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The following term designations are used:
1—Term 1 only
2—Term 2 only
3—Term 3 only
1&2—Either Term 1 or Term 2
P—Phases (Medicine and Dentistry)
Q—Quarters (Veterinary Medicine)

The following instructional code designations are used:
L—Lecture
P—Practicum/Lab
S—Seminar/Discussion
C—Clinical Service
R—Reading
T—Tutorial

April 7, 2014 University of Saskatchewan
ACB — ANATOMY AND CELL BIOLOGY

College of Medicine

ACB. 221.3 — 1(3L‑3P)
Gross Anatomy
Especially designed for students in Kinesiology with applications to activities involving motion, locomotion and related injuries. The emphasis is on the structural, biomechanical and positional relationships of the skeleton, joints, muscles, blood vessels and peripheral nerves in the trunk and limbs. The anatomy of other major body systems is also covered, but less thoroughly.
Restriction(s): Students must be enrolled in the College of Kinesiology.
Prerequisite(s): (BIOL 120 and 121) or BMSC 224 or BIOL 224.
Note: Students with credit for ACB 310 will not receive credit for ACB 221.

ACB. 310.3 — 1(3L‑1.5P)
Basic Human Anatomy
This course covers the structure and functions of the human body. All major body systems are surveyed via lectures and practical laboratory sessions that focus on the direct study of human tissues.
Prerequisite(s): BMSC. 224.3/BIOL. 224.3.
Note: Students with credit for ACB. 202, 210, or 233 cannot take ACB. 310 for credit.

ACB. 325.3 — 2(3L)
Advanced Cell Biology
Recent concepts in the regulation of cell signaling, development, motility and chromatin dynamics are discussed, with a focus on how these processes are regulated, and involved in select disease pathogenesis, aging, pain and therapeutic interventions. Consideration is also given to the experimental findings and approaches leading to these insights.
Prerequisite(s): BMSC. 220.3.
Note: Students with credit for ACB. 325 (discontinued course) cannot take ACB. 325 for credit.

ACB. 330.3 — 2(3L)
Principles of Development
An introduction to the cellular and molecular mechanisms that regulate embryonic development in animals. Topics include fertilization, establishment of the major tissue/organ types, and body axis patterning. The course covers examples of embrgogenesis in both vertebrate and invertebrate species in order to highlight key developmental principles.
Prerequisite(s): BMSC. 220.3 and BMSC. 224.3/BIOL. 224.3.
Note: Students with credit for ACB. 201 cannot take ACB. 330 for credit.

ACB. 331.3 — 2(3P)
Methods in Cell and Developmental Biology
This course will provide laboratory experience in cell and developmental biology. Instruction on, and use of, techniques such as cell culture, expression of proteins in cells, basic cytology, and immunofluorescence will be some of the areas covered.
Prerequisite(s): BMSC. 220.3, BMSC. 240.3.

ACB. 333.3 — 1(3L)
Cellular Neurobiology
The cell biology of neurons and glial cells will be studied, with detailed discussion of neuron cell biology, electrical activity in neurons, synaptic signaling, sensory transduction, and the role of glial cells in supporting neuronal function.
Prerequisite(s): BMSC. 220
Note: Students with credit for ACB. 404 will not receive credit for this course. This course was labeled ACB. 404 until 2013.

ACB. 334.3 — 2(6L/P)
Introductory Neuroanatomy
An introduction to the anatomy of the human brain and spinal cord through lectures and laboratory dissections.
Permission of the department required.
Prerequisite(s): BMSC. 224.3/BIOL. 224.3
Prerequisite(s) or Corequisite(s): ACB. 310.3
Note: Students with credit for ACB. 234, DENT. 293, or MED. 108 cannot take ACB. 334 for credit.

ACB. 400.3 — 1(3L)
Imaging and Anatomy
Provides insight into how imaging modalities visualize anatomical structures in living systems. Conventional imaging methods (ultrasound, MRI, and x-ray imaging), and newer imaging modalities of the synchrotron will be presented as well as topics on the development of contrast and potential clinical uses.
Prerequisite(s): PHYS. 115.3, PHYS. 117.3 (or 125) and ACB. 310.3

ACB. 401.6 — 1and2(6P)
Undergraduate Research Project
A course in which fourth-year students undertake an experimental research project under the direct supervision of an ACB faculty member. Students acquire hands-on experience in modern experimental techniques and approaches in the anatomical sciences. Course evaluation is based on oral and poster presentations, a written research report, and student initiative. This course is strongly recommended for students in the Honours Anatomy and Cell Biology program, and is optional for students in the 4-year ACB degree program.
Permission of the department required.

ACB. 405.3 — 2(1L‑2S)
Current Topics in Cell Biology
Recent developments and the state of the art of cell biology research will be examined in a seminar-discussion format. Students will present and evaluate selected publications from the current literature on a variety of topics related to cell biology.
Prerequisite(s): ACB. 325.3 and 330.3.

ACB. 406.3 — 1(2L‑2P)
Comparative Vertebrate Histology
The organization of the basic tissues into organs and organ systems in vertebrates, with an emphasis on non-human mammals, fish, reptiles, amphibians, birds, and lower chordates. The lectures are accompanied by weekly lab sessions in which students learn to identify tissues from digital microscopic slides (virtual microscopy).
Prerequisite(s): BMSC. 203.3 and BMSC. 224.3/BIOL. 224.3

ACC — ACCOUNTING

College of Edwards School of Business

ACC. 400.6 — 1and2(3S)
Honours Seminar in Accounting
Directed readings and individual research in the area of accounting. The major course requirement involves the preparation of an honours research paper under the supervision of one or more faculty in the particular area of specialization. The resulting honours paper is normally presented at a department seminar.
Formerly: ACC. 400.3
Permission of the department required.

AGRC — AGRICULTURE

AGRC. 111.3 — (3L‑2P)
Sustainable Plant and Soil Management
An introduction to agricultural systems illustrating the interactions between plant, animal, microbial, human and environment components. The soil/plant/environment interface is emphasized. Management decisions affecting cropping and land use are examined.
Note: Students with credit for PLSC 41 will not receive credit for this course.

AGRC. 112.3 — (3L‑2P)
Animal Agriculture and Food Science
An introduction to agricultural systems and the interactions between microbial plant, animal, and human components. The emphasis is on issues and problems associated with animal production, value-added processing, marketing and the consumption of food.

AGRC. 113.3 — 2(2T)
Agri Food Issues and Institutions
Examines the institutional setting within which the agri-food sector operates, as well as the drivers that affect this setting. Attention is paid to changes in the demand for food and bio-based products, the changing nature of production, and long-term trends in productivity, prices, employment and trade. The course examines the manner in which decisions about technology adoption, employment, diversification, RandD expenditures, and government policy are made; the institutions (e.g., laws, contracts, social norms, markets) that govern this decision making; the social, legal, political and economic factors that affect these institutions; as well as the implications for the agri-food sector of decisions made.
Prerequisite(s): ECON. 111.
AGRC. 211.3 — 3L
Global Food Security
This course will introduce students to issues of global food security. Examples taken from the origins of agriculture to modern practices are used to illustrate themes, including sustainable agriculture, food quality and quantity, plant and animal breeding, genetically modified organisms, and productivity improvement. An overview of the food distribution system, the impact of malnourishment and chronic poverty are also presented.
Prerequisite(s): completion of 30 credit units at the university level

AGRC. 298.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

AGRC. 311.3
International Study Tour
Students are introduced to the agriculture and culture of the designated country through pre-departure readings and seminars. While on tour, students will interact with local farmers/industries/government/students/faculty to see agro ecosystems in other countries first hand. Students will become more aware of challenges and develop possible solutions within the context of enhancing a sustainable, secure, food system.
Prerequisite(s): Permission of the instructor.
Note(s): As a study tour this class will be offered from time to time but is not designated to any particular term.

AGRC. 398.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

AGRC. 411.3 — 1(FLD)
Field Studies in Agricultural Production Systems
Provides students with direct experience in the production and marketing sectors through site visits and contact with a range of sector partners. Students will emerge from this course with an enhanced understanding of the key components associated with different agricultural production systems, the interdependence of these components, and the broader context that these production systems occur in.
Prerequisite(s): completion of 84 credit units, or permission of the instructor
Note: There are additional non-refundable costs in addition to tuition fees.

AGRC. 498.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

AGRN — AGRONOMY

College of Agriculture and Bioresources

AGRN. 375.3 — 2(3L)
Current Issues in Agronomy
Provides a forum to investigate current agronomic issues of importance to Western Canada. Students acquire information about these issues through invited presentations by recognized experts, independent research and team problem solving. Students will investigate issues in a multidisciplinary manner to communicate findings in both oral and written form.
Prerequisite(s): AGRC 111 and 30 credit units of university credit or permission of the instructor.
Note: Students with credit for AGRN 75 will not receive credit for this course. Costs in addition to tuition will apply to this course.

AGRN. 382.3 — SU
Introduction to Field Scouting
Introduces students to the art and science of field crop scouting. Through lecture and field training, students will become familiar with the techniques necessary to assess soil characteristics and variability, to identify and quantify crop pests (weeds, disease, insects) and herbicide injury/control symptoms, to identify plant nutrient deficiencies and symptoms of abiotic stresses and to suggest potential methods of remediation. Students will also discuss ethical behaviour and professionalism as it applies to field scouting and the practice of agrology.
Prerequisite(s): PLSC. 201 or PLSC. 222 and SLSC. 240
Note: Offered in Summer Term two. Students with credit for AGRN 82 will not receive credit for this course. There are additional non-refundable costs in addition to tuition fees.

ANBI — ANIMAL BIOSCIENCE

College of Agriculture and Bioresources

ANBI. 110.3 — 2(3L-2P)
Introductory Animal Bioscience
This class examines the domestication of agricultural and companion animals and their adaptation to human society. Comparative aspects of domestication, genetics, reproduction, neonatal development, endocrinology and environmental impacts will be reviewed.

ANBI. 320.3 — 2(3L-2P)
Equine Science
Presents the evolution of the horse’s role in society, its current uses and the significance of the local and global equine industry. Management topics include housing, nutrition, hoof care and first aid to provide a foundation of information for the care of the horse. Reproduction and genetics lectures present reproductive endocrinology, the application of new technologies and basic equine genetics. Equine behavior and learning is discussed in conjunction with the management, training and equine welfare.
Formerly: ANSC. 250 and ANSC. 350
Prerequisite(s): 6 credit units of BIOL or permission of the instructor.
Note: Students with credit for any of ANSC. 250, ANSC. 350 or ANSC. 450 cannot receive credit for this course.

ANBL. 360.3 — 1(3L)
Canine and Feline Science
Covers canine evolution, history of domestication and breed development. The use of dogs in therapy, herding, etc. will be discussed. Professional dog kennel operation, design, legislation and licensing thereof will be included. Feeding, care and management of cats and dogs will be covered.
Formerly: ANSC. 360.
Prerequisite(s): 6 credit units of BIOL courses.
Note: Students with credit for ANSC. 360 will not receive credit for this course.

ANBL. 375.3 — 2(3L)
Animals and the Environment
Discusses the important role that domestic animals play in an environmentally appropriate land use strategy, in both extensive and intensive systems. The major focus will be to examine animal agriculture’s ecological footprint including impact on riparian areas, nutrient cycling, climate change, ecological diversity including wildlife and human health. Sustainable agricultural practices including mitigation strategies for reducing the effects of animal agriculture on the environment will be covered.
Formerly: ANSC. 375
Prerequisite(s): Successful completion of 60 credit units of university level courses or permission of the instructor.
Note: Students with credit for ANSC. 375 will not receive credit for this course.

ANBL. 411.3 — 1(3L)
Behaviour of Domestic Animals
Provides students with an understanding of the principles of animal behaviour, and how these relate to management of domestic species. Emphasizes the social behaviour of animals and introduces the relationship between animal behaviour and animal welfare.
Formerly: ANSC. 411
Prerequisite(s): ANSC. 212 and completion of 48 credit units.
Note: Students with credit for ANSC. 411 will not receive credit for this course.

ANBL. 420.3 — 2(3L)
Comparative Animal Endocrinology
Examines the fundamentals of animal endocrine systems. Similarities and differences in endocrine function between different vertebrate groups will be discussed. Topics include anatomy and physiology of hormones and glands, mechanisms of hormone action, hormonal regulation of various physiological processes in animal systems, endocrine manipulation and monitoring, endocrine disruption and endocrine methodologies.
Prerequisite(s): BIOL. 224.3 and 60 credit units, or permission of the instructor.
ANBI. 470.3 — 1(3L)
Applied Animal Biotechnology
Covers reproductive technologies; transgenic techniques; molecular genetics in animal selection; use of recombinant proteins for growth, lactation and reproduction; immunological modulation of animal production; improvement of feeds and rumen organisms; improvement of health. In addition, ethical and safety aspects will be considered. Emphasizes the application and impact of biotechnological techniques on animal production.
Prerequisite(s): ANSC. 470
Note: Students with credit for ANSC. 470 will not receive credit for this course.

ANBI. 475.3
Field Studies in Arctic Ecosystems and Aboriginal Peoples
This field-based travel course will provide hands-on research experience in natural ecosystems in the sub-arctic of the Hudson Bay coast in northern Manitoba at the interface between animals, people, and the environment. This experiential course is an intensive introduction to and connection between the ecology and Aboriginal cultures of the sub-arctic.
Prerequisite(s): Successful completion of 60 credit units of university level courses and permission of the instructor
Note: This field course takes place in mid-August and is based out of Churchill, Manitoba. There are additional non-refundable costs in addition to tuition fees.

ANBI. 492.3 — 1and2(3L)
Literature Thesis in Animal Bioscience
The student develops a question to be explored in depth in an area relevant to domestic animal biology. Working with a faculty supervisor the student prepares a thesis on the topic. Most often the thesis relies on current scientific literature but occasionally additional new data are analyzed. Presentation of the research in a conference setting is required.
Prerequisite(s): Successful completion of 75 credit units
Restriction(s): Restricted to Animal Bioscience majors.
Note: Students with credit for ANSC. 492, ANSC. 494, or ANB. 494 cannot receive credit for this course.

ANBI. 494.3 — 1and2(2L)
Research Thesis in Animal Bioscience
The student develops a question to be explored in depth in an area relevant to domestic animal biology. Working with a faculty supervisor the student collects relevant data during a series of experiments over the summer months. Statistical analysis of data are conducted and the student prepares a thesis based on the results. Each student delivers a presentation in a conference setting.
Restriction(s): Restricted to students with a 70% cumulative average as of January of their third year of the Animal Bioscience major.
Prerequisite(s): Successful completion of 75 credit units and permission of the department.
Note: Students with credit for ANSC. 492, ANSC. 494, or ANB. 492 cannot receive credit for this course.

ANBI. 494.6 — 1and2(2L)
Research Thesis in Animal Bioscience
The student develops a question to be explored in depth in an area relevant to domestic animal biology. Working with a faculty supervisor the student collects relevant data during a series of experiments over the summer months. Statistical analysis of data are conducted and the student prepares a thesis based on the results. Each student delivers a presentation in a conference setting.
Restriction(s): Restricted to students with a 70% cumulative average as of January of their third year of the Animal Bioscience major.
Prerequisite(s): Successful completion of 75 credit units and permission of the department.
Note: Students with credit for ANSC. 492, ANSC. 494, or ANB. 492 cannot receive credit for this course.

ANSC — ANIMAL SCIENCE
College of Agriculture and Bioresources

ANSC. 212.3 — 1(3L-2P)
Livestock and Poultry Production
The structure of the livestock and poultry industries. Principles, problems, and programs associated with production.

ANSC. 301.3 — 1(1/L)
Animal Production Tour
Introduces students to the diversity of animal agriculture and agri-business. Students will participate in a five day field trip that will cover traditional and exotic livestock production and marketing enterprises as well as food and feed processing facilities. Emphasis will be placed on exposing the student to livestock production conditions over the range of commercial operations found in Saskatchewan. Students will be expected to integrate information gathered from the field-trip into oral presentations and term reports with a goal of providing the student with background information necessary to complete upper year Animal Science courses. A special fee (approximately $300.00) will be assessed to cover expenses.
Prerequisite(s): ANSC. 212 or permission of the instructor
Note: Offered in the fall of odd-numbered years.

ANSC. 313.3 — 2(3L-2P)
Animal Breeding and Genetics
Qualitative and quantitative genetics applied to animal improvement. Principles and systems of selecting and breeding domestic animals. Introduction to molecular genetics related to animals.
Prerequisite(s): ANSC. 212 or permission of the instructor

ANSC. 315.3 — 1(3L-2P)
Animal and Poultry Nutrition
Lectures cover the principles of nutrition; the processes of digestion and utilization of foods and feeds; and the character, sources, function and requirements of the various nutrients. Laboratory work includes participation in laboratory analysis of feeds and practical nutritional exercises.
Prerequisite(s): BMSC. 200, 230; or permission of the instructor

ANSC. 340.3 — 2(3L-2P)
Feeds Technology and Swine Production
The classification, characteristics and processing of concentrate feeds as well as operating and management applications relating to swine production. Laboratory exercises involve solving feeding and swine management problems. This course has a mandatory field trip that takes place one Saturday during the term.
Prerequisite(s): ANSC. 212 or permission of the instructor
Note: ANSC. 315 is recommended

ANSC. 398.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ANSC. 410.3 — 2(3L-2P)
Cow Calf Management
Provides senior undergraduate students with an understanding of the management, feeding and productivity of the breeding beef herd. Includes both summer grazing and winter feeding management. Emphasizes the effect of climate on management and feed requirements; environmental impacts of grazing; stocking rates; plant palatability, preference and selection; nutritional behavior; nutrient cycling and energy flow; interactions with wildlife; ingestion of toxic plants.
Prerequisite(s): ANSC. 212 or permission of the instructor
Note: ANSC. 315 is recommended

ANSC. 430.3 — 1(2/3L-4P)
Intensive Management of Beef Cattle
Covers the feeding and management of beef cattle housed under intensive conditions. Topics include the principles of growth and development, carcass quality, feedlot diseases, marketing, feedlot design and environmental concerns with intensive feedlot operations. A brief overview of production using alternative species of ruminants (deer, bison, wapiti) is also provided.
Prerequisite(s): ANSC. 212 or permission of the instructor
Note: ANSC. 315 is recommended

ANSC. 440.3 — 1(3L-2P)
Poultry Production and Aquaculture
Review of poultry production systems with emphasis on breeding, housing and environmental control, feeding, disease prevention, and processing of meat and eggs. Lectures will integrate scientific principles with production techniques, relate management and nutrition to problems in and the economics of industrial production and highlight current issues. Laboratories will include tours of selected poultry facilities as well as projects in artificial incubation and hatching, management techniques for poultry and judging egg quality. Similar, but less extensive coverage, will be provided for Aquaculture production systems.
Prerequisite(s): ANSC. 212 or permission of the instructor
Note: ANSC. 315 and 340 are recommended

ANSC. 460.3 — 1(3L-4P)
Intensive Management of Dairy Cattle
Provides students with an understanding of the management and feeding of dairy cattle housed under intensive management conditions. Topics to be covered include the economics and marketing of milk and milk products, the science of feeding dairy cattle to meet their nutrient requirements, principles of ration formulation, management of the transition dairy cow, rearing of replacement heifers, milking systems, management of reproduction, herd health, and manure management and environmental impact of intensive dairy operations.
Prerequisite(s): ANSC. 212 or permission of the instructor
Note: ANSC. 315 is recommended
ANTH. 111.3 — 1/2(3L)
One World Many Peoples Introduction to Cultural Anthropology
Acquaints students with historical and contemporary approaches in Anthropology to the study of social and cultural variation.
Note: Students with previous credit for ANTH. 110 may not take this course for credit.

ANTH. 224.3 — 1/2(3L)
North American Plains Ethnography
A comprehensive survey of the ethnography, ethnohistory, and contemporary cultural issues facing the peoples of the North American plains. The composition and development of the plains culture complex and the impact of culture change will be considered centrally in this course.
Prerequisite(s): ANTH. 111.3 or NS 107.3 or ARCH. 112.3 or permission of instructor.

ANTH. 226.3 — 1/2(3L)
Business and Industrial Anthropology
Examination of the utility of cultural anthropology’s concepts, theory, methodology and insights in creatively influencing the conduct of domestic and international business. Cross-cultural business etiquette, understanding of marketing and consumer behaviour, and importance of intercultural negotiation in solving business problems in multicultural/transnational organizational settings are also discussed.
Prerequisite(s): ANTH. 111 or completion of 30 credit units at the university level including a 100-level social science course.

ANTH. 227.3 — 1/2(3L)
Cultures of Central and Eastern Europe
Broadly considers society and culture in Eastern and Central Europe, how the region today is related to both the socialist and pre-socialist pasts, and how ethnography as a key research tool used by anthropologists helps to account for sociocultural changes the region is undergoing since the late 1980’s.
Formerly: ANTH. 298.
Prerequisite(s): ANTH. 111 or completion of 30 credit units at the university level, including an introductory social science course.
Note: Students with credit for ANTH. 298 Special Topics: Cultures of Central and Eastern Europe may not take this course for credit.

ANTH. 230.3 — 1/2(3L)
Cultural Dynamics
Examines some of the major dimensions of non-material culture including religion, magic, and constructs of space and time. It also examines processes of enculturation and culture change.
Prerequisite(s): ANTH. 111.

ANTH. 231.3 — 1/2(3L)
Cross Cultural Perspectives on Health Systems
Examines the medical systems of practice and belief utilized by non-Western traditional societies in contending with the universal realities of disease and mental illness. The attempts to extend Western medical systems into traditional societies will also be considered.
Prerequisite(s): A 100-level course in the social sciences.

ANTH. 233.3 — 1/2(15)
Anthropological Perspectives on Contemporary Ukraine
Explores the effects of post-soviet transition in today’s Ukraine on the lives, identities and practices of its people. The emphasis is placed on how ethnography - a key research tool of anthropologists - helps to account for the changes the Ukrainian society has undergone since the late 1980s.
Formerly: ANTH. 298.3 Special Topics: Anthropological Perspectives on Contemporary Ukraine.
Prerequisite(s): A 100-level course in the social sciences.
Note: Students with credit for ANTH. 298.3 Special Topics: Anthropological Perspectives on Contemporary Ukraine may not take this course for credit.

ANTH. 235.3 — 1/2(3L)
Anthropological Approaches to Ethnicity and Ethnic Groups
Introduction and assessment of various anthropological approaches to the study of ethnicity and ethnic groups in a cross-cultural comparative framework.
Prerequisite(s): ANTH. 111 or completion of 30 credit units at the university level including a 100-level social science course.

ANTH. 240.3 — 1/2(3L)
Cultural Landscapes and Environments
This course examines the cultural construction of landscapes, as well as of built and social environments, through a series of topical readings focusing on historical, archaeological, literary, and ethnographic understandings: predominantly of western North American environments, as these places have been known by Aboriginal and non-Aboriginal people.
Prerequisite(s): ANTH. 111 or permission of instructor.
Note: Not open to students with credit in ANTH. 298.3 Special Topics: Anthropological Perspectives on Space and Place (2009).

ANTH. 244.3 — 1/2(3L)
Political Ecology Anthropology and Global Environmental Issues
Taking a political ecology approach drawn from anthropology, cross-cultural examples, and other disciplines, the course examines the impact of major 20th and 21st Century economic and technological developments upon peoples and environments. The focus is upon indigenous nations, farming, peasant, and other local communities in cross-cultural and global perspective. A core emphasis is on environmental crises (chronic and acute), often associated with asymmetrical power relations, and socio-cultural responses to them, especially in the form of movements of resistance, protest, and reform. Political ecology blends the insights of a unified political economic approach in the social sciences with cultural and human ecologies as well as a mixture of biological and social ecological sciences. The course also explores sustainable futures through this paradigm.
Prerequisite(s): ANTH. 111 or ANTH. 112 or successful completion of 30 credit units of university study.
Note: Students who have taken ANTH. 298 (Special Topics: Political Ecology, Anthropology and Contemporary Environmental Issues) may not take this course for credit.

ANTH. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ANTH. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.
ANTH. 302.3 — 1/2(3L)
The Practice of Ethnography
This course will examine the practice of ethnography by integrating a discussion of ethnographic research methods with training in the critical reading of ethnography and skills development in writing ethnography. Specific techniques will be explored, with an emphasis on qualitative approaches. The relationship of ethnographic theory and methodology will be highlighted.
Prerequisite(s): 3 credit units. 200-level ANTH or permission of instructor.
Note: Students who have credit for ANTH. 430 may not take ANTH. 302 for credit.

ANTH. 310.3 — 1/2(3S)
Anthropology of Gender
Introduces students to the anthropological approaches to gender, looking specifically at the gendered norms of collective behaviours and identities. The course centers on two questions: How is gender understood in different cultural contexts? What are the processes by which people learn to identify themselves as gendered and sexual citizens?
Prerequisite(s): ANTH. 111 or WGST. 112 or permission of instructor.

ANTH. 311.3 — 1/2(3L)
Selected Topics in Anthropology
Coverage of specialized anthropological and/or ethnographic analysis.
Prerequisite(s): List prerequisites here
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ANTH. 321.3 — 1/2(3L)
Myth Ritual and Symbol
Critically examines various approaches to the study of primitive religion and religious symbolism. Different ways on interpreting myth, ritual, and symbol are considered through a survey of the works of both early social scientists and contemporary scholars. The role of symbols and rituals in social communication is examined.
Prerequisite(s): 3 credit units of 200-level ANTH or permission of instructor.

ANTH. 326.3 — 1/2(3L)
Applied Anthropology
Applications of anthropological concepts to contemporary cultural and social issues. There is a focus on anthropology as a policy science including research and non-academic practice. Applied methods and domains are emphasized, including needs and social impact assessment, anthropological contributions to community and economic development, environmental impact and sustainability, business and industry, cultural and natural resource management, education, immigration, Indigenous issues, technology transfers, and health.
Prerequisite(s): 3 credit units of 200-level ANTH or permission of instructor.

