



Academic Programs Committee of Council

University Course Challenge

Scheduled posting: April 2024

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 and schools:

College of Agriculture and Bioresources
College of Arts and Science
College of Dentistry
College of Engineering
College of Graduate and Postdoctoral Studies

Approval: Date of circulation: **April 16, 2024**
Date of effective approval if no challenge received: **May 1, 2024**

Next scheduled posting:

The next scheduled posting will be May 16, 2024, with a submission deadline of **May 13, 2024**. Urgent items can be posted on request.

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

College of Agriculture and Bioresources, Submission to University Course Challenge April 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 information.

Course Changes:

AREC 261.3: Agricultural Data Analytics I

An introduction to probability, statistics, and data management with application to modern agriculture. Topics covered will include the basics of probability, probability distributions, hypothesis testing, correlation, causation, and data management. Through weekly labs students will build skills in spreadsheet software and will perform hypothesis tests on agricultural data.

Prerequisite(s): Successful completion of 27 credit units of university level courses or permission of the instructor.

FABS 456.3: Laboratory Techniques ~~and~~ in Food and Bioproduct Sciences

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

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

Note: Students who have previously taken FABS 315.3 (pre-2023), FABS 417.3, FAMS 415.3 or FAMS 417.3 will not receive credit for FABS 456.3.

PLSC 340.3: ~~Weed Biology and Ecology~~ Weed Science

Growth, reproduction and spread of weeds, influence of agronomic and edaphic factors on weed community structure, weed-crop competition, and biological and mechanical control of weeds. Concludes with a discussion of the use of combined control methods (biological, mechanical and chemical) in integrated weed management.

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

Prerequisite(s): PLSC 260.3

PLSC 418.3: Management of Arable Grassland

This course will familiarize students with the agronomy, physiology, quality and production of temperate forage species used in arable grassland production. The scientific basis of modern forage management and utilization practices will be examined.

Weekly hours: 3 Lecture hours

Prerequisite(s): PLSC 201.3 or PLSC 213.3 or PLSC 222.3 or ANSC 212.3 or RRM 215.3

PLSC 444.3: Ecuador Agriculture Study Tour

~~Students are introduced to the agriculture and culture of Ecuador through pre-departure readings and seminars. During the tour, students will interact with local farmers, industry and government, students and faculty to gain knowledge of the agroecosystems of Ecuador. A student symposium ensures direct contact between Canadian and Ecuadorian students at ESPE and ESPOCH universities in Quito and Riobamba. Students interested in taking this course should contact the instructor at least 4 months prior to the start date of the course. There are additional non-refundable costs in addition to tuition fees.~~

Note: There are additional non-refundable costs in addition to tuition fees.

Permission of instructor required.

Prerequisite(s): Successful completion of 30 credit units of university-level courses.

Note: Students with credit for the PLSC 398 "Ecuador Study Tour" will not receive credit for this course. Extra fees may apply. Please contact the college for information.

PLSC 444.3: South American Agriculture Study Tour

~~Students are introduced to the agriculture and culture of a country in South America through pre-departure readings and seminars. During the tour, students will interact with local farmers, industry and government, students and faculty to gain knowledge of the agroecosystems of that country. A student symposium ensures direct contact between Canadian and local university students. Students interested in taking this course should contact the instructor at least four months prior to the start date of the course. There are additional, non-refundable costs in addition to regular tuition fees.~~

Note: There are additional non-refundable costs in addition to tuition fees.

Permission of instructor required.

Prerequisite(s): Successful completion of 30 credit units of university-level courses.

Note: Students with credit for the PLSC 398 "Ecuador Study Tour" will not receive credit for this course. Extra fees may apply. Please contact the college for information.

Rationale: Due to safety concerns in Ecuador, Dr. Randy Kutcher plans to take this class to Brazil instead. The College of AgBio has received approval from the Tuition and Fees Committee to apply the previously approved course fees.

University Course Challenge – April 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)

Biochemistry, Microbiology and Immunology

New course(s):

BMIS 325.3 Fundamentals of Bacteriology

2 (3L) This course explores how bacteria perform essential functions and adapt to diverse environments. You will learn about the bacterial cell envelope and surface, import and export of nutrients and macromolecules, regulation of gene expression and processes, and how bacteria generate specialized cellular forms. You will examine these topics through the analysis of classic and current literature, using a combination of lectures, activities and discussions. You will also gain an understanding of how bacterial processes are relevant for human health and biotechnology, such as the development of new antibiotics and vaccines.

