize the existing Mathematics programs with the new Statistics programs (and most other graduate programs on campus) with regards to physical residency requirements. It will also reflect the reality that we have existing graduate students who have declined funding due to their careers and who are completing their degrees largely from a distance in order to maintain those careers and/or family ties, which we support.

Music

Program modification:
Master of Music (M.Mus.) (Performance) - Project-based

The Master of Music in performance degree (project-based) requires a minimum of 24 post-baccalaureate credit units. The degree is offered in the following areas: Piano, Collaborative Piano, Voice, Trumpet, Saxophone, Strings, and Conducting~~/Music Education~~. Within Conducting~~/Music Education~~, there are two areas of emphasis: choral or wind.

Admission Requirements

- Language Proficiency Requirements: Proof of English proficiency may be required for international applicants and for applicants whose first language is not English.
- a completed on-line application, the application fee and all supporting application documents
- a cumulative weighted average of at least a 70% (U of S grade system equivalent) in the last two years of study (i.e. 60 credit units)
- a four-year honours degree, or equivalent, from a recognized college or university in an academic discipline relevant to the proposed field of study

For more information on language proficiency requirements, see the College of Graduate and Postdoctoral Studies **Academic Policies** for more information.

Additional Selection Criteria ONLY for Conducting Concentration:

- Applicants will audition by submission of a video recording demonstrating their conducting ability.

See **department website** for application and deadline details.

Degree Requirements (Piano, Collaborative Piano, Voice, Trumpet, Strings, ~~and~~ Saxophone and Conducting Concentrations)

Students must maintain continuous registration in the 992 course.

- GPS 960.0
- GPS 961.0

- GPS 962.0
- MUS 990.0
- MUS 992.0
- participation in professional activities
- second language requirement (voice only)

…

Rationale: Concentration list was outdated and needed updating to include strings. The Music Education concentration was terminated through University Course Challenge in May 2021, but was never removed from the entirety of the catalogue listing.

Approved by CGPS' Graduate Programs Committee on May 9th, 2023.

Statistics

New course

STAT 847.3: Statistical Machine Learning for Data Science

Based on a mathematical and statistical theory foundation, the course introduces statistical methods for supervised and unsupervised learning, focusing on hands-on skills with statistical software, R, and applications to real data. The course covers resampling methods, regression and classification, tree-based methods, dimension reduction and clustering. It embeds R training throughout the entire class.

Prerequisite or Restriction(s): STAT 344 or STAT 345

Note(s): This course is a hybrid course with STAT 447, and this course cannot be taken for credit after previously taking STAT 447.

Instructor(s): Dr. Li Xing

Rationale: This course is being created to meet the development of modern statistics. Statistical machine learning is an emerging field that blends traditional statistical methods with parallel computer science developments. It is a rich field containing a critical toolkit, which shows a great capacity to handle large-scale complex data. Due to its high capability, there is a big demand for recruiting statistical data scientists to work on real complex data as due to the development of technology, real-world data become more and more complex. It is urgent that we need to train our students in those advanced skills. Also, a similar course is now being offered at other mathematics and statistics departments in top-tier Canadian Universities, including the University of British Columbia, University of Toronto, University of Waterloo, McGill University, Simon Fraser University, etc. As one of the top 15 universities, we would like to show our capacity to train future statisticians with those modern skills.

Items For Information

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

Course modification(s):

GEOG 881.3: Land Use and Transportation Planning

Current course title: Land Use and Transportation Planning

Proposed course title: Advanced Land Use and Transportation Planning

Current note: Students may have credit for only one of PLAN 481 or GEOG 881.

Proposed note: This course is a hybrid course with PLAN 481, and this course cannot be taken for credit after previously taking PLAN 481.

Rationale: Course title change to distinguish the graduate-level course from the undergraduate course title. Note is being updated to align with how we note the hybrid relationship of the undergraduate and graduate cross-listed courses.