ANTH. 328.3 — 1/2(3L)
Political and Legal Anthropology
Analytical and comparative examination of anthropological approaches to the study of political and legal structures and processes. Sources of conflict resolution and the relationships among politics, law, and religion are explored from a cross-cultural and comparative framework.
Prerequisite(s): 3 credit units of 200-level ANTH or permission of instructor.

ANTH. 329.3 — 1/2(3L)
Environmental Anthropology
Examines the variety of cultural adaptations that both large-scale and small-scale societies make to local and, increasingly, global environments. Illustrates how the principals of general ecology apply to humans in their environmental relations, while also applying ethnographic perspectives to new political manifestations of environmentalism.
Prerequisite(s): 3 credit units of 200-level ANTH or permission of instructor.

ANTH. 330.3 — 1/2(1.5L-1.5S)
Oral History and Storytelling Anthropological Perspectives
Offers an anthropological perspective on stories and storytelling events, their meanings, interpretations, and applications. Drawing on a wealth of scholarship generated by folklorists, anthropologists and oral historians, students will examine current theories and principles of oral historical research and consider the implications of storytelling and oral narrative in modern societies.
Prerequisite(s): 3 credit units of 200-level ANTH or permission of instructor.
Note: Students with credit for ANTH. 398 Special Topics: Oral History and Storytelling may not take this course for credit.

ANTH. 339.3 — 1/2(3L)
Cultural Change, Globalization and Development
Surveys anthropological theories that relate to change, from classical ones (such as neo-evolutionism, acculturation and assimilation, innovation, and diffusion) through more contemporary approaches to urbanization, social movements and networks, development, and globalization, to complexity and emergence theories. The tensions between the capacity for people to direct their futures and the limiting of external determinants are discussed through this course.
Prerequisite(s): 3 credit units. 200-level ANTH or permission of instructor.

ANTH. 354.3 — 1/2(2L-15)
Ritual Spaces in Ukrainian Culture
By applying ritual and symbolic analysis to the study of culture, this course investigates selected sites of Ukrainian traditional and contemporary culture in which ritual plays a prominent role. A comparative perspective is applied with the objective to better comprehend complex processes of cultural continuity and change in Eastern Europe and multiethnic Canada.
Formerly: ANTH. 398.3 Special Topics: Ritual Spaces in Ukrainian Culture.
Prerequisite(s): Any ANTH course numbered 200 to 235 or permission of the instructor.
Note: Students with credit for ANTH. 398.3 Special Topics: Ritual Spaces in Ukrainian Culture may not take this course for credit.

ANTH. 379.3
Washington Center Topics in Anthropology
Covers topics in Anthropology, offered by the Washington Center, Washington D.C. Possible topics include Peace and Social Justice, International Human Rights, Public Policies and Empowerment Strategies that Reduce Hunger and Poverty or other topics approved by the Department of Archaeology and Anthropology.
Prerequisite(s): 60 credit units of university level study including 6 credit units senior ANTH.
Note: Registration in this course is restricted to students selected for the Washington Center Term Abroad program.

ANTH. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ANTH. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ANTH. 401.3 — 2-Jan
Independent Research in Anthropology
Students will undertake a project involving original research or a review essay under the direction of a faculty member. An oral presentation and written report submitted at the end of the project will be evaluated by a faculty committee. Topics are open within the field of Anthropology, subject to the availability of a faculty advisor. An outline of the project must be submitted to the course coordinator in the term preceding registration and be approved before Departmental permission will be granted.
Prerequisite(s): Admission to Honours program in Anthropology; ANTH. 302.3, and permission of the department.
ANTH. 403.3 — 1/2(3S)
Anthropology of Healing
This course exposes students to critical anthropological perspectives on the concepts of healing, health, and well-being. Emphasis is placed on understanding the meaning of healing in cultural context, and on the cultural bases of psychosocial, medical, restorative, and transformational therapeutic processes.
Prerequisite(s): 3 credit units of 300 level ANTH, or permission of the instructor.
Note: Students who have taken ANTH. 498 (Special Topics): Anthropology of Healing may not take this course for credit.

ANTH. 421.3 — 1/2(3L)
Anthropology in Time: Early Influences
This course provides a historical survey of the evolution of basic concepts and theories in anthropological thought and practice. The development of the field of anthropology is examined by a review of foundational perspectives on the nature of human culture, thought, behavior and experience in relation to its natural and social environment, covering a range of ideas from early philosophical views to mid-twentieth century social and philosophical schools of thought.
Prerequisite(s): 3 credit units: 300-level ANTH or permission of instructor.
Note: Students with credit for ANTH. 420 cannot take this course for credit.

ANTH. 422.3 — 1/2(3L)
Anthropology in Context: Contemporary Influences
Anthropology in Context: Contemporary Influences
New course description: This course consists of a broad survey of the development of contemporary concepts and theories in anthropology and related fields. Special emphasis will be given to the evolution of such terms and ideas as ethnography, culture, subjectivity, and the shifting models of the relationship individual and group in contemporary theory.
Prerequisite(s): 3 credit units of 300-level ANTH or permission of instructor.
Note: Students with credit for ANTH. 420 may not take this course for credit.

ARCH. 112.3 — 1/2(3L)
The Human Journey Introduction to Archaeology and Biological Anthropology
This course introduces students to the basic principles of archaeology and biological anthropology by examining human evolutionary and cultural development. The course follows the journey of humanity from our earliest bipedal ancestors, through the emergence of anatomically modern humans, to the eventual advent of agriculture and development of complex urban states.
Formerly: ANTH. 112.
Note: Students with previous credit for ANTH. 110 or 112 may not take this course for credit.

ARCH. 244.3 — 1/2(3L)
Archaeology and Cultural Development Ancient Israel and Syria Late Bronze Age to Hellenistic Period
Examines the archaeological reconstruction of cultural development in the regions of ancient Israel and Syria from the Late Bronze Age to the Hellenistic Period, focusing on methodological issues, major sites, and the defining characteristics of the cultures themselves.
Formerly: CLAS. 244
Prerequisite(s): ARCH. 112 or 116.
Note: ARCH. 243 is recommended. Students with credit for CLAS. 237 or 244 may not take this course for credit.

ARCH. 250.3 — 1/2(3L-1P)
Introduction to Archaeological Science
A study of the theory, methods and techniques used by archaeologists in survey, excavation, analysis and interpretation. Emphasizes methods and techniques. Laboratory instruction will be given in the handling of archaeological material and data.
Formerly: ANTH. 250.
Prerequisite(s): ARCH. 112 or 116.

ARCH. 251.3 — 1/2(3L)
Introduction to Archaeological Interpretation
How do archaeologists reconstruct the lives of past peoples from the material remains they left behind? This course introduces the student to the methods, techniques and theoretical models used by archaeologists as they answer questions about our human past and the emergence of modern societies.
Formerly: ANTH. 251.
Prerequisite(s): ARCH. 112 or 116.
ARCH 300.3 — 1/2(3R)
Reading Course
Supervised reading courses in a particular aspect of one of the branches of anthropology not offered in lecture form in this department. A detailed reading program will be designed on an individual basis and will be guided by regular consultation with one or more faculty members. The student is required to prepare a comprehensive proposal for approval by the Head of the Department and make arrangements with a professor to supervise the course. Students must discuss the project with the Department Head before registration.

ARCH 301.3 — 1/2(3R)
Reading Course
Supervised reading courses in a particular aspect of one of the branches of anthropology not offered in lecture form in this department. A detailed reading program will be designed on an individual basis and will be guided by regular consultation with one or more faculty members. The student is required to prepare a comprehensive proposal for approval by the Head of the Department and make arrangements with a professor to supervise the course. Students must discuss the project with the Department Head before registration.

Prerequisite(s): Minimum of 24 undergraduate anthropology/archaeology credit units.
Note: Not more than 3 credit units will be allowed for calculation of honours standing or scholarship recommendation. These courses are not available for graduate credit.

ARCH 344.3 — 1/2(3L)
The Archaeology of Gender
Gender archaeology has been an important aspect of the discipline for almost thirty years. While its earliest practitioners focused on the absence of women in interpretations of past cultures and barriers to women archaeologists in our own culture, gender-oriented approaches to archaeology have expanded to look at feminist approaches to disseminating archaeological information, methodological advances in identifying gendered persons in the archaeological record, theoretical discussions of the relationship between gender and material culture, and archaeological efforts to look at other neglected categories of identity. This course examines all these topics with particular attention to how gender has been integrated into interpretations of human evolution; bioarchaeological and mortuary data; food and craft production; spatial organization of activities and settlements; and historical archaeology. It will also give special consideration to recent efforts to expand gender archaeology beyond women to masculinist and queer perspectives.

Prerequisite(s): ARCH 250 or 251 or permission of the instructor.

ARCH 350.3 — 1/2(3L)
Introduction to Boreal Forest Archaeology
An introduction to the archaeology of the boreal forest region stretching from Quebec to the northern prairie provinces, and including southern Keewatin and adjacent southeastern Mackenzie. The archaeological cultures will be discussed in detail and the methodological and theoretical approaches to the archaeology of this region.

Formerly: ANTH 350.
Prerequisite(s): ARCH 250 or 251.

ARCH 352.3 — 1/2(3L-2P)
Historical Archaeology
Study of the method and theory of historical archaeology in North America with emphasis on recent developments in the field. Topics include critical use of documentary sources, historic artifact and faunal analyses, pattern recognition, frontier archaeology and others will be explored.

Formerly: ANTH 352.
Prerequisite(s): ARCH 250 or 251.

ARCH 353.3 — 1/2(3L)
Plains Archaeology
A survey of the prehistory of the Plains region of North America with emphasis on the recognition and examination of archaeological problems.

Formerly: ANTH 353.
Prerequisite(s): ARCH 250 or 251.

ARCH 354.3 — 1/3L
The Archaeology of Culture Contact
Examines the nature and consequences of early contacts between indigenous peoples and Europeans by utilizing the archaeological record, supplemented by ethnohistorical and historical sources. The primary focus will be North America north of Mexico with comparative case studies from interactions in South Africa, Australia and New Zealand.

Prerequisite(s): ARCH 250 or 251.

ARCH 356.3 — 1/2(2L-1S)
Development of Complex Cultures in Eastern Mediterranean and Near Eastern Regions
A study of the development of complex cultures in the eastern Mediterranean and Near Eastern regions from the hunting and gathering societies of the Upper Palaeolithic period to the establishment of complex urban cultures during the Early Bronze Age, with an emphasis on the geographical areas of ancient Syria and Israel.

Formerly: ANTH 356.
Prerequisite(s): One of ARCH 243, 244, 250 or 251.

ARCH 357.3 — 1/3L
The Archaeology of Prairie Settlement
Based largely on evidence gained from the archaeological record supplemented by input from history, cultural geography and other disciplines, this course will give students the opportunity to explore the ways in which people have adapted to the challenges of living in the prairie environment. Topics such as the archaeological evidence of spatial patterning of settlements, social context of built environment, use and organization of space, gender, ethnicity and the material culture of settlement will be examined. Case studies dealing with the archaeology of indigenous settlement on the plains, the fur trade, Metis, ranching era and homestead era as well as others will form the focus of discussion.

Prerequisite(s): ARCH 250 or ARCH 251 or permission of the instructor.

ARCH 360.3 — 1/2(3L)
Archaeological Resource Management
This course provides a theoretical and methodological introduction to the management and conservation of archaeological sites and materials. We will examine the various facets of cultural resource management on international, national and provincial levels with detailed examination of regulations, procedures, realities and weaknesses of what is essentially applied archaeology in western Canada. Important developments within CRM including increasing involvement of First Nations and the Duty to Consult; concerns regarding sacred objects, sites, and landscapes; human remains; professional ethics; conservation of sites and curation of collections and other topics will be addressed.

Formerly: ANTH 360.
Prerequisite(s): ARCH 250 or 251.

ARCH 361.6 — 1/2(60P)
Archaeological Field Methods
Six weeks of field experience in archaeological research techniques including site survey, excavation, and laboratory analysis. The field location will depend on areas of departmental projects. Offered only in Spring and Summer Session.

Formerly: ANTH 361.
Prerequisite(s): ARCH 250 or 251.
Note: Students with credit for ANTH 261 may not take this course for credit.

ARCH 383.3 — 1/2(1T-80P)
Career Internship in Cultural Resource Management
Designed to provide students with an opportunity to participate first-hand in cultural resource management and regulation, including such activities as site inventory, recording and impact assessment practices, data management and (if done in conjunction with the provincial Heritage Branch) site inventory management, land development screening, impact assessment review and compliance and possible experience in legislative review and First Nations initiatives. Work experience in the museum context of artifact conservation may also be available.

Prerequisite(s): 60 credit units at the university level including Arch. 360.3
Note: Requires 80 hours in total.

ARCH 385.3 — 1/2(3L-1P)
Computer Applications in Archaeology
Explores the interaction between archaeological theory, excavation methods, and modes of analysis, and various computer applications, such as databases, computer assisted mapping and drawing programs, and geographic information systems utilized in archaeological research.

Prerequisite(s): ARCH 250, 251 and an additional 6 credit units of archaeology at the 200/300 level or permission of the department.

ARCH 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
ARCH. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ARCH. 403.3 — 2(4P-.5T)
Analysis and Public Exhibition of Cultural Artifacts
Independent study of a particular cultural artifact or artifact type, culminating in the public presentation of an exhibit in the Museum of Antiquities. Includes practical experience as a volunteer in the Museum.
Permission of the head of ARCH and ANTH required.
Prerequisite(s): 60 credit units at the university.
Note: Students with credit for CMRS. 403 cannot take this course for credit.

ARCH. 452.3 — 1/2(3L)
Selected Topics in Archaeology
Formerly: ANTH. 452.
Prerequisite(s): ARCH. 251 and 3 credit units in senior archaeology.

ARCH. 453.3 — 1/2(3L)
Introduction to Lithic Technology
Basics of stone tool manufacturing and usage, including the analysis of materials, breakage, debitage, typologies, use wear, and Old and New World tool classes. The behavioral and social context of lithic technology will also be emphasized.
Formerly: ANTH. 453.
Prerequisite(s): ARCH. 251 or 250 and a 300-level archaeology course.

ARCH. 457.3 — 1/2(3L)
Introduction to Prehistoric Pottery Technology
A broad perspective on prehistoric pottery including the nature of clays, pottery production and use, the physical properties of pottery and pottery assemblages on the Canadian plains and adjacent boreal forest.
Formerly: ANTH. 457.
Prerequisite(s): ARCH. 251 or 250 and a 300-level archaeology course.

ARCH. 458.6 — 1and2(3L)
Zooarchaeology
The identification of vertebrate faunal remains from archaeological sites including an examination of interpretive procedures and quantitative methods.
Formerly: ANTH. 458.
Prerequisite(s): ARCH. 470 or BIOL. 351 or 361.

ARCH. 459.3 — 1/2(3L-1.5P)
Geoarchaeology
Deals with the basic components of geoarchaeology including: stratigraphy, site formation processes, and landscape reconstruction. Various methods used in paleoenvironmental reconstruction are also discussed focusing on the late Quaternary of North America.
Prerequisite(s): GEOL. 121, 122, and ARCH. 250.
Note: GEOL. 247 is recommended. There will be costs additional to tuition fees.

ARCH. 462.3 — 1/2(3L)
Contemporary Archaeological Theory
Detailed survey of the basic concepts and schools of thought in contemporary archaeology considered on a world-wide basis, with emphasis on Canada and the United States. Theoretical models relating to culture history, settlement, ecological and other approaches are discussed.
Formerly: ANTH. 462.
Prerequisite(s): ARCH. 251 and 3 senior credit units in archaeology.
Note: Students with credit for ANTH. 451 may not take this course for credit.

ARCH. 465.3 — 1/2(3L)
Spatial Analysis of Archaeological Data
Spatial analysis examines the distribution of artifacts, ecofacts and features in the archaeological record and assesses the extent to which the distribution reflects past human activity, social structures, etc. Familiarizes students with theories of spatial analysis and provides practical experience in applying these theories to archaeological data.
Formerly: ANTH. 465.
Prerequisite(s): A 300-level course in archaeology or ARCH. 243 or 244.

ARCH. 466.3 — 1/2(3S)
Archaeology of Domestic Space
Focuses on domestic structures at sites in the Near East and Mediterranean, from the Neolithic to Roman Imperial times. Students will examine the construction and spatial organization of the house, from prehistoric and historic contexts, to analyze the complex interactions between architecture and the functioning of the household.
Prerequisite(s): ARCH. 251 and a 300-level archaeology course.

ARCH. 470.3 — 1/3(3P-3L)
Human Osteology
A comprehensive investigation of the human skeleton. Primary emphasis involves preparing students for archaeological fieldwork and advanced research in biological anthropology.
Formerly: ANTH. 470.
Prerequisite(s): ARCH. 270.

ARCH. 471.3 — 2(3L-3P)
Forensic Anthropology
Concerned with the analysis of human skeletal materials and specifically the identification of age, sex, stature, race and other features. Laboratory sessions supplement lectures.
Formerly: ANTH. 471.
Prerequisite(s): ARCH. 470.

ARCH. 472.3 — 1/2(L)
Palaeopathology
The diagnosis and interpretation of disease in antiquity and the overall health status of earlier human populations. Although skeletal pathology will be emphasized, analysis of mumified tissues and ancient DNA will be included.
Prerequisite(s): ARCH. 470.

ARCH. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ARCH. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ART — ART

College of Arts and Science

ART. 111.6 — 1and2(2T-2P)
Painting I Foundation
Explores the principles and elements of the language of art as related to the process of painting. Discussion and exposure to a variety of tools, materials, and media will be included. Historical reference to stylistic changes and various aesthetic concepts will be explored.
Note: Painting students must provide their own painting materials.

ART. 112.6 — 1and2(3T)
Drawing I Foundation
Introduction to the formal and creative language of drawing. The course emphasizes the development of drawing skills and identification of concepts and methods as they relate to visual perception and expression.
Note: Drawing students must provide their own drawing materials. Students with credit for ART. 181 and 182 may not take ART. 112 for credit.

ART. 113.6 — 1and2(1.5T-1.5P)
Printmaking I Foundation
Explores the conceptual, expressive and technical processes of three main areas of printmaking - lithography, silkscreen and intaglio. Discussion and exposure to a variety of equipment, materials and media will be included.

ART. 136.3 — 1/2(1L-2S)
Extended Media I Foundation
This introductory studio course explores collaborative and interdisciplinary approaches to contemporary art-making. Sessions include lectures and experiential, interactive activities, leading to the development of multidisciplinary projects. All disciplines within the university community are welcome. No background in studio art is necessary.
Note: Students with credit for ART. 135 may not take ART. 136 for credit. This course is not offered every year.

ART. 141.3 — 1/2(1.5T)
Sculpture I Foundation
An introduction to the concepts and issues relating to contemporary sculpture. This combined lecture/studio class encourages a wide exploration of materials while focusing on basic formal and compositional skills.
Note: Sculpture students provide their own materials. Students with credit for ART. 114 may not take ART. 141 for credit. This course can be used toward either studio or Art History requirements in Art degree programs.
ART. 161.3 — 1(3T)
Foundation in Photography I
Introduction to the basic elements of black and white photography. Theory and practical application will be taught through the direct experience with the camera. Black and white film development and printing will be practiced.
Note: Photography students must provide their own cameras and photographic materials. Students with credit for ART. 116 may not take ART. 161 for credit.

ART. 211.6 — 1and2(3T)
Painting and Related Work II
Continued identification of concepts and methods as they relate to the expression, structure, media and skills of pictorial art. Students may experiment with painting media and work from any subject matter. Students must acquaint themselves with the materials of their craft and its correct use in producing technically sound works of art. Emphasizes the student’s artistic growth and development.
Prerequisite(s): ART. 111.
Note: Painting students must provide their own painting materials. Students with credit for ART. 271 or 272 may not take ART. 211 for credit.

ART. 212.6 — 1and2(3T)
Drawing and Related Work II
Continued identification of concepts and methods as they relate to visual perception and expression through drawing, compositional design, graphic media and skills. Use of diverse media coupled with invented and observed form is encouraged.
Prerequisite(s): ART. 112.
Note: Drawing students must provide their own drawing materials. Students with credit for ART. 281 or 282 may not take ART. 212 for credit.

ART. 213.6 — 1and2(2T)
Printmaking II
Exploration at an advanced level of the conceptual, expressive and technical means of four major print methods: Etching, Lithography, the Relief Print and Serigraphy and related photographic methods. Thorough familiarity with the craft of the traditional print methods as well as experimentation will be encouraged.
Prerequisite(s): ART. 113.

ART. 214.6 — 1and2(3T)
Sculpture and Related Work
Continued identification of the concepts, materials and means of sculpture and related three-dimensional form. A range of methods of construction (casting, carving, building, assembling, etc.) and presentation will be encouraged. This includes use of the wood and metal shops and exploration of a wide exploration of materials and combination of materials (such as wood, metal, cement, plaster, found objects, etc.).
Prerequisite(s): ART. 141
Note: Students with credit for ART. 241 and ART. 242 may not receive credit for this course. ART. 214.6 is equivalent to the combination of ART. 241.3 and ART. 242.3.

ART. 216.6 — 1and2(3P)
Photography II
Continued development in the creative language of photography both expressive and technical. Includes black and white, and colour photography, both chemical and digital. Theory and practical application will be approached through assigned projects and independent work.
Prerequisite(s): ART. 161.
Note: Photography students must provide their own cameras and photographic materials.

ART. 235.3 — 1and2(3T)
Digital Imagery
Conceptual and technical development of the student’s work in digital imagery. Adobe Photoshop software will be used to introduce students to image input and photomontage techniques. Critical and theoretical concerns pertaining to the medium will be discussed and related to the assignments.
Note: Students with credit for ART. 336.6 may not take ART. 235.3 for credit.

ART. 236.3 — 1/2(3T)
Extended Media II A
Continued exploration of collaborative and interdisciplinary approaches to contemporary artmaking. Projects will include alternative practices such as video, performance, installation, projection, bookworks, digital media, etc. Reading and discussion of related texts will accompany production of artworks.
Prerequisite(s): Completion of at least two foundation-level studio art classes, or permission of the department.
Note: This course can be used toward either studio or Art History requirements in Art degree programs. This course is not offered every year.

ART. 237.3 — 1/2(3T)
Extended Media II B
Continued exploration of collaborative and interdisciplinary approaches to contemporary artmaking. Projects will include alternative practices such as video, performance, installation, projection, bookworks, digital media, etc. Reading and discussion of related texts will accompany production of artworks.
Prerequisite(s): ART. 236.
Note: This course can be used toward either studio or Art History requirements in Art degree programs.

ART. 241.3 — 1/2(3T)
Sculpture and Related Work II A
Continued identification of the concepts, materials and means of sculpture and related three-dimensional form. Methods of construction (casting, carving, building, assembling, etc.) and presentation, both traditional and experimental, will be encouraged. This includes a wide exploration of materials and combination of materials (such as wood, metal, cement, plaster, found objects, etc.).
Prerequisite(s): ART. 141
Note: Students with credit for ART. 241 may not take ART. 241 for credit.

ART. 242.3 — 1/2(3T)
Sculpture and Related Work II B
Continued identification of the concepts, materials and means of sculpture and related three-dimensional form. Methods of construction (casting, carving, building, assembling, etc.) and presentation, both traditional and experimental, will be encouraged. This includes a wide exploration of materials and combination of materials (such as wood, metal, cement, plaster, found objects, etc.).
Prerequisite(s): ART. 241.
Note: Students with credit for ART. 241 may not take ART. 242 for credit.

ART. 298.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ART. 311.6 — 1and2(3T)
Painting and Related Work III
Continued identification of concepts and methods as they relate to the expression, structure, media and skills of pictorial art. Students may experiment with painting media and work from any subject matter. Students must acquaint themselves with the materials of their craft and its correct use in producing technically sound works of art. Emphasizes the student’s artistic growth and development.
Prerequisite(s): ART. 211.
Note: Students with credit for ART. 371 or 372 may not take ART. 311 for credit.

ART. 312.6 — 1and2(3T)
Drawing and Related Work III
Continued identification of concepts and methods as they relate to visual perception and expression through drawing, compositional design, graphic media and skills. Use of diverse media coupled with invented and observed form is encouraged.
Prerequisite(s): ART. 212.
Note: Students with credit for ART. 381 or 382 may not take ART. 312 for credit.

ART. 313.6 — 1and2(3T)
Printmaking III
Explores the conceptual, expressive and technical processes of all areas of printmaking, including digital media. Advanced concepts and processes are all a part of choices students can make concentrating in two or more distinct areas of printmaking.
Prerequisite(s): ART. 213.

ART. 316.6 — 1and2(3T)
Photography III
Continued development in the creative language of photography both expressive and technical. Includes black and white, and colour photography, both chemical and digital. Theory and practical application will be approached through assigned projects and independent work.
Prerequisite(s): ART. 216.
ART. 338.3 — 1/2(3T)
Extended Media III A
Continued exploration of collaborative and interdisciplinary approaches to contemporary artmaking. Projects will include alternative practices such as video, performance, installation, projection, bookworks, digital media, etc. Reading and discussion of related texts will accompany production of artworks.
Prerequisite(s): Art. 337.
Note: Students with credit for ART. 335 may not take ART. 338 for credit.

ART. 339.3 — 1/2(3T)
Extended Media III B
Continued exploration of collaborative and interdisciplinary approaches to contemporary artmaking. Projects will include alternative practices such as video, performance, installation, projection, bookworks, digital media, etc. Reading and discussion of related texts will accompany production of artworks.
Prerequisite(s): Art. 338.
Note: Students with credit for ART. 335 may not take ART. 339 for credit.