Prerequisite(s): BMSC 210.3 and BMSC 230.3.

Pre- or Co-requisite(s): BMSC 320.3

Instructor(s): Yannick Tremblay, Jenny-Lee Thomassin, Jessica Sheldon

Rationale: The Department of Biochemistry, Microbiology and Immunology is undergoing its first curriculum evaluation and renewal since the merger of the two departments (Biochemistry, and Microbiology and Immunology). During the evaluation process significant knowledge gaps were identified in our student cohorts related to bacterial physiology. The lack of a solid foundation in bacterial physiology directly impacts our students' ability to excel in their 400-level bacterial pathogenesis and bacterial genetics courses. To bridge this knowledge gap effectively, we propose a new 300-level course dedicated to the fundamental aspects of bacterial physiology. This course is designed to build upon their introductory 200-level courses and will complement existing 300-level genetics courses to help learners connect introductory knowledge to real-world applications; thus, providing learners with a strong foundation to prepare them for our more advanced course offerings. In summary, the proposed course is not only timely but also essential for nurturing the success of students within the BMI department.

Biology

Minor course revisions

BIOL 480.3 Biology Research

Remove AGRC 494 and BIOL 481 as equivalent courses.

Change to Note:

Current Note: Students with credit for BIOL 481 cannot take BIOL 480 for credit. Honours Agriculture Biology students may not take both this course and AGRC 494. Those in College Scholar Programs may not take this course in addition to another laboratory or field project designed under the Program.

New Note: Students may complete both BIOL 480.3 and 481.6 for credit provided that research conducted for each course is substantially different.

Rationale: 1) The original note is a holdover from previous decades but seems to be a little out of date considering that we are now promoting undergrad research through the Certificate in Biological Research. We think the change in the Note is a better optic and more encouraging for undergrads who might be interested in undergraduate research. 2) The course AGRC 494 no longer exists. This was likely intended to restrict research in the Ag Biology major from the College of Agriculture and Bioresources. However, BIOL 480 and 481 are not listed in their AG Biology major so there should be no issue with us deleting this from the Note. 3) The College Scholar option has not been used by any Biology major in the living memory of the Department.

BIOL 481.6 Extended Research Project in Biology

Remove AGRC 494 and BIOL 480 as equivalent courses.

Change to Note:

Current Note: Students with credit for BIOL 480 cannot take BIOL 481 for credit. Agricultural Biology students may not take both BIOL 481 and AGRC 494 for credit. Those in College Scholar programs may not take this course in addition to another laboratory or field project designed under the program.

New Note: Students may complete both BIOL 480.3 and 481.6 for credit provided that research conducted for each course is substantially different.

Rationale: See BIOL 480.3 above.

Sociology

New course(s):

SOC 221.3 Sociology of Migration

1/2 (3L) This course critically examines key themes in the sociology of migration, with an emphasis on international migration to Canada. The course explores empirical findings, as well as theoretical and methodological debates on migration. Students will learn about why people migrate, various aspects of migrant integration, and how migration experiences intersect with various social locations such as gender, race, class, and nationality. This course covers a subset of topics in the field such as migration flows; Canadian immigration policies; integration; identity and belonging; migrant families; and transnationalism. Prerequisite(s): 6 credit units of 100-level SOC.

Instructor(s): Kara Somerville

Rationale: We live in a world on the move, and international migration is one of the most important issues for our contemporary society. Immigration has played a major role in Canada's history and continues to shape our society. Canada has one of the highest rates of migration in the world, and most of Canada's population growth is due to international migration. Almost a quarter of Canada's population is immigrants, and this number is expected to continue to rise. The Sociology of Migration explores current debates and inequalities that arise through this global movement of people. Recently, we have seen shifting public discourse and policies around international student mobility, inequities experienced by marginalized groups during the COVID-19 pandemic, migration policies targeting certain highly educated workers, and an increased reliance on temporary migrants. There is a growing need to understand how migration experiences intersect with various social locations such as gender, race, class, and nationality.

Clarification:

ARCH 470.3 Human Osteology was approved to be relabeled to **ANTH 470** in the proposal package submitted to the Academic Programs Committee to:

1. Rename the B.A. in Archaeology and Anthropology to the B.A. in Anthropology
2. Rename the B.Sc. in Archaeology to the B.Sc. in Anthropology
3. Relabel all undergraduate ARCH courses to ANTH courses.

Subsequently, a decision was made to renumber the course to the 300-level; the proposed change to **ANTH 370** was submitted to the February 2023 University Course Challenge.