SOC 891.3: Theory and Method of Social Analysis

Current course title: Theory and Method of Social Analysis

Proposed course title: Advanced Seminar in Sociological Research

Current course description: An advanced seminar which integrates theory and method in social analysis. Various types of social analysis will be discussed, including theory driven research, policy research, action-oriented research and evaluation research. The focus is to develop sound analytical frameworks in conducting social analysis and in assessing research results. Students will develop a theoretically grounded research problem on the basis of an existing body of literature, design a method, and obtain and analyze data.

Proposed course description: The seminar will focus on professional skill development to prepare students to independently conduct theoretically informed and methodologically sophisticated sociological research. Students will develop understanding of, and skills in, all the stages of the research process. Students will be expected to engage in theoretically informed debates about sociological analysis and apply the knowledge acquired from this advanced seminar to their own research.

Rationale: The course title change is to better reflect the class content and the description to better describe what the class offering.

University Course Challenge – May 2023

The following curriculuar changes were approved by the College of Pharmacy and Nutrition and are being submitted to the May 2023 course challenge for approval:

Nutrition Program Advisory Committee (recommended March 8, 2023)
Division of Nutrition (approved May 8, 2023)

Contact: Dr. Charity Evans (charity.evans@usask.ca)

Removal of Speechcraft as a requirement of the Bachelor of Science in Nutrition (BScNutr) program

Rationale: There is no justification for students to take Speechcraft as part of the BScNutr program, as it is not a required program competency nor is it required for licensure upon graduation. A review of the curriculum revealed numerous other courses that provided opportunity for developing and assessing communication skills more relevant to the field of dietetics (e.g. patient counselling, class presentations); no other USask health profession programs require Speechcraft.

These curriculum changes will be implemented in 2024-25.

Bachelor of Science in Nutrition [B.Sc (Nutr.)] (132 credit units)

Year 1
33 credit units

- BMSC 200.3 Biomolecules
- BMSC 207.3 Human Body Systems I and BMSC 208.3 Human Body Systems II (formerly PHSI 208.6)
- BMSC 230.3 Metabolism
- COMM 102.3 Introduction to Business Management
- FABS 110.3 The Science of Food
- NUTR 120.3 Basic Nutrition
- NUTR 190.0 Introduction to the B.Sc.(Nutr.) Program
- NUTR 221.3 Advanced Nutrition Micronutrients
- NUTR 230.3 Professional Practice I
- PLSC 214.3 Statistical Methods
- Basic food safety training certificate

Unrestricted Electives

- Choose 3 credit units of unrestricted electives

Year 2
36 credit units

- BMSC 210.3 Microbiology
- NUTR 210.3 Food Fundamentals and Preparation
- NUTR 305.3 Research Methods
- NUTR 310.3 Food Culture and Human Nutrition
- NUTR 321.3 Advanced Nutrition Macronutrients and Energy
- NUTR 322.3 Nutrition Throughout the Lifespan
- NUTR 330.3 Professional Practice II
- NUTR 350.3 Introduction to Public Health and Community Nutrition
- NUTR 365.3 Quantity Food Production and Service

- NUTR 366.3 Food Service Management Practicum*
- PATH 205.3 Survey of Pathology
- ~~Successful completion of Speechcraft (Public Speaking Certificate)~~

*offered in Spring and Summer terms

Unrestricted Electives

- Choose 3 credit units of unrestricted electives

Year 3

33 credit units

- COMM 201.3 Introduction to Financial Accounting
- NUTR 420.3 Current Issues in Nutrition
- NUTR 425.3 Nutritional Assessment
- NUTR 430.3 Professional Practice III
- NUTR 441.3 Clinical Nutrition I
- NUTR 442.3 Clinical Nutrition II
- NUTR 450.3 Nutrition Program Planning and Evaluation
- NUTR 466.3 Organization and Management of Nutrition Services
- Advanced food safety training instruction

Unrestricted Electives

- Choose 9 credit units of unrestricted electives

Year 4

30 credit units

- NUTR 531.30 Professional Practice IV
- Successful completion of the practicum