ART. 341.3 — 1/2(3T)
Sculpture and Related Work III A
Continued identification of the concepts, materials and means of sculpture and related three-dimensional form. Methods of construction (casting, carving, building, assembling, etc.) and presentation, both traditional and experimental, will be encouraged. This includes a wide exploration of materials and combination of materials (such as wood, metal, cement, plaster, found objects, etc.).
Prerequisite(s): ART. 241; or ART. 241 and ART. 242.
Note: Students with credit for ART. 314 may not take ART. 341 for credit.

ART. 342.3 — 1/2(3L)
Sculpture and Related Work III B
Continued identification of the concepts, materials and means of sculpture and related three-dimensional form. Methods of construction (casting, carving, building, assembling, etc.) and presentation, both traditional and experimental, will be encouraged. This includes a wide exploration of materials and combination of materials (such as wood, metal, cement, plaster, found objects, etc.).
Prerequisite(s): ART. 341.
Note: Students with credit for ART. 314 may not take ART. 342 for credit.

ART. 350.3 — 1/2(3T)
Hands on Practice of Historical Media
A practical course which explores the techniques of various historical media. Students will gain experience researching and using these older and sometimes forgotten techniques. Media and emphasis will vary depending on the expertise of the instructor.
Prerequisite(s): One of ARTH. 120, 121, ART. 111, or ART. 112 (formerly ART. 181).
Note: This course can be used toward either studio or art history requirements in Art degree programs.

ART. 355.3
Topics in Interdisciplinary Studio Practice
Identification of the concepts, materials, and means of interdisciplinary art-making using a range of media. A wide range and exploration of materials and combinations of mediums will be emphasized, depending on the expertise of the instructor.
Prerequisite(s): 24 credit units ART courses or permission of the instructor.
Note: Topics covered in this course will vary, depending on the instructor. See the subtitle of the class section to determine the specific interdisciplinary topic for each offering.

ART. 356.6
Topics in Interdisciplinary Studio Practice
Identification of the concepts, materials and means of interdisciplinary art-making using a range of media. A wide exploration of materials and combinations of mediums will be emphasized depending on the expertise of the instructor.
Prerequisite(s): 24 credit units ART courses or permission of the instructor.
Note: Topics covered in this course will vary, depending on the instructor. See the subtitle of the class section to determine the specific interdisciplinary topic for each offering.

ART. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
Note: Past courses have included Reconsidering the Spiritual in Contemporary Art; Spectacle: Practices in Art and Drama.

ART. 399.6 — 1and2(3T)
Topics in Visual Art
Topics covered in this course will vary, depending on the instructor. See the subtitle of the class section to determine the specific topic for each offering.
Prerequisite(s): Permission of the instructor
Note: Special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ART. 411.6 — 1and2(3T)
Painting and Related Work IV
Continued identification of concepts and methods as they relate to the expression, structure, media and skills of pictorial art. Students may experiment with painting media and work from any subject matter. Students must acquaint themselves with the materials of their craft and its correct use in producing technically sound works of art. Emphasizes the student's artistic growth and development.
Prerequisite(s): ART. 311.
Note: Students with credit for ART. 471 or 472 may not take ART. 411 for credit.

ART. 412.6 — 1and2(3T)
Drawing and Related Work IV
Continued identification of concepts and methods as they relate to visual perception and expression through drawing, compositional design, graphic media and skills. Use of diverse media coupled with invented and observed form is encouraged.
Prerequisite(s): ART. 312.
Note: Students with credit for ART. 481 or 482 may not take ART. 412 for credit.

ART. 413.6 — 1and2(2T)
Printmaking IV
Exploration at an advanced level of the conceptual, expressive and technical means of four major print methods: Etching, Lithography, the Relief Print and Serigraphy and related photographic and digital methods. Thorough familiarity with the craft of the traditional print methods as well as experimentation will be encouraged.
Prerequisite(s): ART. 313.

ART. 416.6 — 1and2(3P)
Photography IV
Continued development in the creative language of photography both expressive and technical. Includes black and white, and colour photography, both chemical and digital. Theory and practical application will be approached through assigned projects and independent work.
Prerequisite(s): ART. 316.

ART. 421.6 — 1and2(3T)
Special Studies Painting and Related Work I
Focus on the student's independent artistic growth and development in painting.
Permission of the instructor required.
Prerequisite(s): ART. 411.
Note: Painting students must provide their own painting materials. Students with credit for ART. 473 or 474 may not take ART. 421 for credit.

ART. 422.6 — 1and2(3L)
Special Studies Drawing and Related Work I
Focus on the student's independent artistic growth and development as it relates to drawing.
Permission of the instructor required.
Prerequisite(s): ART. 412.
Note: Drawing students must provide their own drawing materials. Students with credit for ART. 483 or 484 may not take ART. 422 for credit.
ART. 423.6 — 1and2(1.5T)
Special Studies Printmaking I
Emphasizes the student's independent growth and development as it relates to printmaking.
Permission of the department required.

ART. 426.6 — 1and2(3T)
Special Studies Photography I
Emphasizes the student's independent growth and development as it relates to photography.
Permission of the department required.

ART. 431.6 — 1and2(3T)
Special Studies Painting and Related Work II
Emphasizes the student's independent artistic growth and development in painting.
Permission of the department required.

ART. 438.3 — 1/2(3T)
Extended Media IV A
Continued exploration of collaborative and interdisciplinary approaches to contemporary artmaking. Projects will include alternative practices such as video, performance, installation, projection, bookworks, etc. Reading and discussion of related texts will accompany production of artworks.
Prerequisite(s): ART. 439.
Note: Students with credit for ART. 435, 445, 455 may not take ART. 438 for credit.

ART. 439.3 — 1/2(3T)
Extended Media IV B
Continued exploration of collaborative and interdisciplinary approaches to contemporary artmaking. Projects will include alternative practices such as video, performance, installation, projection, bookworks, etc. Reading and discussion of related texts will accompany production of artworks.
Prerequisite(s): ART. 438.
Note: Students with credit for ART. 435, 445, 455 may not take ART. 439 for credit.

ART. 441.3 — 1/2(3T)
Sculpture and Related Work A
Continued identification of the concepts, materials and means of sculpture and related three-dimensional form. Methods of construction (casting, carving, building, assembling, etc.) and presentation, both traditional and experimental, will be encouraged. This includes a wide exploration of materials and combination of materials (such as wood, metal, cement, plaster, found objects, etc.).
Prerequisite(s): ART. 342.
Note: Students with credit for ART. 414 may not take ART. 441 for credit.

ART. 442.3 — 1/2(3T)
Sculpture and Related Work B
Continued identification of the concepts, materials and means of sculpture and related three-dimensional form. Methods of construction (casting, carving, building, assembling, etc.) and presentation, both traditional and experimental, will be encouraged. This includes a wide exploration of materials and combination of materials (such as wood, metal, cement, plaster, found objects, etc.).
Prerequisite(s): ART. 441.
Note: Students with credit for ART. 414 may not take ART. 442 for credit.

ART. 495.0 — 2(P)
BFA Exhibition
Students will mount an exhibition of work done during their program of study in the department of Art and Art History. Students must include at least a one-page written "artist's statement" with their exhibition, developed in consultation with a faculty advisor. The exhibition must be of a quality and quality deemed acceptable by faculty and will be assigned a grade of CR (Completed Requirements).
Permission of the department required.
Prerequisite(s): BFA. A student in the final year of program with minimum CPA of 70% and permission of the department.

ART. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ART. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ARTH — ART HISTORY

College of Arts and Science

ARTH. 120.3 — 1(3L)
Art and Visual Culture I
This introductory class explores the production, dissemination and consumption of art, architecture and visual culture up to and including the 1600s. In a series of case studies drawn from differing cultures and geographies both local and global, it will consider a range of questions including: What is the role of the artist, architect and visual culture in society? What are the media, genres and contexts for communicating thought, and how and when do they do it? What does it take for art and visual culture to open up a space for relating to the world we live in, differently? How does the study of art, architecture and visual culture from the 1700s to the present day open up a space for relating to the world we live in, differently? How does the study of art, architecture and visual culture (past and present) generate curiosity, expand understandings, and ask new questions, in the present moment? This class will engage with these and other demanding questions.
Note: Students with credit for ART. 110 or ART. 121 may not take this course for credit.

ARTH. 121.3 — 2(3L)
Art and Visual Culture II
This introductory class explores the production, dissemination and consumption of art, architecture and visual culture from the 1700s to the present day. In a series of case studies drawn from differing cultures and geographies both local and global, it will consider a range of questions including: What is the role of the artist, architect and visual culture in society? What are the media, genres and contexts for communicating thought, and how and when do they engage in cultural, social and political actions (if they do)? What does it take for art and visual culture to open up a space for relating to the world we live in, differently? How does the study of art, architecture and visual culture from the 1700s to the present day open up a space for relating to the world we live in, differently? How does the study of art, architecture and visual culture (past and present) generate curiosity, expand understandings, and ask new questions, in the present moment? This class will engage with these and other demanding questions.
Note: Students with credit for ART. 110 or ART. 121 may not take this course for credit.
ARTH. 256.3 — 1/2(3L)
Introduction to Canadian Art and Architecture I
A survey course which reflects the great change in
Canadian Art and Architecture from ancient
aboriginal art to the origins of modernism in the late
19th Century. In this class we will consider the major
accomplishments of pre-European art, Colonial Art
and Architecture and the growing maturity of 19th
Century cultural production. The art and architecture
of Canada will be considered from the perspective of
both particular outgrowth of this place as well as
sharing similarity with the cultural forms of
neighboring communities and imperial centres of
production. The emergence in Canada of centres of
artistic and craft production, cultural institutions
and art and professional organizations will also be looked at.
Prerequisite(s): ARTH. 120 and. 121.

ARTH. 257.3 — 1and2(3L/S)
Introduction to Canadian Art and Architecture II
A survey course which reflects developments in
Canadian Art and Architecture from the closing years
of the 19th Century through to the present day. In
this course we will consider the major movements in
Canadian Art as well as significant contributors and
social factors, (race, religion, gender, class), which have influenced art of this period.
Formerly: ART. 257
Prerequisite(s): ARTH. 120 and. 121, or a course in the
areas of fine arts or humanities.
Note: Students with credit for ART. 257 will not receive
credit for this course.

ARTH. 258.3 — 2(3L)
Modernity in Art
have these ideas affected our understanding in the
nature of art and the role of the artist in society? How
has Western art production of the past. 100
years affected contemporary visual culture? What is
the role of art and the artist in the 21st Century? This
course will study the visual culture of the 20th century
within the social and historical contexts in
which it was created. It will also examine the critical
vocabularies that have developed around the artistic
and cultural legacy of Modernism.
Prerequisite(s): ARTH. 120 and. 121.

ARTH. 260.3 — 1/2(3L/S)
History and Theory of European
Architecture. 1400 to 1700
An introduction to the architecture of the European
states and their colonies. 1400 to 1700. The
institutional, geographic and social locations of
architectural production will be studied. Issues of
power, nationalism, and class will be examined.
Prerequisite(s): ARTH. 120 and. 121.
Note: Students with credit for ART. 260 or ART. 262 may not take this course for credit. This course is not offered
every year.

ARTH. 261.3 — 1/2(3L/S)
History and Theory of European
Architecture. 1700 to 1900
An introduction to the architecture of the European
states and their colonies. 1700 to 1900. The
institutional, geographic and social locations of
architectural production will be studied. Issues of
power, nationalism, and class will be examined.
Prerequisite(s): ARTH. 120 and. 121.
Note: Students with credit for ART. 261 or ART. 262 may not take this course for credit.

ARTH. 298.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other
special situations. Students interested in these
courses should contact the department for more information.

ARTH. 299.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other
special situations. Students interested in these
courses should contact the department for more information.

ARTH. 308.3 — 1/2(3L)
Art of High Renaissance and Reformation Era. 1500 to 1550
The High Renaissance, Mannerism, and other trends
in European painting and sculpture will be
considered in the context of the Reformation; special
emphasis will be placed upon Raphael, Michelangelo, and Durer.
Formerly: ART. 306
Prerequisite(s): ARTH. 120 and. 121.
Note: Students with credit for ART. 306 or ART. 308 will not receive credit for this course.

ARTH. 309.3 — 1/2(3L)
Art of Late Renaissance. 1550 to 1600
Artistic trends in the second half of the 16th century
will be considered in the context of the Council of
Trent; special emphasis will be placed upon Late
Titian, Tintoretto, Veronese, and the painters of the
Medicean Studio.
Formerly: ART. 306
Prerequisite(s): ARTH. 120 and. 121.
Note: Students with credit for ART. 306 or ART. 309 will not receive credit for this course.

ARTH. 318.3
Exhibition Technique
The Social Construction of Art
Exhibition Technique addresses the evolving network
of social and historical relations that generate
multiple and increasingly hybrid meanings in the
production and reception of art. When Brian
O’Doherty coined the critical term white cube in
the. 1970s, artists were already paying attention to
the circumstances in which their work was presented.
The situation of an artistic gesture is the subject of
this inquiry. Who does an artwork call on to secure its
meanings ñ what are its aesthetic allegiances and
precedents? How do institutional structures, political
currents and popular trends inform the significance
of aesthetic work? Who are the curators? What use is the canon?
Prerequisite(s): ARTH. 120 and ARTH. 121
Note: This course is offered for Art History credit but
students may opt to use this for Studio credit should they
so choose (with selected difference in evaluation criteria).

ARTH. 323.3 — 1/2(3S)
European Colonialism in Visual Arts. 1880 to
1920
Examines how visual culture played a central role in
legitimizing European colonial expansion of the late
19th and early 20th centuries. Photography, painting,
popular prints, postcards, world fairs, and the urban
planning of colonial cities will be studied. Anti-
colonial resistance will also be examined.
Formerly: ART. 323
Prerequisite(s): ARTH. 120 and. 121.
Note: Students with credit for ART. 323 will not receive
credit for this course.

ARTH. 324.3 — 1/2(3L/S)
Early 20th Century Studies in Art and
Architecture. 1900 to 1918
A study of visual culture and architecture in Europe
and North America from. 1900 to the end of World
War I. Issues concerning art institutions, gender, class
and the impact of modernism will be studied.
Prerequisite(s): ARTH. 120 and. 121.
Note: Students with credit for ART. 320 or ART. 324 may not take this course for credit.

ARTH. 325.3 — 1/2(3L/S)
Early 20th Century Studies in Art and
Architecture. 1918 to 1940
A study of visual culture and architecture in Europe
and North America from. 1918 to World War II. Issues
concerning art institutions, nationalism, gender, class
and the impact of modernism will be studied.
Prerequisite(s): ARTH. 120 and. 121.
Note: Students with credit for ART. 320 or ART. 325 may not take this course for credit.

ARTH. 326.3 — 1/2(3L/S)
Studies in Photographic History. 1830 to 1920
An introduction to the study of photography from
the earliest experiments to 1920. Areas include
photographic theory, art photography and
commercial production. Special emphasis will be
placed on photography in a Canadian context.
Prerequisite(s): ARTH. 120 and. 121.
Note: Students with credit for ART. 321 or ART. 326 may not take this course for credit.
This course is not offered every year.

ARTH. 328.3 — 1/2(3L/S)
Studies in Photographic History. 1920 to
Present
An introduction to the study of photography from
1920 to current practices. Areas include recent
critical debates, commercial production and the
impact of new technologies. Special emphasis will be
placed on photography in a Canadian context.
Prerequisite(s): ARTH. 120 and. 121.
Note: Students with credit for ART. 321 or ART. 328 may not take this course for credit.
This course is not offered every year.
ARTH. 329.3 — 1/2(3L)
Imagining the City
How do artists, filmmakers, architects, urban planners and thinkers imagine their urban spaces? What determines their point of view in the cities in which they live? How do they represent their urban imaginaries as contested, multiple and constantly mutating, from Mexico City to Havana, Barcelona to Saskatoon, Johannesburg to Paris and London, etc.? This course will engage critically with these and other demanding questions. Materials to be examined may include painting, photography, architecture, cultural theory, film, new media, popular culture, performance, sculpture, installation art, graffiti and fashion.
Prerequisite(s): 6 credit units of Humanities, Fine Arts, or Social Sciences, or permission of the department.

ARTH. 340.3 — 1(3L)
Contemporary Performance Art Theory and Praxis
What is performance art? How does live art and radical politics intersect, connect or collide? What makes a performance radical or political? Is performance art only about these elements? Which cultural theories must be adapted or discarded in the practice of radical and political performance art practice? What are the conditions through which radical performance art can thrive? This class will allow students to engage critically with these demanding questions.
Prerequisite(s): ARTH. 120.3 and 121.3.
Note: This course may be used towards either studio or Art history degree requirements.

ARTH. 345.3 — 1/2(3L)
Saskatchewan Aboriginal Art History
A survey/seminar course that reviews the art history of Aboriginal peoples of Saskatchewan from the Artefact (pre-1700s), Transitional (1700-1900), to Modern-Contemporary (1900–today) periods. Works to be examined include rock art, architecture, pottery, pipes, shields, drums, painted robes, clothing, moccasins, bags, and mix-media Modern-Contemporary works. The design and subject matter of Aboriginal art are discussed within its specific cultural context of the time period, which includes values and beliefs associated with land, spirituality, mythology, and the influence of significant historical and social transitions. Course content will be reviewed through power point presentations, videos, group discussions and possibly, gallery/ museum field trips and guest artists.
Prerequisite(s): 3 credit units of ARTH or 3 credit units in Native Studies or Aboriginal courses from NS; IPP; ANTH. 224.3; ARCH. 353.3, 454.3, 457.3; HIST. 264.3, 265.3, 266.3, 482.3; POLS. 222.3, 322.3, 323.3, 422.3; SOC. 219.3, 319.3, 341.3; EIND. 380.3, 450.3.

ARTH. 350.3 — 2(3L)
A History of Popular Culture
Visual images of all kinds: from oil painting to pornography. This course will explore the 19th Century origins of popular visual media. It will familiarize students with the development of cultural studies as a discipline and challenge them to do their own primary research into popular culture.
Prerequisite(s): ARTH. 120 and 121.

ARTH. 354.6 — 1/2(3S)
Studies in Contemporary Art
Focuses on selected moments in the rapidly changing field of contemporary art. Bringing together key works of art and stimulating cultural theory, the course covers a wealth of visual forms including painting, drawing, photography, sculpture, printmaking, extended media, video, installation, performance and digital media.
Prerequisite(s): ARTH. 120, 121.

ARTH. 355.3 — 1/2(3L)
Contemporary Aboriginal Art I
This seminar will examine contemporary Aboriginal art, from the mid to late, 1900s. Emphasis will be on Canadian artists.
Prerequisite(s): ARTH. 253 or ARTH. 255 or any 3 credit units ARTH or Aboriginal cognate course from: NS; ANTH. 224.3; ARCH. 353.3, ARCH. 454.3, ARCH. 457.3, ENG. 242.3, ENG. 335.3, ENG. 338.3, HIST. 264.3, HIST. 265.3, HIST. 266.3, HIST. 482.3, POLS. 222.3, POLS. 322.3, POLS. 323.3, POLS. 422.3; SOC. 219.3, SOC. 319.3, SOC. 341.3; OR other course on Aboriginal peoples approved by the course instructor.
Note: This course is not offered every year.

ARTH. 358.3 — 2(3L)
Postmodernism in Art
What is the postmodern project? What constitutes the postmodern in art? How have artists articulated the condition of postmodernity across the categories of nation, gender, race, sexuality and globalization? This course will engage critically with these and other demanding questions. Materials to be examined include painting photography, architecture, cultural theory, film, new media, popular culture, performance, sculpture, installation art and fashion.
Prerequisite(s): ARTH. 120 and 121.

ARTH. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

ARTH. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

ASTR — ASTRONOMY
College of Arts and Science

ASTR. 102.3 — 1(3L-1T)
Introduction to Galaxies and Cosmology
Provides an overview of the large scale structure of the universe on a descriptive level. Topics include the structure of our own galaxy, the local group of galaxies, the classification of galaxies, and galaxy clusters. Galactic and extragalactic distance scales are also introduced. Further topics include the energy and matter content of the observable universe, evidence for dark matter and dark energy, and the history of the universe from the big bang to the present epoch. Contemporary experiments and observations in cosmology are also discussed.
Formerly: Half of ASTR. 101.6
Note(s): Students with credit for ASTR. 101.6 may not take this course for credit.

ASTR. 420.3 — 2(3L/S)
Professional Practices in the History of Art and Visual Culture
For senior students who are interested in practical professional practice experience in careers related to the study of the history of art and visual culture. The course will be divided into four components focusing on careers in Academic: Commercial and Public Gallery management; Architecture; and Collections and Curatorship. Each of these areas of study will be facilitated through seminars, workshops, site visits, invited speakers and assigned projects.
Prerequisite(s): ARTH. 120, 121, at least two senior Art History courses, and/or permission of the instructor.

ASTR. 455.3 — 2(3L/S)
Contemporary Aboriginal Art II
This seminar will examine contemporary Aboriginal art, from the late 1900s to the present day. Emphasis will be on Canadian artists.
Prerequisite(s): ARTH. 253 or ARTH. 255 or any 3 credit units ARTH or Aboriginal cognate course from: NS; ANTH. 224.3; ARCH. 353.3, ARCH. 454.3, ARCH. 457.3, ENG. 242.3, ENG. 335.3, ENG. 338.3, HIST. 264.3, HIST. 265.3, HIST. 266.3, HIST. 482.3, POLS. 222.3, POLS. 322.3, POLS. 323.3, POLS. 422.3; SOC. 219.3, SOC. 319.3, SOC. 341.3; OR other course on Aboriginal peoples approved by the course instructor.
ASTR. 103.3 — 2(3L-1.5P-1T)
Descriptive Introduction to Stellar Astronomy
Provides a first introduction to stellar astronomy. Topics include Kepler's laws, basic telescope properties, classification of stars, determination of stellar distances, stellar energy generation, and basic properties of white dwarfs, supernovae, pulsars and black holes.
Formerly: Half of ASTR. 101.6
Prerequisite(s) or Corequisite(s): PHYS. 115 or GE 124.
Note(s): Students with credit for ASTR. 101.6 may not take this course for credit.

ASTR. 213.3 — 1(2L-4P)
Astronomical Photometry
An introduction to the use of telescopes for photometric studies of variable stars, exoplanets, asteroids and star clusters. Astronomical coordinate systems and techniques for measurement of stellar distances and ages will be discussed. Evening labs will acquaint students with the use of several CCD cameras and telescopes.
Prerequisite(s): One of ASTR. 103, PHYS. 115, 127, or 155.
Note: Students with credit for ASTR. 212 may not take this course for credit. Offered in 2012-2013, then in alternate years.

ASTR. 214.3 — 1(2L-4P)
Astronomical Spectroscopy
A lab-based introduction to stellar spectral classification, spectroscopic parallax measurement, orbit analysis of spectroscopic binaries, redshift measurements of galaxies and CCD imaging techniques. Students will use telescopes to obtain spectroscopic data and will use digital CCD cameras to image star clusters and nebulae.
Prerequisite(s): One of ASTR. 103, PHYS. 115, 127, or 155.
Note: Students with credit for ASTR. 212 may not take this course for credit. Offered in 2013-2014, then in alternate years.

ASTR. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ASTR. 299.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, unresolved cosmological issues, gravitational waves.
Prerequisite(s): PHYS. 252.
Prerequisite(s) or Corequisite(s): MATH. 331 and MATH. 339.

ASTR. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ASTR. 312.3 — 2(3L)
Theoretical Models of Stars and Stellar Evolution
An examination of the successes and failures of stellar evolution theory in tracking the protostar, main-sequence, red giant, supernova, pulsar and black hole stages in the lives of stars. Students will study physical models of stellar structure, binaries, microquasars and nuclear energy generation and investigate the solar neutrino mystery.
Prerequisite(s): ASTR. 103 or 213 or 214; PHYS. 252; MATH. 224 or 226 or 238.

ASTR. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ASTR. 411.3 — 2(3L)
Gravitation and Cosmology
An introduction to general relativity as a theory of gravitation with applications to cosmology. Includes: principles of special and general relativity, tensor calculus in curved spacetime, Einstein's field equations, Schwarzschild solution, experimental tests of general relativity, black holes, standard cosmological models, unresolved cosmological issues, gravitational waves.
Prerequisite(s): PHYS. 252.
Prerequisite(s) or Corequisite(s): MATH. 331 and MATH. 339.

ASTR. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

BAC 11.3 — Business Communications
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 employment type communications, write a group proposal and report, and deliver oral presentations.
Restriction(s): BAC Students.
Prerequisite(s) or Corequisite(s): BAC 11.
Note: Students with credit for COMM. 100.3 will not receive credit for this course.

BAC 15.3 — Human Resource Management
Introduces students to various concepts and tools that will assist in understanding behaviour and enhancing effectiveness in organizations at individual, group and organization-wide levels. Topics include attitudes, values and ethics; compensation, motivation, and rewards; organization structure and processes; discipline; leadership, communication and change. Also provides an applied foundation for work group effectiveness.
Formerly: BAC 27.

BAC 16.3 — Financial Information for Decision Making
Examines the use of financial information for decision making. Topics include management of working capital, financial decisions involving intermediate and long-term financing, and capital budgeting. The course will also introduce students to financial statements with emphasis on understanding the boundaries and limitations of information in the financial statements, and using information in financial statements to help make various decisions about an organization.
Formerly: BAC 13.

BAC 25.3 — Managerial Marketing
Will examine the development of marketing strategy, product policy, distribution channels, management of personal selling, promotion policy, pricing policy, and market planning.
Restriction(s): BAC Students.
Prerequisite(s) or Corequisite(s): BAC 11.

BAC 27.0 — Certificate in Business Administration
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 employment type communications, write a group proposal and report, and deliver oral presentations.
Restriction(s): BAC Students.
Prerequisite(s) or Corequisite(s): BAC 11.
Note: Students with credit for COMM. 100.3 will not receive credit for this course.

BAC 103.3 — 2(3L-1.5P-1T)
Descriptive Introduction to Stellar Astronomy
Provides a first introduction to stellar astronomy. Topics include Kepler's laws, basic telescope properties, classification of stars, determination of stellar distances, stellar energy generation, and basic properties of white dwarfs, supernovae, pulsars and black holes.