Finally, a proposal to update the prerequisites for what will be **ANTH 370** as of May 1, 2024 was submitted to the February 2024 University Course Challenge. This proposal referred to the course as "ARCH 470" matching the current status at the time of the proposal, but should also have noted the previous revisions for clarity.

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.

Drama

Minor course revisions

DRAM 419.3 Acting VIII

Prerequisite change:

Current prerequisite(s): DRAM 325

New prerequisite(s): DRAM 325.3 and successful completion of an audition.

Rationale: This course is related to performance(s) in Greystone Theatre and requires an audition. This is to update the course calendar to reflect the current practice in the department.

Statistics

Minor course revisions

STAT 346.3 Multivariate Analysis

New course number: **STAT 448.3**

Rationale: The pre-requisites for STAT 346 are MATH 164 (formerly MATH 264) or MATH 266, STAT 241, and one of STAT 344 or STAT 345. Since one of the pre-requisites is a 300-level course, it makes more sense to use a number 4xx for STAT 346. It is requested that this change not be made until May 2025, to avoid any mismatch between how this course is listed in program requirements and in the course section of the Course and Program Catalogue.

College of Dentistry

The following changes have been approved by the college and are being presented to University Course Challenge, as follows:

For Information

The College of Dentistry is proposing to move DENT 306.6, Human Oral Infectious Diseases, and DENT 392.6, Pharmacology, from Year 2 of the DMD program into Year 1 of the DMD program.

With the adoption of the Comprehensive Care model of training and treatment in Year 4 of the DMD program in 2022-2023, the program continues to evolve to ensure that students receive the most clinical training of any dental school in the country. Providing more clinical time in Years 3 & 4 of the program means that students now face more complicated patient treatment issues earlier in their training and education than previously, requiring the providing of basic and intermediate health science and pharmacology earlier in the program to allow for that information to be properly incorporated into their coursework before the transition from pre-clinical to clinical training occurs.

Doctor of Dental Medicine (D.M.D.) (193 credit units)

Year 1

~~37-51~~credit units

- [DENT 208.3](#) Principles and Practice of Dentistry
- [DENT 220.6](#) Operative Dentistry I
- [DENT 221.2](#) Dental Materials
- [DENT 225.2](#) Dental Anatomy and Morphology
- [DENT 226.3](#) Occlusion
- [DENT 231.3](#) Oral Microbiology Immunology and Physiology
- [DENT 291.18](#) Principles of Biomedical Science for Dentistry Students
- [DENT 306.6](#) Human Oral Infectious Diseases
- [DENT 392.6](#) Pharmacology

Year 2

~~53-41~~credit units

- [DENT 301.2](#) Oral Radiology I
- ~~[DENT 306.6](#) Human Oral Infectious Diseases~~
- [DENT 309.2](#) Communication Skills I
- [DENT 317.3](#) Orthodontics I

- [DENT 319.4](#) Periodontics I
- [DENT 320.5](#) Operative Dentistry II
- [DENT 324.3](#) Pedodontics I
- [DENT 330.5](#) Removable Prosthodontics II
- [DENT 340.4](#) Fixed Prosthodontics I
- [DENT 348.3](#) Diagnosis I
- [DENT 353.2](#) Local Anaesthesia
- [DENT 360.5](#) Endodontics II
- [DENT 388.3](#) Infection Control in Dentistry
- ~~[DENT 392.6](#) Pharmacology~~

Year 3

56 credit units

- [DENT 401.3](#) Oral Radiology II
- [DENT 409.2](#) Communication Skills II
- [DENT 417.4](#) Orthodontics II
- [DENT 419.5](#) Periodontics II
- [DENT 420.5](#) Operative Dentistry III
- [DENT 424.4](#) Pedodontics II
- [DENT 430.6](#) Removable Prosthodontics III
- [DENT 440.5](#) Fixed Prosthodontics II
- [DENT 448.3](#) Diagnosis II
- [DENT 455.2](#) Basic Internal Medicine
- [DENT 460.5](#) Endodontics III
- [DENT 463.3](#) Oral and Maxillofacial Surgery I
- [DENT 466.2](#) Hospital Rosters
- [DENT 475.4](#) Implant Prosthodontics I
- [DENT 486.3](#) Oral Pathology

Year 4

47 credit units

- [DENT 501.2](#) Oral Radiology
- [DENT 517.4](#) Orthodontics
- [DENT 524.4](#) Pedodontics III
- [DENT 563.3](#) Advanced Oral and Maxillofacial Surgery II
- [DENT 580.2](#) Dental Practice Management
- [DENT 586.32](#) Clinical Comprehensive Care

New Course – For Approval

Dental Therapy

DETH 297.0 Essential Skills in Dental Therapy

This course is a pre-requisite bridging program for applicants to the one-year Bachelor of Science in Dental Therapy stream for dental hygienists and internationally-trained dentists. as well and the International Dental Degree Program. Successful completion of the course will allow the applicant to enter Year 2 of the Bachelor of Science in Dental Therapy program.