BAC 11.3 — Business Communications
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 employment type communications, write a group proposal and report, and deliver oral presentations.

BAC 15.3 — Human Resource Management
Introduces students to various concepts and tools that will assist in understanding behaviour and enhancing effectiveness in organizations at individual, group and organization-wide levels. Topics include attitudes, values and ethics; compensation, motivation, and rewards; organization structure and processes; discipline; leadership, communication and change. Also provides an applied foundation for work group effectiveness.

BAC 16.3 — Financial Information for Decision Making
Examines the use of financial information for decision making. Topics include management of working capital, financial decisions involving intermediate and long-term financing, and capital budgeting. The course will also introduce students to financial statements with emphasis on understanding the boundaries and limitations of information in the financial statements, and using information in financial statements to help make various decisions about an organization.

BAC 25.3 — Managerial Marketing
Will examine the development of marketing strategy, product policy, distribution channels, management of personal selling, promotion policy, pricing policy, and market planning.

BAC 103.3 — 2(3L-1.5P-1T)
Descriptive Introduction to Stellar Astronomy
Provides a first introduction to stellar astronomy. Topics include Kepler's laws, basic telescope properties, classification of stars, determination of stellar distances, stellar energy generation, and basic properties of white dwarfs, supernovae, pulsars and black holes.

BAC 11.3 — Business Communications
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 employment type communications, write a group proposal and report, and deliver oral presentations.

BAC 15.3 — Human Resource Management
Introduces students to various concepts and tools that will assist in understanding behaviour and enhancing effectiveness in organizations at individual, group and organization-wide levels. Topics include attitudes, values and ethics; compensation, motivation, and rewards; organization structure and processes; discipline; leadership, communication and change. Also provides an applied foundation for work group effectiveness.

BAC 16.3 — Financial Information for Decision Making
Examines the use of financial information for decision making. Topics include management of working capital, financial decisions involving intermediate and long-term financing, and capital budgeting. The course will also introduce students to financial statements with emphasis on understanding the boundaries and limitations of information in the financial statements, and using information in financial statements to help make various decisions about an organization.

BAC 25.3 — Managerial Marketing
Will examine the development of marketing strategy, product policy, distribution channels, management of personal selling, promotion policy, pricing policy, and market planning.
BAC 28.3 Organizational Behavior
Will increase the student’s understanding of people’s behaviour in the workplace and the forces that shape that behaviour. Organizational structure, job design, motivation, understanding individual behaviour, working in groups, leadership, power and organizational change are core topics. Theory is augmented with tools and models for working effectively with and through others. Students are challenged to seek opportunities to contribute to an effective work environment through their mind-sets and actions. There is an emphasis on the students examining what they learn about workplace behaviour in view of what they have already experienced. To accomplish this, the format of each class is more a workshop session than a lecture. Students are active participants in their own learning experience and the emphasis is on the practical, albeit with theory as a base.

Note: Students with credit for COMM. 105.3 will not receive credit for this course.

BAC 29.3 Business Law
Intended to provide the student with an understanding and appreciation of the nature of the legal process; the role of the courts and various administrative tribunals in the administration of justice; and the basic rights and obligations of individuals and firms in contract and tort. The law relating to wills, real and personal property, corporations and partnerships is also discussed.

Restriction(s): BAC Students

Note: Students with credit for COMM. 304.3 will not receive credit for this course.

BAC 35.3 Global Environment of Business
Introduction to the global setting in which international business decisions are made. In addition to the basic economic factors, socio-cultural, legal and political considerations are examined. Emphasis is placed on the factors which are relevant to decision making in a wide range of international business functions (i.e. marketing, finance) and international business forms (i.e. export-import, foreign manufacturing, joint ventures).

Restriction(s): BAC Students

Note: Students with credit for COMM. 340.3 will not receive credit for this course.

BAC 37.3 Business Decision Making
Decision making in contemporary organizations is simultaneously impacted by a complex mingling of external policies - from both the private and public sectors - across the local, provincial, national and increasingly international levels. This course introduces students to strategic management frameworks for analysis that will assist them in understanding the impact that external policies have upon organizational decision making.

Restriction(s): BAC Students

Note: Students with credit for COMM. 306.3 will not receive credit for this course.

BAC 38.3 Business Strategy
Will focus on case histories in policy formulation designed to expose the student to a wide range of business problems involving the examination of a company’s opportunities, competencies, aspirations, and responsibilities. The student is then expected to assess the objectives of the company, develop a strategy for achieving them, and point the way toward organizing to get the job done. In beginning to deal with these ‘overall’ problems, the student begins to see how the individual parts of the company (accounting, engineering, production, marketing, administrative organization, people, etc.) have to be coordinated and integrated if the company is to achieve profits. In addition to the above-mentioned “case approach” a computer-based business game may be played.

Restriction(s): BAC Students

Prerequisite(s): BAC 11.3, BAC 14.3, BAC 15.3, BAC 16.3, BAC 25.3, BAC 37.3 and one of BAC 28.3 or BAC 29.3

This course is designed to expose the student to a wide range of business problems involving the examination of a company’s opportunities, competencies, aspirations, and responsibilities. The student is then expected to assess the objectives of the company, develop a strategy for achieving them, and point the way toward organizing to get the job done. In beginning to deal with these ‘overall’ problems, the student begins to see how the individual parts of the company (accounting, engineering, production, marketing, administrative organization, people, etc.) have to be coordinated and integrated if the company is to achieve profits. In addition to the above-mentioned “case approach” a computer-based business game may be played.

Prerequisite(s): BAC 11.3, BAC 14.3, BAC 15.3, BAC 16.3, BAC 25.3, BAC 37.3 and one of BAC 28.3 or BAC 29.3

BINF — BIOINFORMATICS

College of Arts and Science

BINF. 200.3 — 1/2(3L-1.5L)
Introduction to Bioinformatics
An introduction to resources and basic techniques for the analysis of protein and DNA data. Students will become familiar with online DNA and protein structure databases, and with the computational methods available for analyzing data in them and with the application of databases and search tools to biological problems.

Prerequisite(s): CMPT. 111, BMSC. 200.

BINF. 210.3 — 1/2(3L-2T)
Introduction to Bioinformatics Applications
Provides an introduction to Bioinformatics, and experience with select bioinformatics tools and databases currently utilized in the life sciences. Focus is on analysis, storage, and manipulation of genomic and proteomic information. Topics include major databases, common sequence formats, protein and nucleotide sequence alignment, BLAST, genome annotation, microarrays, gene expression, primer design, high-throughput data analysis.

Prerequisite(s): BMSC. 200.3 or equivalent.

Note: Students with credit for BINF. 200 cannot get credit for BINF. 210. Students cannot take BINF. 200 and BINF. 210 concurrently.

BINF. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

BINF. 398.3 — 1/2(3T)
Advanced Techniques in Bioinformatics
Senior students will be introduced to research in an advanced area of bioinformatics through completion of a research project under the supervision of a faculty member proficient in the area. They also will be required to attend research seminars as directed by the course coordinator.

Prerequisite(s): Permission of the Director. Preference will be given to Honours students in the program.

Prerequisite(s) or Corequisite(s): BINF. 300

BINF. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

BIOC — BIOCHEMISTRY

College of Medicine

BIOC. 300.3 — 1(3L)
Information Transfer DNA to Proteins
Deals with the structure and function of nucleic acids at an advanced level. Chromosome anatomy, DNA replication, transcription of genes, and translation of mRNA in both prokaryotes and eukaryotes are covered. The various mechanisms whereby gene expression is regulated are also discussed.

Formerly: BIOC. 230.

Prerequisite(s): BMSC. 220.

Note: Students with credit for BIOC. 230 and. 334 cannot take this course for credit.
BIOC. 310.3 — 1(3L-4P)
Proteins and Enzymes
The properties of proteins and enzymes will be described including structure, kinetics, regulation and modification, antibodies, membrane proteins and glycosylation. Laboratories will provide experience with the determination of structural and functional properties including: ultracentrifugation, chromatography, electrophoresis, kinetics, phosphoamino acid identification, Western blotting, computer-based sequence analysis via the Internet.
Prerequisite(s): BMSC. 240.3 and CHEM. 250.3.
Note: Students with credit for BIOC. 341 or BIOC. 429 cannot take this course for credit.

BIOC. 311.3 — 2(3L-4P)
Introductory Molecular Biology
Basic principles and techniques of nucleic acid manipulations used in molecular biology and biotechnology are presented. Information and practical experience with plasmids, restriction endonucleases, PCR, DNA sequencing, site-directed mutagenesis, cloning, hybridization, analysis of RNA and gene promoters, and protein over-expression are presented. The laboratory component will also include an Internet exercise.
Prerequisite(s): BIOC. 240.3, CHEM. 250.3, and one of BMSC. 320.3 or BIOC. 226.3.
Note: Students with credit for MCIM. 391.3 (formerly MICR. 391.3), MICR. 395, or BIOC. 341 may not take this course for credit.

BIOC. 405.3 — 2(3L)
Structure and Function of Biomolecules
This is a lecture-based course that will focus on the advanced principles of protein structure, stability and biological function. In addition, techniques used to study protein structure will be introduced and illustrated with practical examples and problems.
Prerequisite(s): BIOC. 310.3.
Note: Students with credit for BMST. 305 will not receive credit for BIOC. 405. This course was labeled BMST. 305 until 2013.

BIOC. 412.3 — 2(3L)
Protein Structure Function and Engineering
The details of protein structure, domains, folding and targeting, and modern experimental approaches to protein engineering will be presented. The interrelationship between structure and function in enzyme/protein mechanism and regulation shall be stressed.
Prerequisite(s): BIOC. 310 and CHEM. 250.
Note: Students with credit for BIOC. 334 cannot take this course for credit.

BIOC. 420.3 — 2(3L)
Advanced Plant Biochemistry
Examines topics in plant biochemistry including metabolic and developmental integration, plant interaction with the environment, cell wall biosynthesis, regulation of cell division, synthesis of hormones and elicitor molecules, natural product biochemistry and secondary metabolites, senescence and programmed cell death and plant responses to abiotic and biotic stresses.
Prerequisite(s): PLSC. 340 or BMSC. 200, BMSC. 230 and CHEM. 250 or permission of the Instructor.
Note: Students with credit for BIOC. 433 cannot take this course for credit. Offered in the academic year. 2012/2013 and alternate years thereafter (2014/2015, etc.).

BIOC. 430.3 — 1(3L)
Biochemistry of Cancer
This course provides current knowledge of the biochemical and clinical aspects of human cancer. The course will focus on the importance of oncogenes and tumor suppressor genes and other topics such as tumor formation and metastasis, apoptosis, cancer epigenetics, signal transduction mechanisms, and drug resistance, drug development, and biochemical and clinical importance of tumor models.
Prerequisite(s): BMSC. 230, BMSC. 240 and CHEM. 250.
Note: Offered in the academic year. 2013/2014 and alternate years thereafter (2015/2016, etc.).

BIOC. 435.3 — 1(3L)
Human Metabolism and Disease
Metabolism is the set of chemical reactions that occur in living organisms to produce energy and substrates that are necessary to sustain life. This course will explore cellular and organismal metabolism with a focus on the relationships between key metabolic pathways and genetic and acquired human diseases. Topics will include diabetes and obesity as well as other diseases of amino acid, carbohydrate, lipid and vitamin/cofactor metabolism.
Prerequisite(s): BMSC. 230 and CHEM. 250.

BIOC. 436.3 — 2(3L)
Advanced Molecular Biology
Modern and advanced methods and strategies of nucleic acid manipulation, and characterization of genes in cells and whole organisms are presented. Topics include: PCR applications; delivery of genes into cells and animals, generation of transgenic and gene knockout animals, DNA fingerprinting, and aspects of molecular medicine such as screening approaches for genetic diseases.
Prerequisite(s): BIOC. 311 or MICR. 391 (or 395).

BIOC. 437.3 — 2(3L)
Systems Biology
The importance and potential of systems biology, an over-view of the omics platforms involved, and exemplary disease processes and interventions will be presented in this course. Although cancer and infectious diseases will be the major topics presented, an overall interdisciplinary approach will reveal the diverse disciplines involved.
Prerequisite(s): BIOC. 310 and. 311; 3 credit unit STAT.
Note: Offered in 2013/2014 and alternate years thereafter (2015/2016).

BIOC. 488.3 — 1/2(8P)
Research Approaches in Biochemistry
The student will work on a project available in the research laboratory of a faculty member, under that faculty member's supervision; become familiar with the pertinent research literature; establish procedures, collect, record and analyze experimental results; submit to the department a written report which incorporates the background to the work done, procedures used, results obtained and a discussion of the results and their significance.
Prerequisite(s): BIOC. 310, 311 or MCIM. 391 (formerly MICR. 395) (may be taken concurrently) and permission of the department. Preference will be given to biochemistry honours students.

BIOC. 489.6 — 1and2(8P)
Extended Research Approaches in Biochemistry
The student will: work two terms on a project available in the research laboratory of a faculty member, under that faculty member's supervision; become familiar with the pertinent research literature; establish procedures, collect, record and analyze experimental results; submit to the department a written thesis which incorporates the background to the work done, procedures used, results obtained and a discussion of the results and their significance. The student will defend the thesis findings.
Prerequisite(s): BIOC. 310, 311 or MCIM. 391 (formerly MICR. 395) (may be taken concurrently) and permission of the department. Preference will be given to biochemistry honours students.

BIOC. 490.0 — 1and2(15)
Seminar
The biochemistry seminar series presents a wide range of topics from the life sciences.

BIOL — BIOLOGY

College of Arts and Science

BIOL. 107.6 — 1and2(3L-1.5T)
The Living Earth
Includes geological, biological and ecological studies. It considers the history of the earth and the forces which shape its changing surface, the nature of life and the requirements for life on the earth, heredity and evolution including the record of life preserved in the rocks, organism diversity, and the effects of people on the environment. The lectures will be supplemented by outside reading and by small-group tutorial and demonstration sessions.
Note: Students with credit for BISC. 100 or 101 or BIOL. 108, 110, 120 or 121 or GEOL. 205 or 206 may not take this course for credit. BIOL. 107 is recommended for students in Program Types A, B and D. Students in Program Type C can use BIOL. 107 as a junior elective in program requirement #7.

BIOL. 108.6 — 1and2(3L-3P)
The Living Earth
Follows the same lectures as BIOL. 107 but has a three-hour laboratory each week. Designed for College of Education students in the Elementary Program. There will be a Physical Sciences/ Biological Sciences laboratory devoted to an integrated approach to the environment, using techniques from Physics, Chemistry, Biology and Geology. This laboratory is equivalent to a three-hour practicum.
Note: Students with credit for BISC. 100 or 101 or BIOL. 107, 110, 120 or 121 or GEOL. 205 or 206 may not take this course for credit.

BIOL. 120.3 — 1/2(3L-3P)
The Nature of Life
An introduction to the underlying fundamental aspects of living systems: covering cell biology, genetics and the evolutionary processes which lead to complex, multi-cellular life forms.
Prerequisite(s): Biology 30 or BIOL. 107 or BIOL. 108.
Note: Chemistry 30 is strongly recommended. Students with credit for BIOL. 110 will not receive credit for BIOL. 120.
BIOL. 121.3 — 1/2(3L-3P)

The Diversity of Life

Our world has at least 15 million species, all of which have adapted to particular environments and lifestyles and use energy to grow and reproduce. We examine these processes in representative organisms from all the major groups, and discuss factors influencing changes in biodiversity over time and space.

Prerequisite(s): Biology 30 or BIOL 107 or BIOL 108.

Note: Students with credit for BIOL. 110 will not receive credit for BIOL. 121.

BIOL. 222.3 — 2(3L-3P)

The Living Plant

Will examine the organization of the plant body and how cells, tissues and organs function and contribute to growth, development and reproductive success. The course will deal broadly with plant biology, emphasizing flowering plants, and providing the foundation for senior courses on plants.

Prerequisite(s): BIOL 120.

Note: BIOL 121 is strongly recommended. Students with credit for BIOL 203 or BIOL 217 or HSC 208 or PHYS 208 or BMSC 224 will not receive credit for BIOL 224.

BIOL. 226.3 — 1/2(3L-3P)

Animal Body Systems

Will study the problems all animals overcome in order to survive and reproduce, and the different body systems that must deal with both unique and common environmental challenges.

Prerequisite(s): BIOL 120.

Note: BIOL 121 is strongly recommended. Students with credit for BIOL 203 or BIOL 217 or HSC 208 or PHYS 208 or BMSC 224 will not receive credit for BIOL 224.

BIOL. 228.3 — 1/2(3L-3P)

An Introduction to Ecology and Ecosystems

An introduction to ecological principles and the functioning of aquatic and terrestrial ecosystems. Community structure and dynamics, ecosystem production, populations, energy flow and material recycling will be considered.

Prerequisite(s): BIOL 108 or BIOL 121 or GEOG 120 or 6 credit units in GECL.

Note: Students with credit for BIOL 253 or PLSC 213 will not receive credit for BIOL 228.

BIOL. 298.3 — 1/2(3L)

Special Topics

Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

BIOL. 299.6 — 1and2(3L)

Special Topics

Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

BIOL. 301.3

Critical Issues in Biology

Examines the essential processes and principles of current, topical biological research. The course is designed to enhance the capacity to understand biological concepts, critically evaluate scientific work, develop logical and sound opinions and improve written and oral communication skills.

Prerequisite(s): 15 credit units in Biology.

Note: This course is a requirement in four Year and Honours Biology degrees; students in these programs should consider taking BIOL 301 as early as possible in their program.

BIOL. 302.3 — 1/2(3L-3P)

Evolutionary Processes

A quantitative and conceptual overview of evolutionary mechanisms at different biological scales, including molecular/genetic, population and species levels.

Prerequisite(s): BIOL 120 and BIOL 121, BIOL 226 and 3 senior credit units in BIOL.

Note: This course is a requirement in all Biology degrees and serves as a prerequisite for other senior BIOL courses. Students should consider taking this course no later than their third year. Students with credit for BIOL 263 or BIOL 401 may not take this course for credit.

BIOL. 312.3 — 2(3L-4P)

Life in the North

Provides students with a greater understanding of the complexity of important concepts and issues related to the land and environment of the North. The course focuses on the impacts of ecological and physical changes of northern ecosystems on the peoples. Emphasis is given to the challenges of sustainability of ecosystems in the Circumpolar North, and to the need for long-term and international stewardship.

Prerequisite(s): NORTH 101 and 6 credit units in Science (BIOL 107, 108, 120 and 121 recommended).

Note: Students enrolled in a B.S. Four Year, Three-year or Honours in Biology can use BIOL. 312 only to fulfill degree requirement #7 of the B.S. This course meets the science requirement for Programs A, B, D.

BIOL. 316.3 — 2(3L-3P)

Molecular Genetics of Eukaryotes

Examines advanced topics in the molecular genetics of eukaryotes. Examples of topics covered include epigenetics, RNA interference or post-transcriptional gene silencing, the role of model organisms in scientific research, organelle genetics, and RNA splicing. The lab will involve a combination of hands-on experimentation, computer-based analysis and student presentations.

Prerequisite(s): BIOL 226 (formerly BIOL 211).

BIOL. 317.3 — 1(3L-4P)

Fundamentals of Animal Physiology

Considers physical, chemical and functional aspects of animal cells and tissues. Specifically examines membrane transport mechanisms, bioelectricity and fundamental principles of muscle and nervous system physiology, evolution and plasticity. Cellular mechanisms underlying learning and memory are introduced.

Prerequisite(s): BIOL 224 or BMSC 224 (or HSC 208); CHEM 112; CHEM 115 or CHEM 250 (CHEM 115 recommended).

Note: PHYS 115 and 117 are recommended. Students with credit for BIOL 217 will not receive credit for this course.

Offered on an annual basis.

BIOL. 318.3 — 2(3L-4P)

Comparative Animal Systems Physiology

An in-depth examination of cardiovascular, respiratory, osmoregulatory, digestive, and reproductive system physiology in animals. Examples are drawn from vertebrate and invertebrate models. Emphasizes endocrine and nervous coordination of cellular and whole animal body functions.

Prerequisite(s): BIOL 317 (formerly BIOL 217).

Note: Students with credit for BIOL 218 will not receive credit for BIOL 318.

BIOL. 323.3 — 1(3L-4P)

Plant Systematics and Evolution

Introduces vascular plant diversity. Will include basic principles of plant systematics (methods of classification, description, nomenclature and taxonomic keys), practical experience with the identification of vascular plants, and tempo and patterns of plant speciation and evolution.

Prerequisite(s): BIOL 121 and BIOL 222.

Note: Students are required to make a collection of plants and may wish to begin the collection over the summer prior to the course. In that case, contact the instructor for details and supplies pertaining to the plant collection.

BIOL. 324.3 — 2(3L-3P)

Plants and Human Affairs

A consideration of economically important vascular plants, plant families, plant parts and products used as food, textiles and medicines. The origin, history and domesteciation of plants and major crops, diversification of crops and major centers of agriculture in the world and fundamental roles of plants in human societies are discussed.

Permission of the instructor required.

Prerequisite(s): 6 credit units selected from BIOL 107, 108, 120, 121, or completion of 60 credit units at the university level.

BIOL. 325.3 — 2(3L-4P)

Plant Cells and Tissues

A structural and functional study of the organization of the vascular plant body. The course deals with plant cell organelles, cell types and basic tissue organization. Examination of live material is emphasized in the laboratory.

Prerequisite(s): BIOL 121 and 222.
Biol. 326.3 — (3L-4P) 
Plant Development
Deals with patterns of growth and development of the plant body with special reference to genetic, hormonal and environmental control of developmental processes. Flowering plants are emphasized but also compares evolutionary changes in developmental patterns within other plant groups. Laboratories examine live materials and include tissue culture and other experimentation.
Prerequisite(s): BIOL. 222.
Note: BIOL. 121 is recommended.

Biol. 331.3 — (2L-4P) 
Plant Physiology
Three sections which deal respectively with plant cell physiology, the physiology of the whole plant and the physiology of plant growth and morphogenesis.
Prerequisite(s): BIOL. 222.

Biol. 342.3 — (2L-4P) 
Fungi Environment and People
Often overlooked due to their small size, or wrongly considered to be 'lower plants'; fungi are more closely related to animals. They have major impacts on human health, biotechnology, the environment, and agriculture. We examine fungal diversity, cell biology and development, reproductive and genetic strategies, symbioses, and biotechnology applications in this diverse and successful group.
Prerequisite(s): BIOL. 120 and. 121.
Note: BIOL. 226 (formerly BIOL. 211) and/or ACB. 200 or BMSC. 220 are recommended. There will be an all-day field trip to Emma Lake the second Saturday of the term to collect forest mushrooms.

Biol. 350.3 — (1L-4P) 
Introductory Plant Pathology
A survey of the biology of the major groups of plant pathogens and of the major types of plant diseases with emphasis on symptoms, transmission and control. Approximately equal emphasis is placed on theory and on laboratory work.
Prerequisite(s): BIOL. 121 and. 222 (formerly. 202 or 205).

Biol. 355.3 — (1L-4P) 
Field Course
Introduction to the principles and methods of field biology as applied to southern boreal forest and lake ecosystems. Students will complete an independent field research project. Includes an extended field study during late summer at the Biological Field Station on the Kenderdine Campus at Emma Lake.
Permission of the instructor required.
Prerequisite(s): 21 senior credit units BIOL, and restricted to students with minimum CWA of 70% overall and in Biology.
Note: This course is required in the Honours program in Biology. Enrollment is limited and priority will be given to students admitted to the Honours program in Biology. It is recommended that this course be completed after the third year of study.

Biol. 361.3 — (1L-4P) 
Vertebrate Biology
An introduction to the biology of fishes, amphibians, reptiles, birds and mammals. The course will consist of a brief phylogenetic survey and an examination of the evolution of different vertebrate body systems. Emphasis will be placed on comparative morphology, embryology and physiology.
Prerequisite(s): BIOL. 121 and 224 (formerly BIOL. 203).
Note: Students with credit for BIOL. 351 may not take this course for credit.

Biol. 363.3 — (1L-4P) 
Population Ecology
The theory of population growth, distribution and abundance of organisms.
Prerequisite(s): BIOL. 228 and a course in statistics.
Note: BIOL. 302 is recommended. Students with credit for BIOL. 263 or BIOL. 473 may not take this course for credit.

Biol. 365.3 — (1L-4P) 
Insect Diversity and Evolution
Surveys insects and their close relatives based on morphology and taxonomy. Focuses on insect natural history, comparative anatomy and classification. Representative types examined in the laboratory provide an understanding of current trends in insect taxonomy and phylogeny.
Prerequisite(s): BIOL. 120 and. 121 and 3 additional credit units of senior BIOL courses, or permission of the instructor.
Note: Students are required to make a collection of insects and may wish to begin the collection over the summer prior to the course. In that case, contact the instructor for details.

Biol. 373.3 — (1L-3P) 
Community Ecology
Examines physical and biotic factors shaping species assemblages over space and time, especially processes controlling plant communities (e.g. environmental factors, disturbance, and biotic interactions). Explores current issues in community ecology, such as impacts of diversity loss, invasive species, and environmental change. Laboratories focus on experimental design, data collection and analysis.
Prerequisite(s): BIOL. 228 or PLSC. 213; one of STAT. 245, STAT. 246, or PLSC. 214.

Biol. 398.3 — (1/2L-35) 
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

Biol. 399.6 — (1and2-35) 
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

Biol. 410.3 — (2L-1L-6P) 
Functional Genomics
A practical course that will provide students with the background, experience and understanding of modern molecular biology as it pertains to the biological sciences. Emphasis will be placed on utilizing large, publicly available datasets to generate and test hypotheses about how organisms function at the molecular level. A single research theme will be used in the lab for investigation of biological processes in model organisms, extending into non-model species.
Permission of the instructor required.
Prerequisite(s): BIOL. 316 or BIOL. 311 or MCIM. 391.
Note: BIOL. 301 is recommended.

Biol. 421.3 — (2L-1L-6P) 
Grasses and Grasslands
A study of the morphology, systematics, biogeography, systematics and bioecology of the grasses and other graminoids, and ecology of grasslands. Laboratory emphasis is on the structure and taxonomy of grasses.
Prerequisite(s): BIOL. 121 and. 222 (formerly. 202 or 205); or permission of the instructor.
BIOL. 430.3 — 2(3L-4P)
Neurobiology of Behaviour
Studies how activities in an animal's nervous systems produces and modifies natural behaviour. Topics in the course include: the detection and coding of information from the environment, integration of information for decision-making, generation of motor patterns that underlie behaviour, and general constraints on form and function of neural circuits.
Prerequisite(s): BIOL. 317 or HSC. 350; or permission of instructor.

BIOL. 436.3 — 2(3L-3P)
Animal Parasitology
Deals with helminths, arthropods and protozoa of people, domestic and wild animals, and birds. Examples from these parasite and host types will be used to illustrate important concepts, including basic structure and function, life cycles, ecology, biogeography, individual and population level host-parasite-environment relationships, epizootiology and parasite control strategies.
Prerequisite(s): BIOL. 121 and 9 additional credit units of senior BIOL courses or permission of the instructor.
Note: BIOL. 302 (formerly BIOL. 401) is recommended.

BIOL. 440.3 — 1/2(3L-3P)
Photobiology
An introduction to light interactions with biological systems. The class will examine the evolution of biological pigments and photoreceptor systems. Emphasis will be placed on how plants and animals detect changes in their environment based on light cues and how they respond at the physiological level. Examples of topics which will be explored are the evolution of vision, photosynthetic energy production, circadian rhythms, phototoxicity and bioluminescence.
Prerequisite(s): BIOL. 120 and 15 credit units of senior BIOL or permission of the instructor.
Note: Students with credit for BIOL. 498: Photobiology may not take BIOL. 440 for credit.

BIOL. 451.3 — 1(3L-4P)
Ichthyology
The biology of fishes including their morphological diversity, physiology, behaviour and ecology, and their management and utilization.
Prerequisite(s): BIOL. 121 and 224 (formerly BIOL. 203) and BIOL. 228 (formerly BIOL. 253).
Note: BIOL. 302 (formerly BIOL. 401) is recommended.

BIOL. 455.3 — 2(3L-4P)
Mammal Diversity and Evolution
Introduction to local and world mammal faunas including living and extinct taxa. Evolution, behaviour, ecology, morphology, phylogeny, and physiology will be emphasized in lectures. Laboratories will be concerned with classification, identification, and anatomical adaptations.
Prerequisite(s): BIOL. 121 and 224 (formerly BIOL. 203) and BIOL. 228 (formerly BIOL. 253).
Note: BIOL. 302 (formerly BIOL. 401) is recommended.

BIOL. 458.3 — 1(3L-4P)
Ornithology
Introduction to the diversity of birds of the world. Lecture material focuses on evolution, ecology, behaviour, physiology and conservation. Laboratories focus on morphological diversity and taxonomy.
Prerequisite(s): BIOL. 121 and 224 (formerly BIOL. 203) and BIOL. 228 (formerly BIOL. 253).
Note: BIOL. 302 (formerly. 401) is recommended.

BIOL. 466.3 — 1(3L-4P)
Aquatic Insects
Identification of aquatic insects, discussions of current literature, field trips, collections, and laboratory work.
Prerequisite(s): BIOL. 121 and 224 (formerly BIOL. 203) and BIOL. 228 (formerly BIOL. 253); or permission of the instructor.
Note: Students are advised to contact the instructor about making a collection of insects the summer before enrolling in the course.

BIOL. 470.3 — 1(3L-4P)
Conservation Biology
An introduction to the theoretical and scientific foundation of conservation biology as applied to animals and plants. Course material will cover elements of population, community and landscape ecology as they apply to conservation challenges. Labs will include measuring biodiversity and analysis of current conservation issues. Field trips are compulsory.
Prerequisite(s): BIOL. 228 (formerly BIOL. 253) and BIOL. 302 (formerly. 263 or 401); or permission of the instructor.
Note: There will be costs for a field trip in addition to tuition fees.

BIOL. 472.3 — 2(3L-4P)
Animal Behaviour
Fundamental concepts in animal behaviour. An introduction to the form, control and adaptive significance of animal behaviour.
Prerequisite(s): BIOL. 228 (formerly BIOL. 253) and BIOL. 302 (formerly. 263 or 401).

BIOL. 475.3 — 1/2(3L-3P)
Ecological Toxicology
An introduction to the principles of ecological toxicology, including: population modeling, experimental design and interpretation of field studies, and contaminant impact assessment on populations, communities and ecosystems. Computer laboratory exercises will be used to model populations and ecosystems and analyze changes in populations and communities resulting from contaminant impacts.
Prerequisite(s): BIOL. 120 and 121 (formerly BIOL. 110) and BIOL. 228 (formerly BIOL. 253) and 6 additional credit units of senior BIOL courses and a course in statistics; or permission of the instructor.
Note: TOX. 301 is recommended.

BIOL. 480.3 — 1/2(6P)
Biology Research
The student will work on a laboratory or field project under the supervision of a faculty member. Before beginning, the student must obtain a supervisor and then submit an outline of the project for approval by the Head of the Department. At the end of the project, the student will submit to the department a written report in thesis form.

Permission of the department required.
Prerequisite(s): BIOL. 301 (may be taken concurrently). Restricted to fourth year biology students with a Cumulative Weighted Average of 70% or better.
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.

BIOL. 481.6 — 1and2(6P)
Extended Research Project in Biology
Laboratory and/or field project under the supervision of a faculty member. Student must obtain a supervisor who submits course outline (syllabus) to the Department Head. Written reports and an oral presentation will be required.

Permission of the department required.
Prerequisite(s): BIOL. 301 (may be taken concurrently). Restricted to fourth year Biology students with a minimum C.W.A. of 70% in Biology.
Attention: Students must consult and discuss their research interests with a potential supervisor before registering for this course, preferably in the spring or early summer.
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.

BIOL. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

BIOL. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
BLE — BIOLOGICAL ENGINEERING

College of Engineering

BLE. 205.3 — 2(3L-3P)
Agricultural Machinery Management
An introduction to agricultural field equipment used for grain and forage production in Western Canada. Emphasis is placed on optimal selection, operation and performance, and management of farm machinery. Equipment studied includes: tractors, tillage, seeding, chemical application, forage harvesting, and grain harvesting equipment. Laboratories will allow students to gain a practical understanding of equipment design and function.
Formerly: ABE. 205
Restriction(s): Only open to College of Agriculture and Bioresources.
Note: Students with credit for ABE 51, ABE. 205, or ABE. 305 may not take this course for credit.

BLE. 212.3 — 1(3L-3P)
Physical Principles of Plant Biosystems
An introduction to physical concepts governing movement and storage of nutrients, energy, and water within the plant biosystem (soil-plant-atmosphere). Topics include: physical properties of soil, biogeochemical cycling, plant physiology, and water and energy transport within the plant biosystem. Subject material will provide the foundation for future engineering courses involving biosystems.
Formerly: ABE. 212
Prerequisite(s) or Corequisite(s): BIOL. 120.
Note: Students with credit for EVSC. 220, SLSC. 240, or ABE. 212 cannot take this class for credit.

BLE. 261.3 — 1(3L-3P)
Post Harvest Management of Agricultural Crops
Will study the principles and practice of post harvest management of agricultural crops. Topics will include handling, storing, drying, cooling, cleaning and grading of agricultural crops including cereals, oilseeds, pulse, forage crops and fruit and vegetable crops. The course will examine the physiological process of crops in storage and the design and management of physical facilities and systems required to maintain crop quality and value.
Formerly: ABE. 261
Restriction(s): Only open to College of Agriculture and Bioresources.
Note: Students with credit for ABE 61 or ABE. 261 may not take this course for credit.

BLE. 275.3 — 2(3L-3P)
Applications in Precision Agriculture
Will study the theory and application of Precision Agriculture techniques that allow the student to acquire and manipulate agronomic information. The principles of Global Positioning Systems and their limitations will be introduced. Geographical Information System software will be used to create maps for decision-making, information-sharing, and controlling variable rate application equipment.
Formerly: ABE. 275
Restriction(s): Open to all colleges.
Note: Students with credit for ABE 75.6 or ABE. 275 may not take this course for credit.

BLE. 295.3 — 1(3L-3T)
Introduction to Biosystems Engineering
Introduction to the discipline of Biological Engineering and to design principles and practices. Students will develop logical problem-solving skills through solution of problems involving energy and mass balances, bioprocessing, instrumentation and machinery systems, water and soil resources and waste management. Extensive use is made of computer software for calculation and graphical presentation of results.
Formerly: ABE. 295
Prerequisite(s): GE 120 (taken) or (GE 111 (taken) and GE 121 (taken)).
Note: Students with credit for ABE. 295 may not take this course for credit.

BLE. 303.3 — 2(3L-3P)
Principles of Food and Bioproducts Engineering
Studies basic systems used in food processing including facilities, power requirements, equipment for primary and secondary processes. The specific unit operations and equipment studies include pumps and blowers, heat exchangers, drying, freezing, absorption, distillation, size reduction, and mixing. Discusses materials of construction for food process equipment and the layout of plant equipment.
Formerly: ABE. 303
Restriction(s): Open to all Colleges with the exception of the College of Engineering.
Note: Students with credit for ABE. 303 may not take this course for credit.

BLE. 307.3 — 1(3L-3P)
Agricultural Building Systems
Examines the layout of farm buildings on the farmstead and the functional design of buildings used in crop and animal production, including systems analysis and materials handling. Functional requirements of construction, space and environment are emphasized.
Formerly: ABE. 307
Restriction(s): Only open to College of Agriculture and Bioresources.
Note: Students with credit for ABE. 307 may not take this course for credit.

BLE. 309.3 — 2(3L-3P)
Water Management
Sustainable irrigation projects require management of irrigation water for profitable crop production without negatively altering the soil or depleting the source water resource. Water management topics discussed pertain to irrigation in the western Canadian prairie setting. Techniques of applying irrigation water to the soil-plant-atmosphere continuum to increase productivity and profitability are evaluated. Examples range from totally enclosed environments of greenhouses to the extra water in addition to natural precipitation of field crops. An appreciation is developed that irrigation projects increase regional growth and prosperity while operating within the bounds of societal control and regulation. Upon completion of this course, the student will be able to organize sustainable irrigation projects, choose the irrigation equipment required and recommend how to operate it.
Formerly: ABE. 309
Restriction(s): Only open to College of Agriculture and Bioresources.
Note: Students with credit for ABE. 79 or ABE. 309 will not receive credit for this course.

BLE. 311.3 — 1(3L-1.5T)
Mathematical Methods
A study of the application of mathematics to engineering problems involving biological systems. Students will develop proficiency in using the control volume technique to develop models describing mechanical, fluid and thermal systems. Analytical solutions are derived for commonly encountered ordinary and partial differential equations. System response and modelling aspects will be studied. An introduction is given to numerical procedures for solution of initial value and boundary value problems. Topics include: Laplace transforms, Linear systems, use of matrices to solve both singular and nonsingular systems of linear equations, Eigenvalues and Eigenvectors, Fourier Series, introduction to numerical methods and introduction to MATLAB.
Formerly: ABE. 311
Prerequisite(s): MATH. 224 (taken).
Note: Students with credit for ABE. 311 may not take this course for credit.

BLE. 312.3 — 1(3L-3P)
Electrical Power
Familiarization with electrical distribution systems, safety, and electrical machines. Topics include steady-state LRC Circuits, DC power, and three-phase and single-phase AC power; electric motors and generators; and introduction to Canadian Electrical Code.
Formerly: ABE. 312
Prerequisite(s): PHYS. 155 (taken).
Note: Students with credit for EE. 201 or EE. 204 or ABE. 312 cannot take this class for credit.

BLE. 313.3 — 2(3L-3P)
Instrumentation
Static and dynamic characteristics of transducers and circuits used in the measurement of variables such as force, pressure, strain, temperature, humidity and electromagnetic radiation. Introduction to data loggers and digital data acquisition. The course emphasizes the importance of understanding the fundamental principles of transducers and associated circuitry from the standpoint of both design and selection of measurement systems.
Formerly: ABE. 313
Prerequisite(s): (BLE. 311 or ME. 321), PHYS. 155 and (BLE. 312 (taken) or EE. 204 (taken)).
Note: Students with credit for ABE. 313 may not take this course for credit.
BLE. 323.3 — 1(3L-3P alt weeks)
Properties of Materials in Biosystems
Familiarization with the terminology and definitions of physical properties of biological materials, including size, shape and density; water content, equilibrium moisture content, water activity, capillary tension, chemical potential and turbidity; chemical and molecular composition; viscosity, viscoelastic, thermal, frictional, hydro- and aerodynamic, optical, electrical, and electromagnetic properties. Description of typical measurement methods and equipment for determination of material properties. Students develop an ability to identify and determine the physical properties of biological materials for analysis and design of agricultural, food, and biological systems and to indicate the uncertainty in property measurements and responsibly apply uncertainty in property values to engineering calculations. Emphasis is on describing the importance of biological material properties to engineering systems, and to understanding interactions between living and non-living components of biological systems.
Formerly: ABE. 323
Prerequisite(s): BIOL. 120 or BLE. 211.
Prerequisite(s) or Corequisite(s): GE 210.
Note: Students with credit for ABE. 325 may not take this course for credit.

BLE. 324.3 — 2(3L-1.5P-1.5T)
Mechanics of Materials in Biosystems
Analysis of the mechanical properties of manufacturing and biological materials. Topics include load analysis, stress-strain responses, deformation, contact stresses, static failure theories and fatigue analysis, turgor and micro-mechanical cell models, visco-elastic relations and impact loading. Course includes an introduction to solid modeling in engineering design.
Formerly: ABE. 324
Prerequisite(s): BLE. 323 and GE 213.
Note: Students with credit for ABE. 324 may not take this course for credit.

BLE. 327.3 — 2(3L-3P alt weeks)
Transport Processes in Biosystems
A unified approach to transport of energy and mass in biological and environmental processes. Emphasis is placed on the formulation and solution of mathematical models to represent heat and mass transfer in indoor and outdoor environments, in plant and mammalian systems, and for industrial processing of food and biomaterials. Students will apply analytical and numerical techniques to solve heat transfer problems involving steady state and transient heat conduction, convection and radiation, heat transfer with phase change, and mass transfer problems involving steady state and transient diffusion/dispersion and convection.
Formerly: ABE. 327
Prerequisite(s): BLE. 311 and CHE. 210 and ME 227.
Note: Students with credit for ABE. 327 may not take this course for credit.

BLE. 398.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special circumstances to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
Formerly: ABE. 398

BLE. 422.3 — 1(3L-3T alt weeks)
Modeling of Biosystems
The student will be introduced to the concept of computer simulation as an analytical tool for understanding, designing and testing biology-related systems. Content includes introduction to systems modeling, classification of models, elements of dynamic simulation models, analytical models based on equilibrium, modeling growth and population dynamics, compartment models, feedback in biological systems and feedback mechanisms and stability of biological systems. Mathematical optimization and reliability analysis techniques are introduced.
Formerly: ABE. 422
Prerequisite(s): BLE. 311, BLE. 324 and BLE. 327.
Note: Students with credit for ABE. 422 cannot receive credit for BLE. 422.

BLE. 431.3 — 1(3L-3P alt weeks)
Irrigation System Design
Engineering and hydrologic principles are applied to design of modern irrigation and drainage systems. Soil-plant-water relationships important to understanding water needs are emphasized.
Formerly: ABE. 431
Prerequisite(s): CHE. 210 and either (BLE. 212 or BIOL. 120 and SLSC. 240).
Note: Students with credit for ABE. 431 cannot receive credit for BLE. 431.

BLE. 432.3 — 1(3L-1.5T)
Soil and Water Conservation
Land degradation and associated management practices within land biosource systems are studied. Emphasis is placed upon prairie agricultural systems, with examples within other systems (e.g. forestry, wetlands) also considered. Major topics include wind and water erosion, soil compaction, soil carbon change, acidification, sodic soils, salinization, and desertification.
Formerly: ABE. 432
Prerequisite(s): BLE. 212 or (BIOL. 120 and CHEM. 115 and GEOL. 121) or (BIOL. 120 and 6 credit units from CHEM. 100-299, GEOG. 100-299, EYSC. 210).
Note: Students with credit for ABE. 432 cannot receive credit for BLE. 432.

BLE. 441.3 — 2(3L-3P alt weeks)
Design of Enclosed Environments
Emphasizes the physical aspects of environment control systems for agricultural buildings. The student will experience engineering designs involving greenhouses, animal shelters and vegetable storages. Emphasis is on solution of real-world problems, which depend upon making reasonable assumptions, integrating knowledge from more than one source, and interpreting mathematical results in terms of physical systems. Some use is made of computer programs. Laboratory periods are used for tours to buildings to observe environment control systems and for work on group design projects.
Formerly: ABE. 441
Prerequisite(s): BLE. 327 or ME 327.
Note: Students with credit for ABE. 441 cannot receive credit for BLE. 441.

BLE. 451.3 — 2(3L-1.5P)
Design of Agricultural Machinery Systems
Study of agricultural and other off-road machinery with special attention to the functional design requirements of various machine operations, cost analysis, machinery selection and testing. Topics include tillage force analysis, tillage tools, mechanisms for metering and applying seed, fertilizer and pest control chemicals, harvesting methods and machinery, hydraulic and other methods of transmitting power and controlling machines, application of computer aided design and finite element method in design analysis.
Formerly: ABE. 451
Prerequisite(s): BLE. 324.
Note: Students with credit for ABE. 451 cannot receive credit for BLE. 451. Please check with the department for course availability.

BLE. 462.3 — 2(3L-3P alt weeks)
Biological Materials Handling
A study of the processes involved in conveying, storing, drying, cleaning and sorting of biological materials utilized for food, feed, fiber and fuel. Analysis and design of machines used for conveying bulk solids and liquids. The theory and practice of drying biological materials is studied as well as moisture and quality control in storage and transport.
Formerly: ABE. 462
Prerequisite(s): BLE. 323 and BLE. 327.
Note: Students with credit for ABE. 462 cannot receive credit for BLE. 462.

BLE. 475.3 — 1and2(3L-1.5P)
Off Highway Equipment Design
This class involves the design, construction and testing of an off highway prototype. Students will gain experience in working with a design group, machine design, setting design constraints, component testing, fabrication, machine performance testing, design report preparation and business management. Students taking this course for credit will be required to assume responsibility for one aspect of the machine and prepare all design documentation, operating and safety procedures and component testing reports. Students are also required to liaison with industrial suppliers and sponsors of the program. Solid Works graphics design software is used extensively.
Formerly: ABE. 475
Prerequisite(s) or Corequisite(s): BLE. 495, ME 495 or EE 495.
Note: Students with credit for ABE. 475 cannot receive credit for BLE. 475.

BLE. 481.3 — 2(3L-3P alt weeks)
Sustainability and Environmental Assessment
A study of the principles of sustainable development and the process of environmental impact assessment with emphasis on Prairie agricultural and industrial settings. Case studies are used to illustrate the EIA process in engineering design of environmental control measures. Concepts of integrated resource management are analyzed as the basis for making linkages between protecting the environment, economic development and public participation.
Formerly: ABE. 481
Prerequisite(s): 90 credit units from the institution.
Note: Students with credit for ABE. 481 may not take this course for credit.
BLE. 482.3 — 1(3L-3P alt weeks)
Waste Management and Utilization
The design of systems for processing and utilization of by-products generated by the bioresource industries, including primary agriculture, food processing, and forestry. Pollution problems caused by these industries are examined and opportunities for recycling and utilization of by-products are identified. Emphasis is on land as opposed to surface water as a receptor of organic by-products. A comprehensive strategy is developed for approaching pollution control and by-product utilization problems. Students are expected to integrate sociological, regulatory, economic, biochemical and technological considerations in exploring waste treatment and utilization options. Students work in teams to conduct an industrial waste survey and a feasibility study of waste reduction and enhanced waste utilization for a specific local industry, farm, or processing plant. Natural treatment/processing systems are emphasized and topics may include site assessment, composting, cogeneration, and wetlands treatment.
Formerly: ABE. 482
Prerequisite(s) or Corequisite(s): EN Three Year Common Core and 18 credit units from EN Senior Courses.
Note: Students with credit for ABE. 482 may not take this course for credit.

BLE. 495.6 — 1and2(3L-3T alt weeks)
Design Capstone
In the first part of the course (Term 1), design is presented as both art and science, where solutions are developed using creative design processes that include analysis, synthesis and iterative decision making. Students explicitly define design problems, goals, objectives and constraints, complete an information search, and propose a plan for the analysis and specification of the design solution. A presentation of the design problem and the proposed approach to the design solution will be presented in a seminar to the department. The second part of the course (Term 2) is self-directed. Students perform the analysis associated with the design problem and are able to specify a design solution at the end of the course including an economic analysis. Students must submit a comprehensive report, describing the design solution. The final design solution is also presented to the faculty and staff of the department in the form of poster and oral presentations.
Formerly: ABE. 395.
Prerequisite(s): BCM. 300.
Prerequisite(s) or Corequisite(s): BLE. 422 and 6 credit units from BLE. 400 - 499.
Note: Students with credit for ABE. 395 or ABE. 495 may not take this course for credit.

BLE. 498.3 — 1/2(3L-1.5P)
Special Topics
Offered occasionally to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
Formerly: ABE. 498

BMSC — BIOMEDICAL SCIENCES

College of Medicine

BMSC. 200.3 — 1/2(3L)
Biomolecules
An introduction to the structures, general properties, and functions of simple and complex biomolecules: amino acids, peptides, proteins, enzymes, carbohydrates, lipids and nucleic acids as well as membranes and solute transport.
Prerequisite(s): CHEM. 112. Biology 30.
Note: Students with credit for BIOL. 200 will not receive credit for BMSC. 200.

BMSC. 210.3 — 2(3L)
Microbiology
An introduction to the structure, physiology, genetics and pathogenicity of microorganisms. Topics include the structure and composition of bacteria and viruses, bacterial growth, genetics, and regulation, the role of microorganisms in disease, and an introduction to the immune system.
Prerequisite(s): BIOL. 120, BMSC. 200.
Note: Students with credit for MCIM. 214 or FAMS. 212 will not receive credit for BMSC. 210.

BMSC. 220.3 — 1(3L)
Cell Biology
An introduction to the biology of eukaryotic cells. Topics include organization of eukaryotic chromosomes; the flow of genetic information from nucleus to cytoplasm; cellular membranes and organelles; control of cell division; and signaling between cells. Contrasts between eukaryotic cells and prokaryotic microbial cells will be discussed, as well as distinctions between plant and animal cells.
Prerequisite(s): BIOL. 120.
Prerequisite(s) or Corequisite(s): BMSC. 200.
Note: Students with credit for ACB. 200 will not receive credit for BMSC. 220.

BMSC. 224.3 — 1/2(3L-3P)
Animal Body Systems
Studies the problems all animals have to overcome in order to survive and reproduce, and the different body systems that must deal with both unique and common environmental challenges.
Prerequisite(s): BIOL. 120.
Note: Students with credit for BIOL. 203 or BIOL. 217 or BIOL. 224 or HSC. 208 or PSYH. 208 will not receive credit for BMSC. 224.

BMSC. 230.3 — 1/2(3L)
Metabolism
An introduction to the thermodynamic aspects of energy metabolism and the principles of anabolic and catabolic metabolic pathways. Emphasis will be placed on the overall purpose of the major pathways, the precursor molecules leading into these pathways, the important pathway products and the basic types of control that regulate metabolic flux. Examples in prokaryotic systems will be provided where possible.
Prerequisite(s): BIOL. 120, BMSC. 200.
Note: Students with credit for BIOL. 211 will not receive credit for BMSC. 230.

BMSC. 240.3 — 1/2(3L-4P)
Laboratory Techniques
Provides an introduction to the theory and application of basic techniques in biochemistry, cell biology and microbiology which will serve as a foundation for upper year specialization courses.
Prerequisite(s): CHEM. 112.
Prerequisite(s) or Corequisite(s): BMSC. 200.
Note: Students with credit for BIOL. 212 cannot take this course for credit.

BMST — BIOMOLECULAR STRUCTURE STUDIES

College of Arts and Science

BMST. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

BMST. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

BMST. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

BMST. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

BMST. 406.3 — 1(3P)
Advanced Biomolecular Techniques
Provides an introduction to a number of techniques that are commonly used for studying biological macromolecules. This is a laboratory course to complement the knowledge gained in BMST. 305. Students will become familiar with various biophysical techniques for studying biomolecular properties and activities.
Prerequisite(s): MATH. 110.3 or MATH. 125.3 and one of BMST. 305.3 or BIOL. 310.3 or CHEM. 353.3.

BMST. 408.3 — 2(3L)
Macromolecular Structure Determination
Provides students with a basic understanding of techniques used to probe the structures of macromolecules. The core focus of the course will be X-ray crystallography and nuclear magnetic resonance spectroscopy (NMR) with applications to protein and nucleic acid structure determination. Cryo-electron microscopy will also be discussed.
Prerequisite(s): MATH. 110.3 or MATH. 125.3 and one of BMST. 305.3 or BIOL. 310.3 or CHEM. 353.3.
BMST. 485.6 — 1/2(8‑9P)
Research in Biomolecular Structure Studies
Students will work on a research project for two terms in the laboratory of a faculty member that is actively involved in structure-based studies of biomolecules. They will gain experience in experimental procedures, data analysis, and preparation of both a written report and oral presentation on their scientific findings.
Prerequisite(s): BMST. 406 and 408, which may be taken concurrently, and permission of the Course Coordinator. Preference will be given to Biomolecular Structure honours students.