Rationale: Dental Hygiene and Dental Therapy have significant scope of practice overlaps in basic science, health promotion, health education and clinical prevention. But Dental Hygienists lack the requisite training in local anaesthetic, restorative dentistry, and oral surgery that Dental Therapists receive. This bridging program will provide the students with intensive pre-clinical simulation to enable them to move on to patient-based care at the end of the program.

College of Engineering - University Course Challenge Submission, April 2024

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

Chemical Engineering Program:

- 1) **Motion:** To permanently delete 'CHE 470 – Industrial Site Visitation' from the Chemical Engineering Program.

Rationale: The Chemical and Biological Engineering (CBE) department has provided several compelling reasons to the College of Engineering *Undergraduate Academic Programs Committee* (UAPC) which include safety concerns for students traveling for site visits, prohibitive costs to offering the course, as well as past student feedback indicating that students do not find pedagogical value in the course. In addition, as this is a zero-credit course with no associated tuition assessed, there is also no offsetting mechanism as well for costs involved. In addition, students can utilize current online tours to experience an industrial site visit through virtual reality opportunities, hence the college has approved deletion of this course offering.

- 2) **Motion:** To change the prerequisites for ***CHE 113.3 Unit Operations in Chemical Process Engineering*** from:
 - Old Prerequisite(s) or Corequisite(s): GE 163.2 and MATH 134.3.3
 - To
 - New Prerequisite or Corequisite: GE 163.2.

Rationale: Currently, MATH 134.3 is a prerequisite or corequisite of CHE 113.3. In addition, the contents of MATH 134.3 are now deemed unimportant for CHE 113.3 though important for upper year Chemical Engineering courses. The respective department and college UAPC both concur that this minor course change is important such that current first-year Engineering students seeking to take [CHE 113.3](#), who would otherwise be eligible to take this bridging course, are not adversely impacted by this unnecessary (and out of date) prerequisite or co-requisite of MATH 134.3.

The Future Catalogue mark-up should reflect these changes as follows:

Chemical Engineering

Bachelor of Science in Engineering (B.E.) - Chemical Engineering (137 credit units)

- [Admissions](#)
- [Academic policies](#)
- [Year 1 \(41-44 credit units\)](#)
- [Year 2 \(27 credit units\)](#)
- [Year 3 \(32 - 35 credit units\)](#)
- [Year 4 \(31-34 credit units\)](#)
- [Elective Lists](#)
- [Top](#)

Year 1 (41-44 credit units)

All Engineering programs have a [common](#) first year.

Note: Students in the Chemical Engineering Undergraduate Program cannot use ENVE 201 as a substitute for CHEM 242.

Year 2 (27 credit units)

Fall Term

- [CHE 220.3](#) Introduction to Chemical Process Engineering
- [CHEM 242.3](#) Thermodynamics and Kinetics
- [CHEM 250.3](#) Introduction to Organic Chemistry
- [GE 213.3](#) Mechanics of Materials
- [MATH 223.3](#) Calculus III for Engineers

Winter Term

- [CHE 210.3](#) Fluid Mechanics I
- [CHE 223.3](#) Chemical Thermodynamics
- [CHEM 221.3](#) Analytical Chemistry I
- [MATH 224.3](#) Calculus IV for Engineers

Year 3 (32 - 35 credit units)

Fall Term

- [CHE 323.3](#) Chemical Engineering Thermodynamics
- [CHE 325.3](#) Process Engineering and Design I
- ~~[CHE 470.0](#) Industrial Site Visitation~~
- [CHEM 231.3](#) Inorganic Chemistry I
- [GE 210.3](#) Probability and Statistics

Winter Term

- [CHE 315.3](#) Equilibrium Stage Operations
- [CHE 322.3](#) Mathematical Modelling
- [CHE 324.3](#) Heat Transfer
- [CHE 326.3](#) Plant Design Project
- [CHE 333.2](#) Chemical Engineering Laboratory I

Fall Term or Winter Term

- 3 credit units Complementary Studies Elective (over year 3 or year 4)
- 3 credit units Technical Elective (over year 3 or year 4)
- [GE 348.3](#) Engineering Economics
- [RCM 200.3](#) Effective Professional Communication