BMST. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

BMST. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

BPBE — BIORESOURCE POLICY

College of Agriculture and Bioresources

BPBE. 230.3 — 1/2(3L)
Innovation and Entrepreneurship
Explores the historical and economic roles of entrepreneurship in the agricultural sector of the Canadian economy. Included in this will be a discussion of the important role that entrepreneurship has played in the growth of the prairie economy. Students will be exposed to theory and practice of entrepreneurship in the context of both independent and corporate organizations. The theory of entrepreneurship is investigated through discussion of classical and current literature. Entrepreneurship practice is explored through interviews and discussions with entrepreneurs.
Formerly: AGEC. 230.
Note: Students with credit for AGEC. 230 or COMM. 349 may not take this course for credit.

BPBE. 251.3 — 1(3L)
Introduction to Agricultural Policy
Examines why government policy is important to the agricultural industry and why governments at all levels become involved. Various areas of policy are examined with emphasis on policies which affect the holding and operation of farm land and those which affect the transportation and handling of grain crops and the profit centres within the agribusiness sector. A detailed examination is made of several federal and provincial government policies as they affect the farm sector in Saskatchewan. Farm organizations, the farm lobby and the role of the media are also discussed.
Prerequisite(s): ECON. 111.
Note: Students with credit for BPBE 76 will not receive credit for this course.

BPBE. 254.3 — 1(3L)
Agribusiness Taxation
Provides an introduction to federal and provincial income tax as it relates to the agriculture sector. The course stresses the terms, concepts and fundamental principles of income taxation. While tax form preparation will be reviewed, tax concepts, compliance issues and tax planning will be emphasized. The course is designed to expose students to tax laws and how they affect individual decisions and how the taxpayer is/can be integrated with different business organization structures that may be utilized in the agriculture industry.
Prerequisite(s): COMM. 201.

BPBE. 272.3 — 1/2(3L)
Introduction to Agricultural Economics
Demonstrates the practical application of the economic theory and technique developed in previous courses. On-going and published research is used to teach the step by step process of using economic theory to understand and analyze issues with which the discipline concerns itself. In addition, current issues and policies are selected to guide students through the process of translating an economic problem into a researchable question. Students will participate by defining their own research questions, selecting the appropriate theoretical framework, finding data appropriate to conducting an analysis, doing a simple empirical analysis, summarizing results and discussing implications of their research in the form of a paper, an assignment, an in-class presentation, and/or an evaluation and analysis of a current issue.
Formerly: AGEC. 272.
Prerequisite(s): AGEC. 113 or permission of the instructor.
Note: Students with credit for AGEC. 272 cannot take this course for credit.

BPBE. 298.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

BPBE. 315.3 — 1/2(3L-2P)
Application of Microeconomic Theory to Agriculture
A calculus-based treatment of microeconomic theory as it applies to optimal resource allocation in agriculture, individual consumer choice, and the behaviour of competitive markets.
Formerly: AGEC. 315.
Prerequisite(s): ECON. 211; MATH. 104 or 110.
Note: Students with credit for AGEC. 315 cannot take this course for credit.

BPBE. 320.3 — 1/2(3L-2P)
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.
Restriction(s): Not open to students in the BSA (AGEC) Program or in the BSCAGI Program
Prerequisite(s): Successful completion of 60 credit units of university level courses or permission of the instructor
Note: Students with credit for BPBE 62 or AGEC. 320 will not receive credit for this course.

BPBE. 330.3 — 1(3L)
Land Resource Economics
A study of natural resource economics with emphasis on environmental economics, measurement of non-market goods, project evaluation, issues in urban and rural land use, and conservation. Policy problems related to the foregoing will be examined.
Formerly: AGEC. 330.
Prerequisite(s): ECON. 211 or 213.
Note: Students with credit for AGEC. 330 cannot take this course for credit.

BPBE. 342.3 — 2(3L-2P)
Industrial Organization of Agricultural Markets
Describes the current structure of agriculture and changes currently taking place. Theoretical concepts such as oligopoly models, game theory, and transactions costs theory are developed. These theories are used to examine such issues as market concentration, spatial competition, vertical integration, contracting, and agricultural research and development.
Formerly: AGEC. 342.
Prerequisite(s): BPBE. 315 or permission of the instructor.
Note: Students with credit for AGEC. 342 cannot take this course for credit.

BPBE. 343.3 — 2(3L)
Grain and Livestock Marketing
A study of the Canadian grain and livestock marketing systems, procedures and institutions. Examines the price discovery methods used in grains and livestock marketing including: open (futures) market, marketing boards, teletype auctions, etc. Other topics include: the historical evolution of current marketing systems, marketing functions, government policy and regulation and market structure.
Prerequisite(s): Successful completion of 30 credit units or permission of the instructor.
Note: Students with credit for AGEC. 343 or BPBE 66 may not take this course for credit.
BPBE. 344.3 — 2(3L)
Follow the Grain
Provides a supply chain perspective of science, technology, production practice, product handling, product marketing systems, and end uses for grain produced in Saskatchewan. Students will learn how public and private institutions have evolved to govern the process of scientific discovery and marketing to increase the value created in the sector and how different processes, regulations and institutions have evolved to address issues within the supply chain. Contemporary issues such as organic marketing, GM market impacts, and kernel visual distinguishability will be examined.
Formerly: AGEC 344.
Prerequisite(s): AGEC 113 and ECON 111 or successful completion of 60 credit units at the university level or permission from the instructor.
Note: Students with credit for AGEC 344 cannot take this course for credit. There are additional non-refundable costs in addition to tuition fees.

BPBE. 346.3 — 2(3L)
Principles of Selling
Introduces the principles of salesmanship and their application to agricultural business. Emphasis will be placed on the application of principles to real-world situations and on building selling skills through class projects. Students will learn tactical selling skills, develop self-management skills, and study strategic selling techniques. Policies (current and impending) and regulations governing salesmanship are discussed.
Formerly: AGEC 346.
Prerequisite(s): COMM 304 or BPBE 343 or permission of the instructor.
Note: Students with credit for BPBE 72 or AGEC 346 will not receive credit for this course.

BPBE. 347.3 — 1/2(3L)
Agribusiness Marketing Management
Focuses on the role of the agri-marketing manager as a decision maker who is often responsible for formulating strategic marketing plans. Topics include the agricultural and agribusiness marketing environment, selecting market targets for products/services, and the development of marketing plans. The marketing activities of Saskatchewan’s agribusinesses will be examined.
Formerly: AGEC 347.
Prerequisite(s): BPBE 343 or COMM 204 or permission of the instructor.
Note: Students with credit for BPBE 74 or AGEC 347 will not receive credit for this course.

BPBE. 354.3 — 2(3L)
Agribusiness Management Information Systems
This course offers students an introduction to management information systems (MIS) and their application to businesses within the agricultural sector. It provides an overview of hardware, software and technologies that make possible the collection of financial and agronomic data useful in agribusiness management decisions. Students will be oriented to the tools and techniques used in structuring an agribusiness management information system for different organizational structures and types of agribusiness operations.
Prerequisite(s): COMM 201.3 and 60 credit units.

BPBE. 361.3 — 1/2(3L-2P)
Intermediate Statistics and Decision Making
Focuses on analysis of agricultural management and marketing issues using statistical methods. Topics include: data collection, estimation, and test of hypotheses in regression analysis; use of binary variables and non-linear regression. Elementary econometrics is also introduced.
Formerly: AGEC 361.
Prerequisite(s): PLSC 214.
Note: Students with credit for AGEC 361 cannot take this course for credit.

BPBE. 395.3 — 2(3L)
Creative Thinking and the Entrepreneurial Process
Introduces students to the role of creativity and creative thinking skills, processes and attitudes in the life of the entrepreneur. The theory and practice of creative thinking skills in both business and personal contexts will be presented to students. Creativity is examined through discussion of articles from peer-reviewed journals, books, and case studies. The practice of creativity is accomplished through a number of interactive exercises, strategies and processes integrated into the weekly fabric of the class.
Formerly: AGEC 395.
Prerequisite(s): Successful completion of 45 credit units, or permission of the instructor.
Note: Students with credit for AGEC 395 cannot take this course for credit.

BPBE. 398.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

BPBE. 400.3 — 1(3L)
Entrepreneurial Leadership Leading Development Change and Growth in New Business
Will introduce students to conceptual leadership theory and contemporary leadership models, and will also provide opportunities for experiential learning in the area of applied leadership practice. Leadership will be examined from a process-oriented framework with a focus on practical and applied elements in the context of entrepreneurship.
Formerly: AGEC 400.
Prerequisite(s): Successful completion of 75 credit units, or permission of the instructor.
Note: Students with credit for AGEC 400 cannot take this course for credit.

BPBE. 420.3 — 1(3L-2P)
Farm and Agricultural Business Operations Management
An introduction to the theory and practice of operations and financial management under risk and uncertainty. This consists of an examination of techniques and procedures which can be used by the manager and by the professional acting as consultant to the manager. Techniques reviewed include total farm budgeting, linear and quadratic programming and decision analysis.
Prerequisite(s): BPBE 322 or COMM 203.
Note: Students with credit for AGEC 420 may not take this course for credit.

BPBE. 430.3 — 1(3L)
Natural Resource Economics
Management and allocation of natural resources requires an understanding of the biophysical characteristics of resources, and the economics underlying decisions of resource users and society. This course will develop a series of tools to evaluate natural resource use from the management and policy perspective. The course will focus on renewable resources with some consideration of nonrenewable resources. Students will evaluate existing natural resource and environmental policy measures using the tools developed in the course.
Prerequisite(s): One of BPBE 330, ECON 275 or ECON 277, or permission of the instructor.
Note: Students with credit for AGEC 430 may not take this course for credit.

BPBE. 432.3 — 1(3L)
Rural Development Theory Policy and Case Studies
Rural Development patterns are investigated in a Regional Economics Framework. This class focuses on the theories of rural development, empirical studies of rural development and a review of the rural development patterns and policies. Comparisons are made at appropriate points between Canadian and U.S. policies and development programs.
Prerequisite(s): ECON 211.
Note: Students with credit for AGEC 432 may not take this course for credit.

BPBE. 433.3 — 2(3L)
Methods of Rural Analysis Theory and Application
The methods used in the analysis of rural economies, with particular emphasis on economic impact analyses, will be examined. Case studies utilizing these techniques will be reviewed and analyzed.
Formerly: AGEC 433.
Prerequisite(s): ECON 211 and 214.
Note: Students with credit for AGEC 433 cannot take this course for credit.

BPBE. 435.3 — 2(3L-2P)
Agricultural Finance and Appraisal
Study and application of economic principles in agricultural finance and capital investments analysis and farm real estate appraisal. Farm finance includes the study of financial management and agricultural credit. Farm appraisal includes a study of land values and the various approaches to the valuation and assessment of farm real estate.
Formerly: AGEC 435.
Prerequisite(s): BPBE 322 or COMM 203.
Note: Students with credit for AGEC 435 cannot take this course for credit.
BPBE. 440.3 — 1(3L)
Agricultural Marketing Systems
Examines the agricultural marketing system from analytical and strategic perspectives. Analytical methods for assessing consumer demand are explored. Generic advertising, agricultural commodity grading systems and quality verification systems are discussed. The organization of supply chains is examined, including an exploration of the growth of contracting. The economic implications of various collective marketing structures are examined, including cooperatives and supply management boards.
Formerly: AGEC. 440.
Prerequisite(s): BPBE. 315 and. 342 or permission of the instructor.
Note: Students with credit for AGEC. 440 cannot take this course for credit.

BPBE. 445.3 — 2(3L)
Competition Regulation and Antitrust Theory and Applications
This course describes the structure of competition, regulation and antitrust policy in Canada, the U.S. and the E.U. Beginning with the development of traditional models of competition and regulation as well as an introduction to antitrust methods, a set of analytic tools applicable to modern regulatory analysis will be developed, including contestability theory, auction theory, mechanism design and an overview of structural econometric modeling for regulatory analysis. The course will also examine the role and behavior of key regulatory and anti-trust agencies. While applicable to a vast number of industries, where possible analysis will focus on agricultural applications of the methods and policies.
Prerequisite(s): BPBE. 315 and. 361 or permission of the instructor.

BPBE. 451.3 — 1(3L)
Agricultural Problems and Policies
A review of the scope and character of problems affecting Western Canadian agriculture, and a study of the policies and legislation bearing on those problems. Students will be assigned special references for review and discussion and will complete a term assignment on a special phase of the course. Special emphasis is given to student participation.
Formerly: AGEC. 451.
Prerequisite(s): BPBE. 315.
Note: Students with credit for AGEC. 451 cannot take this course for credit.

BPBE. 461.3 — 2(3L-2P)
Agricultural Commodity Analysis
This course is an extension of the introductory econometrics. Further treatment of econometric issues is introduced. This is followed by two basic approaches to analysis of agricultural commodities. The first approach focuses on the causal relationships among economic variables, and the topics include supply-disposition analysis, regression analysis, and further examination of econometric assumptions. The second approach focuses on the time series characteristics of an economic variable and the topics include trend extrapolation, projection methods and Box-Jenkins analysis.
Prerequisite(s): BPBE. 315 and. 361.
Note: Students with credit for AGEC. 461 may not take this course for credit.

BPBE. 492.3 — 1and2
Research Project and Technical Writing
This is a major research, technical writing and communications project that involves investigation of a relevant economic problem. The project includes a literature review utilizing electronic and library resources, a clear articulation of the appropriate economic concepts, an empirical investigation, and interpretation of results. A comprehensive research report is written. Research methodology and technical writing skills are addressed in a series of lectures at the beginning of the term.
Prerequisite(s): BPBE. 315 and. 361 and successful completion of 75 credit units of university level courses.
Restriction(s): Restricted to B.S.A. (AGEC) and BSCAGB programs.
Note: Students with credit for AGEC. 492 or AGRC. 492 may not take this course for credit.

BPBE. 494.6 — 1and2
Research and Technical Writing (Honours Thesis)
This is a research, technical writing and communications course in which the student conducts independent research on a relevant economic problem. The research project includes a literature review utilizing electronic and library resources, a clear articulation and use of the appropriate concepts, an empirical investigation, and the interpretation and presentation of results. A comprehensive and formal research paper is written. Research methodology and technical writing skills are addressed in a series of lectures at the beginning of the term. An oral exam of the thesis is required.
Prerequisite(s): BPBE. 315 and. 361 and successful completion of 75 credit units of university level courses.
Restriction(s): Restricted to B.S.A. (AGEC) and BSCAGB Honours programs.
Note: Students with credit for AGEC. 494 may not take this course for credit.

BPBE. 495.3 — 1/2(3L)
Agribusiness Venture Management
Designed to assist students in developing and understanding the skills and tools required in the preparation and presentation of a complete and professional business plan for a business entity in the agricultural industry. All aspects of the business plan are included in the project: operations, human resources, marketing and finance. Students will be expected to form groups to complete a major project.
Prerequisite(s): Successful completion of 90 credit units of university level courses or permission of the department.
Note: Students with credit for AGEC. 495, COMM. 447, COMM. 492, BPBE 75, or ENT. 310 may not take this course for credit.

BPBE. 498.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CACE — ADULT AND CONTINUING EDUCATION
College of Continuing and Distance Ed

CACE 11
Foundations of Adult Education
This course examines the history of adult education from both worldwide and local perspectives. Participants in the course will also analyze the underlying philosophical, sociological, and political foundations of adult education. They will then apply insights gained from this study to contemporary adult education issues of interest to them.

CACE 12
Facilitating Adult Learning
This course explores the complexity of the teaching/learning process in the education of adults. Participants will be encouraged to identify and define the assumptions, values, and beliefs, which underlie their decisions as facilitators. They will also analyze the application and implications of educational principles in the design, delivery, and evaluation of adult learning opportunities.

CACE 13
Program Planning in Adult Education
This course introduces learners to the basic fundamentals of conducting needs assessments, planning effective programs, and designing program evaluations from a practical perspective based on theoretical models. Upon completion of this course, the learner will know the rudiments of needs assessment and will design a needs assessment instrument; will know the fundamentals of program planning; will know and be able to apply the fundamentals of program evaluation.

CACE 14
Adult Learning and Development
The content of this course reflects the large body of knowledge in the area of lifespan development and its importance for practitioners and for practice in adult education. It examines development, learning, and change, and their relationship to andragogy. Emphasis is placed on the importance of considering both contextual factors and individual differences when examining the process of learning in adults.

CACE 22
Overview of Teaching English as an Additional Language
This overview is designed to give adult educators the foundations of teaching English as an additional language. The course begins with a look at adult language learners, language, and adult language acquisition. This is followed by an historical and modern overview of teaching English as an additional language. Topics such as ethics of teaching English, learning styles, learner empowerment, student and teacher assessment, lesson planning, evaluation, and classroom management are also covered. The remainder of the course focuses on integrating the various skill areas.
Note: Registrants may substitute TESL 21 Overview of Teaching English as a Second Language for this course. TESL 21 is part of the Certificate in Teaching English as a Second Language (CERTESL) program at the U of S. If you are interested in registering for this course, please contact the CACE program office.
CACE 23
Training and Development
Training and Development has traditionally been part of the human resource management field, which concerns itself with equipping people with skills and knowledge to perform current functions. It is also part of the professional field of adult education, the central focus of which is the performance of persons in organizational systems. This course will focus on aspects of employer-sponsored learning: competencies, skills and methods used by TandD professionals, and the processes of training: needs analysis and evaluation. The course addresses organizational concerns such as performance improvements, transfer of training, organizational development and organizing the training function. Current practices and trends are also discussed.

CACE 24
Coaching and Counseling Skills Enhancing Adult Learning and Performance
This course gives you a framework and skills to assist adult learners whose difficulties range from a student disputing a grade in a course to a friend diagnosed with a serious illness who wants to learn more about the condition. From the careful listening model for advising and counselling adult learners presented in the course, you will learn how to generate effective responses and enhance your advising and counselling skills. The course will help you understand the basic skills and perspectives of counsellors. You will learn how to make appropriate and effective referrals. As well, you will assess your experiences, strengths and limitations as a helper. You can apply the skills you learn to managing individual difficulties with learners or to handling problems as they occur with learners in a wide variety of settings and contexts.

CACE 26
Instructional Design for Adult Education
This course will consider instructional design within the context of adult education; examine primary models, the characteristics of instructional design, and the process of development; and apply the specific uses of instructional design to adult education settings.

CACE 33
Transformative Learning for Organizational Change
The successful implementation of today's organizational change initiatives frequently requires individuals to learn new systems of beliefs. This CACE elective will help you critically reflect on the process of change and transformational learning. Learn how to structure and facilitate transformational learning for change at the personal, team, and organizational levels.

CE 201.0 — 1/2(3L)
Elements of CAD
Credit for this course may be gained by enrolling in AutoCAD Level 1 training at SIAST for nine 3 hour sessions. A pass/fail grade will be assigned on completion of the SIAST course. Credit may also be obtained by presenting documentary evidence of equivalent training.

CE 212.3 — 1(3L-3P alt weeks)
Civil Engineering Materials
An introduction to the physical and mechanical properties of materials and the phenomenological bases for these behaviours. Fundamental concepts of materials science and engineering are introduced and applied to materials commonly encountered in civil engineering applications, including Portland cement concrete, metals and alloys, ceramics, polymers and polymer composites, and other materials such as wood, asphalt concrete, and soils.

Prerequisite(s): GE 121 and 33 credit units from (EN Four Year Common Core and CE Program Core).

CE 217.3 — 2(3L-3P alt weeks)
Design Project
A design course in which the principles of design are learned by application to a suitable civil engineering project. The course requires that the students work in groups to achieve the desired outcome. Group interaction and performance is monitored throughout. Guest lectures from various industrial and other representatives will be provided to enhance the student's design experience.

Prerequisite(s): CHEM. 114 (taken).

CE 225.3 — 2(3L-3P alt weeks)
Fluid Mechanics
Provides an introduction to the subject area of fluid mechanics including the properties of fluids, fluid statics, kinematics, laminar and turbulent flow in pipes, Reynolds Transport Theorem, conservation equations of mass, momentum, and energy, Bernoulli equation and its applications, and measurement of fluid properties, pressure, velocity, and discharge.

Prerequisite(s): GE 125 and MATH. 223 (taken).

Note: Students with credit for CHE. 210 cannot take this course for credit.

CE 227.2 — 3(P-2weeks)
Spring Surveying Camp
Basic introduction to the use and adjustments of survey equipment, and the associated field work and data interpretation required for engineering projects.

Note: A two-week field camp immediately following T2 final exams.

CE 295.3 — 2(1.5L-1.5P)
Hydrology
Basic hydrological processes such as precipitation, evapotranspiration, runoff, infiltration, interception, and depression storage are introduced. Engineering applications such as streamflow and storm hydrographs, flood routing, hydrologic analyses and design, and watershed simulation are covered.

Prerequisite(s): GE 210, CE 225 (taken) and MATH. 224 (taken).

CE 311.3 — 1(3L-3P alt weeks)
Continuum Mechanics
The application of equilibrium analysis to materials and systems that can be treated as continua. The laws of equilibrium, compatibility, and constitutive relationships are used to reduce physical problems to mathematical expressions. Concepts are introduced in the context of elastic theory and extended to other areas of relevance to civil engineering such as fluid flow, plasticity, viscoelasticity, and multi-phase material behaviour.

Prerequisite(s): CE 212 and GE 213.

CE 315.3 — 1(3L-3P alt weeks)
Fluid Mechanics and Hydraulics
Builds on the concepts studied in CE 225 Fluid Mechanics. Introduces the concepts of potential flow, dimensional analysis, boundary layer development, incompressible flow in pressure conduits, flow past objects, steady flow in open channels and hydraulic transients.

Prerequisite(s): CE 225.

CE 317.3 — 1(3L-3P alt weeks)
Structural Analysis
Introductory concepts for the analysis of structures are presented. Axial forces, shear forces and bending moments in statically determinant structures due to applied loads are determined, and methods for estimating deflections are covered. Computer analysis using the stiffness method is introduced and applied to 2D trusses. Manual analysis methods for statically indeterminate structures are considered briefly. An emphasis is placed on the application of basic analytical techniques, followed by the use of computer-based verifications.

Prerequisite(s): GE 213.

CE 318.3 — 1(3L-3P alt weeks)
Applied Engineering Mathematics
An introduction to the use of mathematical methods in applied civil engineering problems. Topics include: matrix solution methods for systems of coupled equations, eigenvalue problems, and coordinate transformations; optimization and linear programming; and the solution of differential equations describing non-stationary physical systems using analytical, finite difference and finite element methods. Numerical techniques using computer programs are emphasized.

Prerequisite(s): CMPT. 113 (taken) and CE 225 (taken) and GE 213 (taken) and MATH. 224 (taken).

CE 319.3 — 2(3L-3P alt weeks)
Hydraulics
Basic hydrological processes such as precipitation, evapotranspiration, runoff, infiltration, interception, and depression storage are introduced. Engineering applications such as streamflow and storm hydrographs, flood routing, hydrologic analyses and design, and watershed simulation are covered.

Prerequisite(s): GE 210, CE 225 (taken) and MATH. 224 (taken).
CE 321.3 — 2(3L-3P alt weeks)
Structural Systems and Materials
The behavior and applications of basic forms of structural systems are reviewed, including beam and column systems, arches and cable systems, trusses, braced systems and rigid frames. Limit States design principles in accordance with the National Building Code of Canada (NBCC) are introduced as a means of dealing with uncertainty in design. The estimation of building loads is covered, including dead and live loads, snow and rain loads, and loads due to wind. An introduction is also given to the characteristics of common structural materials, including steel, reinforced concrete and wood.
Prerequisite(s): CE 317 and GE 210 (taken).

CE 327.3 — 2(3L-3P alt weeks)
Sanitary and Environmental Engineering I
Fundamental topics in the discipline of sanitary/ environmental engineering are introduced. Topics include the design of municipal water distribution and wastewater collection systems; an introduction to water chemistry and water quality assessment, and design of physical and chemical treatment processes as they apply to water and wastewater treatment. A brief overview of storm water collection systems is also presented.
Prerequisite(s): CHEM 114 and CE 315 (taken).

CE 328.3 — 1(3L-3P alt weeks)
Fundamentals of Soil Mechanics
The course covers essential concepts in soil mechanics. Topics include compaction, seepage theory, groundwater flow, stresses and strains in soils, effective stress concept, consolidation, shear strength of soils, and earth pressure theory. The course emphasizes the learning of soil mechanics concepts. Some examples of application of these concepts to geotechnical engineering practice are also provided to reinforce these concepts. Laboratory practicum component of the course provides hands-on experience of laboratory tests that are commonly used for determination of geotechnical properties of soils.
Prerequisite(s): GE 218, CE 225 (taken) and GE 213 (taken).

CE 329.3 — 2(3L-3P alt weeks)
Transportation Engineering
This course introduces civil engineering students to the planning, design, operation, and safety of road transportation systems. Topics include: fundamentals of traffic flow theory, highway capacity analysis, geometric design, intelligent transportation systems, travel demand forecasting methods, and safety analysis.
Prerequisite(s) or Corequisite(s): CE 271 and GE 210 (taken).

CE 330.3
Geotechnical Engineering
The course focuses on practical application of soil mechanics concepts to the analysis and design of foundations, excavations, slopes, earthworks and earth-retaining systems. Topics include: design and construction of shallow foundations on soils and rocks based on bearing capacity and settlement analysis; design and installation of deep foundations including driven and bored piles; design and construction of earth retaining systems; slope stability; geosynthetics and soil reinforcement; ground improvement; and, special construction techniques. Practicum component includes hands-on experience in extracting design parameters from results of site investigation and laboratory tests and preparing a geotechnical design report.
Restriction(s): Restricted to students in Civil Engineering and Geological Engineering.
Prerequisite(s): CE 328.3
Note: Students with credit for CE 416 will not receive credit for this course.

CE 414.3 — 1(3L-3P alt weeks)
Sanitary and Environmental Engineering II
This course introduces additional topics in the discipline of sanitary/environmental engineering. It builds upon previously introduced principles of chemistry, fluid mechanics and fundamentals of sanitary/ environmental engineering. Topics covered include design of lime soda ash softening in drinking water treatment; design of biological wastewater treatment systems; and sludge and residual solids management in water and wastewater treatment. An introduction to tertiary wastewater treatment and wastewater disposal issues is also presented.
Prerequisite(s): CE 327.

CE 415.3 — 2(3L-3P alt weeks)
Structures for Water Management
A design course in which the basics of fluid mechanics (hydrostatics, continuity, energy and momentum) are applied to hydraulic design. The concrete gravity dam and spillway structures are used to introduce the basic aspects of hydraulic structure design with respect to forces and hydraulic analysis, including the important topic of energy dissipation. Other structures, such as those used for flood control, irrigation, hydropower, navigation, water supply, land and highway drainage, wildfowl habitat preservation, and water-based recreation, are also considered.
Prerequisite(s): CE 315 (taken).

CE 417.3 — 1(3L-3P alt weeks)
Pavement Materials and Design
Presents methods used to design, build, and predict the performance of road structures. The course draws heavily upon a material science and mechanics framework to quantify the effects of alternative materials, traffic loading and environmental loading on road performance. Road structural design, materials specification, construction, rehabilitation, and maintenance of flexible and rigid pavements are presented in the overall context of effective road asset management.
Prerequisite(s): CE 311, CE 328 (taken) and CE 329.

CE 418.3 — 1(3L-3P)
Design in Reinforced Concrete
Prerequisite(s): CE 321 (taken).

CE 420.3 — 1(3L-3P alt weeks)
Project Engineering
An introduction to the engineering and construction industries: the engineer’s role in industry, construction and the economy. Deals with various aspects of engineering including, work plans and related studies. It also deals with the marketing of engineering services. It discusses control on construction projects and methods of ensuring quality. Construction tendering is covered in detail, including the preparation of instructions to bidders, General and supplementary conditions, specifications, receiving tenders and awarding contracts. Bidding and estimating is also discussed. Computerized precedence network scheduling using various software packages is demonstrated. This course includes discussions on construction claims, professional liability, arbitration and the use of courts to settle disputes.
Prerequisite(s): GE 348.
Prerequisite(s) or Corequisite(s): EN Three Year Common Core and 39 credit units from EN Senior Courses.

CE 421.3 — 1(2/3L)
Engineering Project Management
This course builds on the foundation established in CE 420 Project Engineering. It covers such elements of project management as project scope, time, cost, quality, and risk as applied in an engineering context using case studies from various sectors of industry. A key focus is on the important concept of time management. Elementary applications of advanced project management tools such as earned value and the basic concepts of quality are introduced so as to provide an overview of the complexities of managing large projects. International standards relating to project management are introduced by describing the minimum project management standards expected by the industry today. Throughout, the focus of the course is on the application of project management concepts to engineering situations involving large industrial infrastructure projects. Students will experience some challenges of managing these types of projects with multidisciplinary teams.
Prerequisite(s): CE 420
CE 463.3 — 2(3L-3P alt weeks)
Advanced Structural Analysis
Deals with advanced techniques for the analysis of determinate and indeterminate structures, including energy-based methods, moment distribution method with joint translation, influence lines, non-prismatic members. Computer analysis based on the stiffness formulation is presented for space frames. Finite element analysis is introduced for plate-like elements loaded in their own plane. Emphasis is placed on basic analytical techniques, followed by computer verification.

Prerequisite(s): CE 317.

CE 464.3 — 1(3L-3P alt weeks)
Water Resources Engineering
This course builds on and supplements various aspects of other hydrotechnical courses, especially those related to hydrology. The course focuses on three major parts of water resources engineering practice. Part I deals with watershed analysis and simulation, including use of state-of-the-art software, and the effects of urbanization on watershed runoff, including the design of street drainage systems and detention ponds. It also covers determination of peak discharges for hydrologic design. Part II deals with water use and its associated analysis, including irrigation, drought management and hydropower. Part III deals with water excess management and flood damage mitigation. Several aspects of the course include consideration of economics as a decision-making tool, notably those aspects dealing with drought and flood management.

Prerequisite(s): CE 315 (taken) or BLE 431 (taken) and GE 348 (taken); CE 319.

CE 466.3 — 1(3L-3P alt weeks)
Geotechnical Modelling
Analysis, design and construction of various earth structures, encompass virtually every aspect of geotechnical engineering. Topics for this course include embankments, geosynthetic reinforced steep slopes and retaining walls, earth and mine tailings dams, deep excavations and tunnels. The role of instrumentation to ensure the safety of earth structures and to determine their performance during their service life is also presented. Application of key concepts is emphasized during hands-on computer sessions based on the state-of-the-art geotechnical software.

Prerequisite(s): CE 330 and CE 318 (taken).

CE 467.3 — 2(3L-3P alt weeks)
Transportation and Regional Development
Introduction to regional development and the role of transportation and transportation technology. Topics include the role of technology in economic development, the nature of economic regions, location of economic activities and sustainable competitive advantage in a market economy.

Prerequisite(s): CE 348
Prerequisite(s) or Corequisite(s): CE 329

CE 468.3 — 2(3L-3P alt weeks)
Geoenvironmental Engineering
Introduction to wastes, contaminants and contaminant transport processes in the subsurface. A review of the design elements of natural and engineered barriers and analytical tools for barrier systems and for remediation of subsurface contamination. Case studies of containment and remediation systems for municipal, mining and industrial wastes.

Prerequisite(s): CE 328.

CE 470.3 — 1(3L-3P alt weeks)
Design in Structural Steel
An introduction to the structural design of members and connections for steel structures in accordance with the National Building Code of Canada and the Canadian steel design Standard CSA-S16-01. Design principles are based on Limit States Design. Types of members and components include tension members, beams, columns and beam-columns, as well as bolted and welded beam-columns. Emphasis is placed on basic design and fabrication procedures. Design forces for framed structures are determined using second-order elastic analysis with notional lateral loads.

Prerequisite(s): CE 321.

CE 472.3 — SU(3P)
Study Abroad European Structures
Consists primarily of 14 daily field trips to structures of historical interest in Europe. The influence of visionaries on the history of science and technology including: Julius Caesar, Giotto, Michelangelo, Brunelleschi, Da Vinci and Galileo, will be emphasized throughout the course. Students will be assigned homework, be required to submit a project report and a final examination.

Permission of the Department required.

CE 474.3 — 2(3L-3T alt weeks)
Design in Masonry
Will provide an introduction to the analysis and design of structural masonry components and building systems. The fundamental principles covered in CE 418.3 (Design in Reinforced Concrete) will be extended to flexural members, walls and columns constructed from masonry components, in accordance with the requirements of CSA Standard CSA-S304.1-04 (Design of Masonry Structures). Lateral load resisting systems in low-rise buildings will be discussed, emphasizing the role and behaviour of shear walls and horizontal diaphragms. Elementary concepts of building science will also be introduced, focusing on heat and moisture flow through building envelopes.

Prerequisite(s): CE 418 (taken).

CE 495.6 — 1and2(6P)
Capstone Design Project
A final design course in which advanced principles of design are learned by application to a suitable civil engineering project. The course, which builds upon the foundation established in CE 295, focuses on approaches to be taken in defining complex problems (including the outlining of project objectives and scope), acquisition of suitable data resources, generation of alternative solutions, methods for selecting design alternatives and project implementation. Design philosophy and methods are discussed and explored in the context of the particular assignment given for the current year. The course requires that the students work in groups to achieve the desired outcome. Group interaction and performance is monitored throughout. Guest lectures from various industrial and other representatives will be provided to enhance the student's design experience.

Prerequisite(s): CE 295.
Prerequisite(s) or Corequisite(s): CE 420 and 6 credit units from (CE 400-499 or BLE 481 or GEOE 475).

CE 498.3 — 1/2(3L-1.5P)
Special Topics
Offered occasionally to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CHE — CHEMICAL ENGINEERING
College of Engineering

CHE. 210.3 — 2(3L-2T alt weeks)
Fluid Mechanics I
Single phase fluid flow is considered for both gas and liquids. Newtonian and non-Newtonian concepts are introduced. Mass, energy and momentum balance equations, including Bernoulli equation (mechanical energy) are developed and applied to various fluid flow systems. The concepts of laminar and turbulent flow regimes are discussed and applied to flow in pipes and networks, and fluid metering. Other topics include pump and compressors and flow through consolidated and unconsolidated porous media.

Prerequisite(s): GE 125 and MATH. 223 (taken).
Note: Students with credit for CE 225 cannot take this course for credit.

CHE. 220.3 — 1(3L-2T alt weeks)
Introduction to Process Engineering
The lectures and problems will illustrate the use of energy and material balances in chemical and biochemical engineering processes.

Prerequisite(s) or Corequisite(s): CHEM. 115.
CHE. 223.3 — 2(3L-2T alt weeks)
Chemical Thermodynamics
Fundamental principles of thermodynamics with particular emphasis on generalized methods. Considerable time is devoted to the thermodynamics of solutions with an emphasis on generalized methods for dealing with deviations from ideal behaviour. These principles are applied to the calculation of equilibrium compositions in liquid-vapour systems.
Prerequisite(s) or Corequisite(s): CHEM. 242 or ENVE. 201
Note: Students with credit for CHEM. 247 cannot take this course for credit.
Note: Students in the Chemical Engineering Undergraduate Program cannot use ENVE. 201 as a substitute for CHEM. 242.

CHE. 315.3 — 2(3L-2T alt weeks)
Mass Transfer I
Mass transfer operations involving contact by stages, including single-stage, binary multiple-stage contacting, and multicomponent multiple-stage contacting. Gas absorption, distillation, and liquid extraction are included.
Prerequisite(s): CHE. 323.

CHE. 320.3 — 1(3L-2T alt weeks)
Fluid Mechanics II
Navier-stokes equations are developed and applied to solve chemical processing and applications. Dimensional analysis, stream function, vorticity, and potential flow are introduced. Selected topics of advanced fluid mechanics include two-phase flow, fluidization, non-Newtonian fluids, compressible fluids, turbulent, and computational fluid dynamics (CFD).
Prerequisite(s): CHE. 210.

CHE. 322.3 — 2(3L-2T alt weeks)
Mathematical Modelling
Ordinary and partial differential equations as they relate to chemical engineering processes. Laplace transforms for ordinary differential equations. Analytic and numerical solutions to partial differential equations. An emphasis will be placed on the development of mathematical models for chemical engineering systems.
Prerequisite(s): MATH. 224 (taken) and CHE. 220.

CHE. 323.3 — 1(3L-2T alt weeks)
Chemical Engineering Thermodynamics
Topics include the treatment of vapour-liquid equilibria at high pressures, expansion and compression of fluids, steam power-plant cycles, liquefaction of gases and refrigeration.
Prerequisite(s): CHE. 223.

CHE. 324.3 — 2(3L-2T alt weeks)
Heat Transfer
Prerequisite(s): CHE. 210 (taken).
Prerequisite or Corequisite(s): CHE. 322.

CHE. 325.3 — 1(3L-2P alt weeks)
Process Engineering and Design I
The concepts of industrial chemical process design, industrial economics, process optimization, process simulation and plant safety. Encourages students to use their fundamental knowledge in science and mathematics to design practical chemical engineering facilities. Special emphasis will be placed on safety, hazards, sustainability and loss prevention issues in chemical plants.
Prerequisite(s): CHE. 220.
Prerequisite(s) or Corequisite(s): CHE. 323.

CHE. 326.3 — 2(3L-1.5T)
Plant Design Project
Students will work in teams and perform a detailed design of a chemical engineering process including plant layout, Process Flow Diagram (PFD), material and energy balances, simulation, equipment sizing, costing, safety, and economics. Each student will act as team manager for a specific phase of the project. Projects will be provided by the course instructor.
Prerequisite(s): CHE. 325 (taken).

CHE. 332.0 — 1and2(15)
Seminar
Current and future technological changes and their impacts on society are explored from a chemical engineering point of view. Impacts of petroleum production, mineral industries, and chemical industries. Topics involving health and safety issues in the chemical industries are discussed.
Prerequisite(s): CHE. 210 (taken) and CHE. 220 (taken).

CHE. 333.2 — 2(3P)
Chemical Engineering Laboratory I
Students are trained in chemical engineering experimental methods with an emphasis on safety. A series of experiments using bench scale apparatus to study fluid mechanics, heat transfer and thermodynamics are offered. The method of reporting results is emphasized.
Prerequisite(s) or Corequisite(s): CHE. 210 and CHE. 220.

CHE. 364.3 — 1(3L)
Petrochemical Engineering
The petrochemical industry is a significant employer of chemical engineers. This course covers the fundamental chemistry, reactions and separations involved in the value-added processing of refinery products such as ethylene, sulfur, medium heating value gas, etc. An emphasis will be placed on the use of petrochemical properties in the engineering design and operation of petroleum value-added processes. The focus will be centered on chemical industries and feed stocks associated with Saskatchewan and Western Canada. The chemistry and concerns of petrochemical pollutants will also be discovered.
Prerequisite(s): CHE. 220 and CHEM. 250.
Note: Offered in alternate years.

CHE. 411.3 — 1(3L)
Chemical Reaction Engineering
An examination of the principles of applied chemical kinetics and their use in chemical reactor design and chemical plant operation. Both homogeneous and heterogeneous kinetics, including catalysis, are considered.
Prerequisite(s): CHE. 322 and CHEM. 242.

CHE. 414.2 — 1(3P)
Chemical Engineering Laboratory II
Experiments are chosen in the fields of biochemical engineering, mass transfer, simultaneous heat and mass transfer, fluid mechanics and process dynamics. Pilot plant scale apparatus are used to more closely demonstrate industrial conditions. The method of reporting is emphasized.
Prerequisite(s): CHE. 315 and CHE. 333 (taken).
Prerequisite(s) or Corequisite(s): CHE. 423.

CHE. 421.3 — 1(3L-2T alt weeks)
Mass Transfer II
Further topics in mass transfer operations. Molecular diffusion, mass transfer coefficients, continuous contacting, gas absorption, air-water contacting, drying.
Prerequisite(s): CHE. 315 (taken).

CHE. 422.6 — 1and2(6P)
Process Engineering and Design II
Detailed design of an actual industrial chemical process including preparation of the engineering flow sheet, process simulation and optimization, plant energy and material balances, equipment sizing and design, plant layout, hazards, safety, environmental impacts, and economic analysis of the chemical process. Students will also employ project management skills to ensure timely completion of projects.
Prerequisite(s): RCA. 300 and CHE. 315, 322, 323, 324, 325, 326 and 333.
Prerequisite(s) or Corequisite(s): CHE. 411, CHE. 421 and CHE. 423.

CHE. 423.3 — 2(3L-2P alt weeks)
Process Dynamics and Control
Instrumentation and the control systems will be discussed. The classical linear control theory and stability criteria for control system design are introduced. The development of dynamic equations for elements of control loops is emphasized. Survey and discussion of particular control schemes for chemical engineering processes.
Prerequisite(s): CHE. 322.

CHE. 424.2 — 2(3P)
Chemical Engineering Laboratory III
Experiments using semi-pilot plant and pilot plant scale are chosen in the areas of process dynamics and control, mass transfer, reaction kinetics and reactor design. The method of reporting is emphasized.
Prerequisite(s): CHE. 414 (taken), CHE. 421 (taken) and CHE. 423 (taken).
CHE. 431.1 — 1and2(15)
Seminar
Current and future technological changes and their impacts on society are explored from a chemical engineering and a professional engineering point of view. Impacts of petroleum production, mineral industries, and chemical industries. Topics involving health and safety issues in the chemical industries are discussed.
Prerequisite(s): CHE. 332.
Prerequisite(s) or Corequisite(s): CHEM. 300.

CHE. 453.3 — 1/2(3L)
Corrosion Engineering
Intended for engineers and others who wish to develop an appreciation of the principles of corrosion and corrosion control and their application to the selection of materials of construction and the protection of engineering systems.
Prerequisite(s) or Corequisite(s): CHEM. 223 or ME 227

CHE. 454.3 — (3L)
Design of Industrial Waste Treatment Systems
Air pollution topics include causes and effects of air pollution, sampling and analysis of air and stack gas samples, stack gas dispersion models, and the design of industrial control measures for particulates. Water pollution topics include causes and effects of water pollution, biology of receiving waters and treatment systems, sampling and analysis of wastewaters, and industrial control measures including biological methods such as trickling filters, aeration basins and activated sludge systems.
Prerequisite(s) or Corequisite(s): CHE. 210

CHE. 460.3 — 1/2(3L)
Oil and Natural Gas Upgrading
The application of chemical engineering principles to the petroleum refining and petrochemical industries. A refinery survey looks at key unit operations such as atmospheric distillation catalytic cracking, and reforming. Bitumen and heavy oil upgrading are also discussed. Processes for the production of petrochemicals from natural gas constituents are examined.
Prerequisite(s): CHEM. 210 and CHE. 220.

CHE. 461.3 — 1/2(3L)
Introduction to Biochemical Engineering
To provide the engineering student with an understanding of the behaviour of microorganisms and their industrial application. The elements of organism structure, and enzyme and cell functions are discussed. Attention is given to the evaluation of batch and continuous fermentation processes and the operations of aeration, agitation and sterilization. Some industrial processes are considered.
Prerequisite(s): CHE. 210

CHE. 464.3 — 1/2(3L)
Petroleum Production Engineering
An introduction to the techniques used in the production of oil and natural gas. Topics include an introduction to petroleum geology, properties of reservoir rocks and petroleum fluids, inflow performance of vertical and horizontal wells. Wellbore hydraulics, well testing and well stimulation.
Prerequisite(s): CHEM. 210.

CHE. 470.0 — 1/2(P)
Industrial Site Visitation
Visits to industrial plants.
Note: Offered in alternate years. Student must take this course in either third or fourth year.

CHE. 498.3 — 1/2(3L-1.5P)
Special Topics
Offered occasionally to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CHEM — CHEMISTRY

CHEM. 112.3 — 1/2(3L-3.5P)
General Chemistry I Structure Bonding and Properties of Materials
Structure, bonding and properties of materials. Topics include atoms and molecules, bonding, molecular structure, intermolecular forces, states of matter, and properties of materials. The laboratory illustrates material covered in the lectures.
Prerequisite(s): Chemistry 30 and (Mathematics B30 or Foundations of Mathematics 30 or Pre-Calculus 30).
Note: Mathematics C30 or Geometry-Trigonometry 30 is strongly recommended. Students with credit for CHEM. 111 or 114 may not take this course for credit.

CHEM. 114.3 — 1/2(3L-3P)
General Chemistry for Engineers
Topics include atoms and molecules, stoichiometry, bonding, molecular structure, states of matter, chemical reactions, and thermochemistry.
Prerequisite(s): Chemistry 30, and (Mathematics B30 and Mathematics C30, or Foundations of Mathematics 30 or Pre-Calculus 30).
Note: This course is intended for students in the College of Engineering. Students with credit for CHEM. 111, 112, or 116 may not take this course for credit.

CHEM. 210 — 1/2(3L-3P-1T)
General Chemistry II Chemical Processes
Chemical reactions, including the rates and energetics of reactions and specific types of reactions. Topics include stoichiometry, chemical reactions, chemical kinetics, equilibrium, specific reactions, and thermodynamics.
Prerequisite(s): CHEM. 111, 112 or 114.
Note: The introductory CHEM courses were changed in 2002. Students with credit for CHEM. 111 may take CHEM. 250. Students with credit for CHEM. 251 may not take CHEM. 250 for credit.

CHEM. 250.3 — 1/2(3L-3P-1T)
Bio Organic Chemistry
Intended to give insight into the specific and fundamental role of organic reactions occurring in nature, to students of all scientific disciplines who have been introduced to organic chemistry and to the life sciences. The emphasis will be on the patterns of reactivity among natural products, rather than on the biochemical roles that these molecules play. The laboratory will introduce students to experimental approaches to bioorganic and pharmaceutical chemistry.
Prerequisite(s): CHEM. 250.
Note: CHEM. 115 and BIOC. 200 recommended. Students with credit for CHEM. 251 may take CHEM. 255 for credit. Students with credit for CHEM. 252 may not take CHEM. 255 for credit.

CHEM. 255.3 — 1/2(3L-3P-1T)
Bio Organic Chemistry
Intended to give insight into the specific and fundamental role of organic reactions occurring in nature, to students of all scientific disciplines who have been introduced to organic chemistry and to the life sciences. The emphasis will be on the patterns of reactivity among natural products, rather than on the biochemical roles that these molecules play. The laboratory will introduce students to experimental approaches to bioorganic and pharmaceutical chemistry.
Prerequisite(s): CHEM. 250.
Note: CHEM. 115 and BIOC. 200 recommended. Students with credit for CHEM. 251 may take CHEM. 255 for credit. Students with credit for CHEM. 252 may not take CHEM. 255 for credit.

CHEM. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

CHEM. 299.6 — 1and2(3L)
Thermodynamics and Kinetics
The study of the structure of matter and the changes it undergoes. Topics include properties of materials, thermodynamics, chemical equilibria and chemical kinetics. The laboratory provides experience with the use of physical-chemical equipment and problem solving skills.
Prerequisite(s): CHEM. 115 and MATH. 110 or 123.

CHEM. 299.6 — 1and2(3L)
Thermodynamics and Kinetics
The study of the structure of matter and the changes it undergoes. Topics include properties of materials, thermodynamics, chemical equilibria and chemical kinetics. The laboratory provides experience with the use of physical-chemical equipment and problem solving skills.
Prerequisite(s): CHEM. 115 and MATH. 110 or 123.
CHEM. 322.3 — 1(3L-4P)
Analytical Chemistry II
Introduction to modern instrumental methods of chemical analyses. The laboratory is designed to develop basic understanding of common instrumental methods. Topics include chromatography, electrophoresis, electrochemistry and spectroscopy.
Prerequisite(s): CHEM. 221.

CHEM. 332.3 — 1(3L-4P)
Inorganic Chemistry II
An introduction to transition metal chemistry including coordination geometry and stereochemistry, ligand field theory, and spectroscopic, magnetic and thermodynamic properties of inorganic compounds. The laboratory work includes experiments on the preparation and characterization of transition metal compounds.
Prerequisite(s): CHEM. 231.

CHEM. 334.3 — 1/2(3L)
Materials Chemistry
Materials chemistry involves the study of the synthesis, properties, characterization, and applications of solid state and polymeric materials. This course is fashioned to illustrate how chemistry can be rationally used to synthesize a wide range of materials with properties that can be tailored for advanced technologies.
Prerequisite(s): CHEM. 231

CHEM. 344.3 — 1/2(3L-3P-1T)
Introductory Chemical Quantum Mechanics
An introduction to quantum mechanics and chemical systems as a foundation for courses concerned with the theory and spectroscopy of atomic and molecular systems.
Prerequisite(s): CHEM. 242 and (MATH. 112, 116 or 124 (116 preferred) and (PHYS. 117 or 125 (125 preferred).
Note: Students with credit for CHEM. 243 may not take this course for credit.

CHEM. 353.3 — 1(3L-2P)
Organic Structure Analysis
Presents the theory and practice of various spectroscopic methods for structure determination with a focus on NMR based methods. Emphasizes the integrated interpretation of spectroscopic data and problem solving. The laboratory component provides ‘hands-on’ experience with the acquisition and manipulation of spectroscopic data.
Prerequisite(s): CHEM. 250.
Note: Students with credit for CHEM. 458 may not take this course for credit.

CHEM. 354.3 — 1/2(3L-4P)
Physical Organic Chemistry
Provides a greater understanding of the structure of organic compounds, and the underlying principles and rationale for organic reactions. The laboratory combines preparative, analytical, and computational experiments to enhance the understanding of physical and mechanistic aspects of organic chemistry.
Prerequisite(s): CHEM. 115 and .255 (formerly CHEM. 252).

CHEM. 369.3 — 2(8P)
Synthetic Chemistry Practicum
Laboratory course focusing on fundamental experimental techniques of synthetic chemistry (organic and inorganic). The course will focus on techniques used to quantitatively measure, transfer, and purify chemical substances including those requiring protection from air and moisture. The main part of the course will integrate those techniques in multi-step syntheses.
Permission of the coordinator required.
Prerequisite(s): CHEM. 255 and. 332.

CHEM. 375.3 — 1/2(3L-3P)
Pollution Waste Disposal and Environment
The disposal and treatment of waste materials will be discussed in terms of their effect on the gaseous and aqueous environments. A series of problems designed to illustrate the material covered in each topic will be assigned. The laboratory sessions are designed to give some understanding of how tests for environmental quality are carried out in the field and in the laboratory.
Prerequisite(s): CHEM. 115.

CHEM. 377.3 — 1/2(3L)
Industrial Chemistry
Discussion of the basic principles of chemistry utilized in diverse technological practices.
Prerequisite(s): CHEM. 115 and MATH. 110

CHEM. 380.3 — 1/2(6P)
3rd Year Research
A laboratory, library, theoretical or computer study under the supervision of a member of the Department. Project is intended to be carried out during the third year of the program. At the end of the project the student will present both an oral and a written report summarizing the results.
Permission of the department required.
Prerequisite(s): 21 credit units in CHEM.
Note: Students who have 30 credit units or more of CHEM courses should take CHEM. 482 or 483 instead. Students who have credit for CHEM. 482 or 483 may not take this course for credit.

CHEM. 389.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CHEM. 399.6 — 1and2(3L)
Seminar
Attendance at departmental seminar sessions throughout the academic year is required by students in the final year of a Four-year or Honours program. Consists of presentations by departmental visitors, faculty and students, followed by discussions.