Year 4 (31-34 credit units)

Fall Term

- [CHE 411.3](#) Chemical Reaction Engineering
- [CHE 414.2](#) Chemical Engineering Laboratory II
- [CHE 421.3](#) Mass Transfer
- [CHE 423.3](#) Process Dynamics and Control

Winter Term

- [CHE 424.2](#) Chemical Engineering Laboratory III
- [GE 449.3](#) Engineering in Society

Fall Term or Winter Term

- 3 credit units Senior Humanities or Social Science Elective
- 3 credit units Technical Elective

Fall Term and Winter Term

Choose 6 credit units from the following:

- [CHE 495.6](#) Process Engineering and Design II
- [GE 495.6](#) Technological Innovation Capstone Design Project

Elective Lists

Technical Elective List

- [CHE 369.3](#) Fundamentals of Mineral Processing and Hydrometallurgy
- [CHE 453.3](#) Corrosion Engineering
- [CHE 454.3](#) Design of Industrial Waste Treatment Systems
- [CHE 460.3](#) Oil and Natural Gas Upgrading
- [CHE 461.3](#) Biochemical Engineering
- [CHE 462.3](#) Biomaterial Processing
- [CHE 463.3](#) Bioprocess Industries and Bioproducts
- [CHE 464.3](#) Petroleum Production Engineering
- [CHE 468.3](#) Downstream Bioprocessing
- [CHE 469.3](#) Industrial Mineral Processing
- [GEOE 377.3](#) Fundamentals of Mining and Mineral Processing
- [GEOE 466.3](#) Petroleum Geomechanics

- **ME 478.3** Introduction to Fire Protection Engineering

Note: Some technical electives are offered in alternating years while others are offered annually. Consult with an academic advisor to determine the availability of specific electives.

Complementary Studies Elective

- **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
- [PHIL 231.3](#) Moral Problems
- [PHIL 233.3](#) Ethical Theory
- [PHIL 234.3](#) Biomedical Ethics
- PHIL 235.3
- [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.

Senior Humanities or Social Science Elective

- [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.

Source: [Bachelor of Science in Engineering \(B.E.\) - Chemical Engineering \(137 credit units\) - University Catalogue 2024-25 | University of Saskatchewan \(usask.ca\)](#).

University Course Challenge – April 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.

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

For information

Pharmacy and Nutrition

PHAR 865.3: Analytical Mass Spectrometry

Current Title: Analytical Mass Spectrometry

Proposed Title: Bioanalytical Mass Spectrometry

Current description: This course will cover modern state-of-the-art mass spectrometry techniques and their usefulness in research and discovery. The course will examine instrumentation-related topics, such as ionization sources, mass analyzers and hybrid tandem mass spectrometers. The advantages of each technique will be highlighted and discussed. A second portion of the course will focus on mass spectra interpretation and the various applications of applied mass spectrometry, namely structural elucidation, quantification, and related biomedical and environmental applications. The course will also include practical demonstration of the use of tandem mass spectrometry.

Proposed description: The course will provide the students with fundamental knowledge of mass spectrometry theory from a biological lens and its current pharmaceutical, biomedical and agricultural applications. The theory behind various ionization methods, mass analyzers and tandem mass spectrometry for quantitative and qualitative applications will be discussed with emphasis on method development and validation for small bioactive molecules.

School of Public Health

PUBH 992 - Research-Project

Current title: PUBH 992 - Research-Project

Proposed title: PUBH 992 - Public Health Practicum

Veterinary Microbiology

VTMC 831.3 - Techniques in Molecular Biology

Current description: A "hands-on" laboratory course designed to familiarize students with a wide variety of techniques in molecular biology: manipulation of DNA for cloning and analysis, detection and quantitation of nucleic acids, sequencing of DNA, site directed mutagenesis, purification and detection of proteins, detection of rare nucleic acids by polymerase chain reaction, monitoring gene expression by cDNA microarrays and 2D-protein analysis, nucleic acid-based techniques for identifying organisms.

Proposed description: A "hands-on" laboratory course designed to familiarize students with a variety of techniques in molecular biology, from basic laboratory skills to application of state of the art methods and instrumentation for analysis and manipulation of nucleic acids and proteins. Laboratory exercises

are combined with lectures and dry lab work to provide students with an understanding of underlying concepts and theory.

Rationale: To more accurately reflect the course content, and to eliminate mention of specific methods that may change over time.