CHEM. 402.3 — 1/2(3L)
Selected Topics in Analytical Chemistry
This course covers advanced techniques in chemical analysis. Topics will include analytical methods not covered in CHEM. 221.3 or CHEM. 322.3, more detailed discussion of fundamental concepts, and the applications of analytical chemistry in various disciplines.
Prerequisite(s): CHEM. 322.
Note: Students may take this course more than once for credit, provided the topics covered in each offering differ substantially. In such cases, students must consult the Department to ensure that the topics covered are different.

CHEM. 435.3 — 1/2(3L)
Chemical Applications of Group Theory
Understanding the connection between symmetry and electronic and spectroscopic properties of molecules is the main objective of this course. A systematic introduction of point-group symmetries and group theory is provided.
Prerequisite(s): CHEM. 332.
Note: CHEM. 344 (formerly CHEM. 243) is recommended. Students in programs other than Chemistry who have credit for CHEM. 231 or its equivalent may seek permission from the department.

CHEM. 439.3 — 1/2(3L-3.5P)
Organometallic Chemistry
A detailed look at both main group and transition metal organometallic chemistry. Emphasis will be on basic mechanisms, structure-reactivity relationships and applications in organic synthesis and catalysis.
Prerequisite(s): CHEM. 332.
Note: Students in programs other than Chemistry who have credit for CHEM. 231 or its equivalent may seek permission from the department.

CHEM. 440.3 — 1/2(3L)
Selected Topics in Physical Chemistry
Selected topics that are not dealt with or are covered only at an elementary level in other physical chemistry courses offered by the department. Possible topics include advanced spectroscopy, nuclear chemistry, photochemistry, polymers, radiation chemistry, solid-state chemistry, structural techniques, surface and colloid chemistry.
Prerequisite(s): CHEM. 242 and permission of the instructor.
Note: Students may take this course more than once for credit, provided the topics covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

CHEM. 444.3 — 1/2(3L-3P alt wks-1T alt wks)
Computational Chemistry
Computational chemistry including electronic and molecular structure calculations, and the study of macroscopic molecules and phases. Its focus is on the fundamentals of quantum mechanics and statistical mechanics and how they are applied to simulation techniques. Contemporary applications, such as conformational analysis, protein folding and molecular design, will be introduced.
Prerequisite(s): CHEM. 344 (formerly CHEM. 243) or by permission of instructor.
Note: Students with credit for CHEM. 343 will not receive credit for this course.
CHEM. 450.3 — 1/2(3L)
Selected Topics in Organic Chemistry
Selected topics that are not dealt with or are covered only at an elementary level in other organic chemistry courses offered by the department. Possible topics include organic synthesis, organic reaction mechanisms, natural products, organometallic chemistry, heterocyclic chemistry, carbohydrate chemistry and organic photochemistry.

Permission of the department required.
Prerequisite(s): CHEM. 255.
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

CHEM. 456.3 — 1/2(3L)
Natural Products
Provides a basic knowledge of Natural Products Chemistry with emphasis on secondary metabolism. Includes an overview of primary and secondary metabolism, modern techniques for studying secondary metabolism, biological reactions, interaction of plants with other living organisms, and major classes of bioactive compounds grouped according to their basic building blocks and their biogenesis.

Prerequisite(s): CHEM. 255
Note: CHEM. 353 recommended.

CHEM. 482.3 — 1/2(6P)
4th Year Research
A laboratory, library, theoretical or computer study under the supervision of a member of the Department. Project is intended to be carried out during the final year of the program. At the end of the project the student will present both an oral and a written report summarizing the results.

Permission of the department required.
Prerequisite(s): 30 credit units in CHEM.
Note: Students who have credit for both CHEM. 380 and CHEM. 483 may not take this course for credit.

CHEM. 483.6 — 1and2(6P)
4th Year Research
A laboratory, library, theoretical or computer study under the supervision of a member of the Department. Project will be carried out throughout the final year of the program. At the end of the project the student will present both an oral and a written report summarizing the results.

Permission of the department required.
Prerequisite(s): 30 credit units in CHEM.
Note: Students who have credit for both CHEM. 380 and CHEM. 482 may not take this course for credit.

CHEM. 498.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CHEM. 499.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

CHEP — COMMUNITY HEALTH AND EPIDEMIOLOGY

College of Medicine

CHEP. 402.3 — 1(1.5L-1.5S)
Global Health and Local Communities Issues and Approaches
This survey course provides an introduction to ways of critically understanding and acting on key issues affecting the health of disadvantaged peoples locally and globally. Using critical analyses of health and development concepts and theories, this course helps students understand links between local and global health issues, and foster their active involvement in communities as informed global citizens. Through active and participatory learning, students enrolled in Global Health 1 explore issues affecting personal, community and global health development both overseas and locally. Concepts such as determinants of health, globalization and health, and participatory strategies and actions for enhancing well-being are introduced along with related aspects of gender, power, ecology, education, indigenous health, social movements, and foreign aid.

Permission of the Department required.

Prerequisite(s): CHEP. 402.3 or equivalent

CHEP. 403.3 — 1(1.5L-1.5S)
Global Health II
This course aims to critically engage students in global health care challenges and issues facing under-served and low-resourced populations. Using active and participatory learning strategies including case studies and discussion, students will critically examine health care in low-resource settings. Topics include health care challenges and issues, innovative approaches, organizations providing health care, and the management of emergencies in relation to low-resource settings.

Restriction(s): Intended for College of Medicine students in the Certificate in Global Health program; however, open to additional students with permission from the instructor/department.

Prerequisite(s): CHEP. 402.3 or equivalent

CHEP. 410.3
Inner City Practicum
The inner city practicum component of the Certificate in Global Health Program will provide a service learning opportunity for students where they can reflect on, utilize and expand their global health knowledge and skills in a field setting. The practicum will be a 3 credit experience at SWITCH (Saskatoon) http://switchclinic.ca/or SEARCH (Regina). The Student Wellness Initiative Toward Community Health (SWITCH) provides clinical services and health promotion programming during extended hours at the West Side Community Clinic Monday and Wednesday evenings, and Saturday afternoons. SWITCH has established partnerships with the University of Saskatchewan; Community Health Services (Saskatoon) Association and Saskatchewan Health Region-Primary Health Services. The SWITCH vision is to maintain an operating, interdisciplinary student-run health clinic in conjunction with health professionals and community partners to serve clients in Saskatoon’s core neighbourhoods. Student Energy in Action for Regina Community Health (SEARCH) is the analogous student-run clinic in Regina.

Permission of the department is required.

Prerequisite(s): Restricted to College of Medicine students in the Certificate in Global Health program.

CHEP. 411.3
Northern Saskatchewan Practicum
This practicum will be a six-week 3 credit supervised experience in one of three remote northern Saskatchewan communities. Supervision will be provided by a local field preceptor and the Global Health Certificate Program Director (a University of Saskatchewan faculty member). Students will have an orientation to the northern experience and a debriefing opportunity upon their return. Possible topics for the orientation include: Aboriginal and northern health and social issues, history of Aboriginal-European relations with emphasis on treaties; recent history, the reserve system, residential schools and current relations; traditional beliefs, traditional healing, the Medicine Wheel; current social problems, substance abuse; and research with Indigenous Peoples. The purpose of this orientation is to engage students in critical thinking about indigenous issues in preparation for their experience in the north.

Permission of the department is required.

Restriction(s): Restricted to College of Medicine students in the Certificate in Global Health program.

CHEP. 412.3 — 3(39L)
Global Health: Selected Issues in Nicaragua
An eight-week immersion course in Esteli, Nicaragua that offers students the opportunity to build upon and expand their understanding of the theories and practices of community health and development as introduced in the prerequisite class, CHEP 402. Set in semi-urban and rural parts of Nicaragua, the class offers both classroom and experiential learning with a focus on selected issues relevant to the community organizations involved. Special attention is given to a critical analysis of various health development approaches, particularly as they relate to and are practiced in the local/national context.

Prerequisite(s): CHEP. 402 or any other equivalent course or experience, as evaluated by the instructor.

Note: Next offering. 2009 (offered in alternate years).

CHEP. 415.3
International Practicum
This international practicum component of the Certificate in Global Health Program will provide a service learning opportunity for students where they can reflect on, utilize and expand their global health knowledge and skills in a field setting. The practicum will be a 3 credit, six-week mentored experience at a College of Medicine-approved site in a low resource country. Students registering for the international practicum will have already completed the mandatory courses Global Health and Local Communities (CHEP. 402.3) and Global Health 2 (CHEP403.3), met the program language requirement, completed the Northern Saskatchewan practicum and be engaged in the Inner City Practicum. The international practicum experience will be structured by the student and the faculty mentor (advisor) in close consultation with the field preceptor/s at the proposed international site. A variety of experiential approaches and activities may be used to achieve the goals of the practicum.

Permission of the department is required.

Restriction(s): Restricted to College of Medicine students in the Certificate in Global Health program.

Prerequisite(s): Students registering for the international practicum will have already completed CHEP. 402.3 and CHEP. 403.3, met the program language requirement, completed the Northern Saskatchewan practicum (CHEP 411.3) and be engaged in the Inner City Practicum (CHEP 410.3).
CHEN. 204.3 — 1/2(3L)  Intermediate Chinese II
This course offers intermediate level Chinese language instruction to complement CHIN 202.3. This includes: Language Development (talking about the travel, dining, asking seeing doctors, directions, weather, and shopping); intermediary level grammatical points and sentence structures; Pronunciations review; Reading and Writing (characters, sentences from the text). The oral comprehension part of the course will include summary of texts, skits and class presentations. Culture component: Beliefs, Celebrations, Chinese mannerisms, Foods, and Chinese Calligraphy.

Permission of the Department.
Prerequisite(s): CHIN 202.3 or equivalent.
Note: Students who are fluent in Chinese may not take this course for credit. Students with credit for CHIN 220 may not take CHIN. 204 for credit.

CHIN. 214.3 — 1/2(3L)  Advanced Intermediate Chinese I
This course offers advanced intermediate level Chinese language instruction. This includes: Language Development and also will cover a range of issues regarding classical, modern and contemporary Chinese culture and literature. Some of the topics include: classic proverbs, idioms, letters and note writing, translation, short skits, prose, and verses in vernacular. The oral comprehension part of the course will include discussion and summary of texts and skits, dramas and class presentations.

Permission of the Department.
Prerequisite(s): CHIN 204.3 or CHIN 218.3 or equivalent.
Note: Students who are fluent in Chinese may not take this course for credit.

CHIN. 216.3 — 1/2(3L)  Introduction to Classical Chinese Language and Literature I
This course provides an introduction to Classical or Literary Chinese, the language of virtually all Chinese, Japanese, and Korean literature before the 20th century, and much of formal writing today in East Asia. In this course we will study the basic structure, grammar, and vocabulary of literary Chinese, and we will read representative selections of Chinese philosophy, history, literature, religion, and poetry.

Permission of the Department.
Prerequisite(s): CHIN 204.3 or CHIN 217.3 or equivalent.
Note: Students who are fluent in Chinese may not take this course for credit. Students with credit for CHIN 130 may not take CHIN. 216 for credit.

CHIN. 217.3 — 1/2(3L)  Advanced Intermediate Chinese II
This course offers the second half of advanced intermediate level Chinese language instruction. This includes: Language Development and also will cover a range of issues regarding classical, modern and contemporary Chinese culture and literature. Some of the topics include: classic proverbs, idioms, letters and note writing, translation, short skits, prose, and verses in vernacular. The oral comprehension part of the course will include discussion and summary of texts and skits, dramas and class presentations.

Permission of the Department.
Prerequisite(s): CHIN 214.3 or equivalent.
Note: Students who are fluent in Chinese may not take this course for credit.

CHIN. 218.3 — 1/2(3L)  Introduction to Classical Chinese Language and Literature II
This course is the second half of an introduction to Classical or Literary Chinese, the language of virtually all Chinese, Japanese, and Korean literature before the 20th century, and much of formal writing today in East Asia. In this course we will study the basic structure, grammar, and vocabulary of literary Chinese, and we will read representative selections of Chinese philosophy, history, literature, religion, and poetry.

Permission of the Department.
Prerequisite(s): CHIN 216.3 or equivalent.
Note: Students who are fluent in Chinese may not take this course for credit. Students with credit for CHIN 130 may not take CHIN. 218 for credit.

CHIN. 233.3 — 1/2(3L)  Images of China in Film
This course surveys examples from Chinese cinema that can be seen to define some of the principal contours of Chinese culture viewed both from within and beyond the borders of China. The course will be taught in English and all films are subtitled. Based on recommendations and student's own interests, additions can be made to the films highlighted in this class. Films will be approached through parallel investigations of contemporary studies of Chinese culture and society, Chinese language and history, cross-cultural studies with a focus on China, and the development of a national Chinese national cinema.

Permission of the Department.
Prerequisite(s): Completion of 30 credit units at the university, or permission of the department.
Note: This course may not be used to fulfill the Language requirement in Arts and Science programs.

CHIN. 298.3 — 1/2(3L)  Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CHIN. 299.6 — 1and2(3L)  Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CHIN. 398.3 — 1/2(35)  Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CHIN. 399.6 — 1and2(35)  Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
CLAS — CLASSICS
College of Arts and Science

CLAS. 103.3 — 1/2(3L)
Medical Terminology
Presents the most important Greek and Latin roots of the vocabulary of contemporary medicine and demonstrates the predictable patterns by which these roots combine. Students will learn to define new compounds and phrases by analysis of their parts and will be introduced to language history, linguistic principles and etymology.
Formerly: CLAS. 163.
Note: Students with credit for CLAS. 163, 241, 262 or 263 may not take this course for credit. These courses have not been offered for more than ten years as of 2012. May be taken as an elective only under Requirement 7 of Program Types A, B, C, and D.

CLAS. 104.3 — 1/2(3L)
Classical Myths
A study of the traditional stories of Greek gods and heroes with some consideration given to both earlier Mesopotamian and later Roman mythic traditions.
Formerly: CLAS. 238. CLAS. 238 has not been offered for more than ten years as of 2012.
Note: May be taken as an elective only under Requirement 7 of Program Types A, B, C and D.

CLAS. 103.3 — 1/2(3L)
Classical Roots of English
An examination of the Latin and Greek roots of English vocabulary and grammar.
Formerly: CLAS. 215. CLAS. 215 has not been offered for more than ten years as of 2012.

CLAS. 105.3 — 1/2(3L)
Advanced Bioscientific Terminologies
Continues and develops the methods and materials introduced in CLAS. 103.3. Presents advanced and specialized Medical Terminologies and an introduction to the major Latinate bioscientific corpora, especially the Nomina Anatomica and the various biological nomenclatures. Students will improve their etymological and linguistic skills and their ability to define previous unseen Latinate compound words and phrases.
Prerequisite(s): CLAS. 103.
Note: May be taken as an elective only under Requirement 7 of Program Types A, B, C, and D.

CLAS. 110.3 — 1/2(3L)
Greek Civilization
A survey of the culture of the Greeks to the end of the Classical period, based on readings in translation from Greek literature and on other ancient source materials.

CLAS. 111.3 — 1/2(3L)
Roman Civilization
Surveys Roman culture in the Republican and Imperial periods, based on readings in translation from Roman literature and on other ancient source materials.
Note: Students with credit for CLAS. 121 may not take this course for credit.

CLAS. 220.3 — 1/2(3L)
Daily Life in Ancient Greece and Rome
Studies daily life in ancient Athens and Rome.
Prerequisite(s): 6 credit units from: ARCH. 116; CLAS. 110, 111; HIST. 110, or the permission of the instructor.
Note: pre-1815; Europe and Great Britain.

CLAS. 225.3 — 1/2(3L)
Women in Antiquity
Studies the life and achievements of women in the ancient world.
Prerequisite(s): CLAS. 110 and. 111, or completion of 30 credit units at the university.
Note: pre-1815; Europe and Great Britain.

CLAS. 227.3 — 1/2(3L)
Comedy
An introduction to ancient Greek and Roman comedy through careful study of the works of Aristophanes, Menander, Plautus and Terence.
Formerly: CLAS. 332.
Prerequisite(s): CLAS. 110 and. 111, or completion of 30 credit units at the university.
Note: pre-1815; Europe and Great Britain.

CLAS. 228.3 — 1/2(3L)
Epic
An introduction to Greek and Roman epic poetry with emphasis on its artistic qualities and cultural significance. Selections from Homer, Hesiod, Apollonius, Virgil, Ovid, Lucan, and/or Statius.
Formerly: CLAS. 334. CLAS. 334 has not been offered for more than ten years as of 2012.
Prerequisite(s): CLAS. 110 and. 111, or completion of 30 credit units at the university.
Note: pre-1815; Europe and Great Britain.

CLAS. 240.3 — 1/2(3L)
Ancient Art and Architecture I Bronze Age to Classical Greece
An introduction to the art and architecture of the Aegean Bronze Age and the origins and development of Greek vase painting, sculpture and architecture to the end of the Classical era.
Prerequisite(s): CLAS. 110 and. 111, or completion of 30 credit units at the university.
Note: pre-1815; Europe and Great Britain.

CLAS. 242.3 — 1/2(3L)
Ancient Art and Architecture II Graeco Roman World
A study of the Art and Architecture of the Graeco-Roman World (200 B.C. to A.D. 400), with focus on the Roman adaptation and transformation of Hellenistic Greek aesthetic practices and principles in the spheres of architecture, sculpture, interior decoration and luxury crafts.
Prerequisite(s): CLAS. 110 and. 111, or completion of 30 credit units at the university.
Note: pre-1815; Europe and Great Britain.

CLAS. 252.3 — 1/2(3L)
Introduction to Greek Archaeology
An introduction to the major sites of the Aegean from the Bronze Age to the Hellenistic Era, with emphasis on the reconstruction of culture through the archaeological record.
Formerly: CLAS. 236. CLAS. 236 has not been offered for more than ten years as of 2012.
Prerequisite(s): ARCH. 112 or 116 or CLAS. 110.
Note: pre-1815; Europe and Great Britain.

CLAS. 248.3 — 1/2(3L)
Introduction to Roman Archaeology
An introduction to the major sites of the Roman world, from the Etruscan period to the early empire, focusing on evidence from sites in Italy and the Provinces from which the rise of Roman culture and its impact on other cultures will be assessed.
Formerly: CLAS. 236. CLAS. 236 has not been offered for more than ten years as of 2012.
Prerequisite(s): ARCH. 112 or 116 or CLAS. 111.
Note: pre-1815; Europe and Great Britain.

CLAS. 252.3 — 1/2(3L)
Paganism and Christianity in Early Christian Centuries of Roman Empire
A study of the relationships between paganism and Christianity until A.D. 430.
Prerequisite(s): CLAS. 110 and. 111, or completion of 30 credit units at the university.
Note: pre-1815; Europe and Great Britain.

CLAS. 259.3 — 1/2(3L)
Ancient Christian Literature
A survey of the major literary works of the Greek and Latin Christian Fathers, with emphasis on the poetry of Gregory Nazianzen and on Augustine’s Confessions.
Prerequisite(s): CLAS. 111 or completion of 30 credit units at the university.
Note: pre-1815; Europe and Great Britain.

CLAS. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

CLAS. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

CLAS. 356.3 — 1/2(3L)
Archaeology of Aegean Bronze Age
A study of the material remains of Bronze Age cultures in the Aegean (Minoan, Cycladic and Mycenaean) to reconstruct the contexts in which these prehistoric cultures evolved and were socially active.
Prerequisite(s): CLAS. 247.
Note: pre-1815; Other Regions.
CLAS. 357.3 — 1/2(3L)
Archaeology of Early Greek Polis
A study of the material remains of the 11th to the 6th centuries B.C. in Greece that witness the emergence of culture from a period of severe recession to the florescence of the polis or "city state" that becomes the hallmark of the Classical era.
Prerequisite(s): CLAS. 247.
Note: Pre-1815; Europe and Great Britain.

CLAS. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CLAS. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CLAS. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CLAS. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

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CME — COMPUTER ENGINEERING

College of Engineering

CME. 331.3 — 1(3L-3P alt weeks)
Microprocessor Based Embedded Systems
Covers the architecture and operation of microcontrollers used in embedded systems. The course focuses on hardware and software techniques used to program a microcontroller and interface it with external devices. Emphasis is placed on using both assembly language and C to program the microcontrollers. Microcontroller architecture is discussed in general with certain internal peripherals discussed in detail.
Formerly: EE 331
Prerequisite(s): CMPT. 116 and EE 232
Note: Students with credit for EE 331 will not receive credit for this course.

CME. 332.3 — 2(3L-3P alt weeks)
Real Time Computing
Provides the foundations for the multi-disciplinary field of real-time systems. In addition to basic time-constrained design and analysis techniques, the course addresses the issues of hardware/software tradeoffs, static and dynamic scheduling algorithms, features of real-time operating system kernels, and common design problems in multitasking systems; topics are supplemented by examples of real-time applications.
Formerly: EE 332
Prerequisite(s): CMPT. 115 or CMPT. 117, CME. 331, and CME. 341 (taken).
Note: Students with credit for EE 332 will not receive credit for this course.

CME. 341.3 — 1(3L-3P)
Logic Design Using FPGAs
This course investigates techniques for designing large digital circuits with the Verilog Hardware Description Language (Verilog HDL). The course focuses on FPGAs; however, the techniques discussed are also applicable to the design of ASICs. The architectures of FPGAs are discussed in general with certain aspects of their internal operation discussed in detail. Emphasis is placed on connecting the Verilog HDL code to the hardware circuit that is constructed by the Verilog compiler and router.
Formerly: EE 431
Prerequisite(s): CMPT. 116 and (EE 232 or EP 321).
Note: Students with credit for EE 431 will not receive credit for this course.

CME. 342.3 — 1(3L-3P alt weeks)
VLSI Circuit Design
A general introduction to VLSI design, analysis and simulation. Topics include CMOS cell design, logical effort, circuit simulation and system design.
Formerly: EE 432
Prerequisite(s): EE 232
Note: Students with credit for EE 432 will not receive credit for this course.

CME. 365.3 — 1(3L)
Introduction to Digital Signal Processing and Communication
Provides fundamental knowledge of digital signal processing and digital communication for students not majoring in Electrical or Computer Engineering. Topics covered are z-transform, frequency response of discrete time systems, sampling and frequency aliasing, Fourier series and discrete Fourier transform, fast Fourier transform (FFT), amplitude modulation, quadrature amplitude modulation, and time and frequency division multiple access. Coding the FFT is also discussed.
Prerequisite(s): MATH. 223 and CMPT. 116.
Note: This course will not be offered in 2014-15.

CME. 392.3 — 2(6P)
Computer Engineering Laboratory
Laboratory experiments in electronic hardware and software relevant to the pre- and corequisite courses.
Prerequisite(s) or Corequisite(s): CME. 332, EE 352 and CME. 341.
Note: Students with credit for EE 392 may not take this course for credit.

CME. 433.3 — 1(3L-3P alt weeks)
Digital Systems Architecture
Components and architecture complement each other in the design of digital systems implemented in ASIC (Application Specific Integrated Circuit), ASSP (Application Specific Standard Product), FPGA/CLPD (Field Programmable Gate Array/Complex Programmable Logic Device), Microprocessor, DSP (Digital Signal Processor) and SOC (System on Chip). CME. 341 and CME. 435 teach how to build a system from components. CME. 433 teaches guiding principles to organize a system using a top down design approach.
Prerequisite(s): CME. 331 and CME. 341.

CME. 435.3 — 1(3L-3P alt weeks)
Verification of Digital Systems
Covers the verification of digital circuits and systems with emphasis on SystemVerilog, a verification language. It starts with the basics, such as functional verification methodologies, and SystemVerilog fundamentals, and gradually builds to more complex examples and advanced topics. At the end of the course, a complete verification system is created using SystemVerilog.
Prerequisite(s): CME. 341.

CME. 451.3 — 2(3L-3P alt weeks)
Transport Networks
Topics include requirements of core and metropolitan telecommunications networks for the transport layer; physical layer technologies such as optical and electrical transmission, clock synchronization and receiver code alignment; protocols for transport networks including SONET, ATM, MPLS, Ethernet, IP, and RPR, physical and logical circuit switching, packet and cell switching, queuing and traffic management, and the design of network elements and the design of next-generation transport networks.
Prerequisite(s): EE 232 or CMPT. 320.

CME. 462.3 — 2(3L-1P)
Multimedia Signals and Systems
Covers the principles of multimedia protocols related to sound and speech of both analog and digital video signals, and extends the knowledge to digital video formats standardized in MPEG. This course discusses signals for human perception based on the 1D and 2D DSP theories in time and frequency domain and methods to match their speed to communication bandwidth.
Prerequisite(s): (CME. 365 or EE 461).
Note: This course will not be offered in 2014-15.

CME. 495.6 — 1and2(6P)
Capstone Design Project
Emphasizes the application of a formal design process. Students, working in small groups, apply top-down design principles to a year-long project starting with a basic description of the product or system and culminating with an oral presentation of the final working design.
Prerequisite(s): CME Program Core and 6 credit units from the CME Program Focus Areas.
Prerequisite(s) or Corequisite(s): 9 additional credit units from the CME Program Focus Areas.

CME. 498.3 — 1/2(3L)
Special Topics
Offered occasionally to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
CMPT — COMPUTER SCIENCE

College of Arts and Science

CMPT. 100.3 — 1/2(3L-1.5T)
Introduction to Computing
A survey of major computer science areas, combining a breadth of topics with depth via specific examples within each topic. Topics include: history of computing, computer applications, analysis and design, high level programming, computer software, computer hardware, artificial intelligence, and the social impact of computers.
Prerequisite(s): Mathematics A30 or B30 or C30; or Foundations of Mathematics 30; or Pre-Calculus 30.
Note: After CMPT. 100, students can take any of 103, 111, 106, or 115, and 117. Students can receive credit for only one of CMPT. 100, CMPT. 102, CMPT. 120, CMPT. 175. Students may not take CMPT. 100 for credit after taking CMPT. 105. Also, students may not take CMPT. 100 for credit concurrent with or following CMPT. 115 or CMPT. 117. Students wishing to major in computer science are advised to take CMPT. 117. After CMPT. 100, students can take any of CMPT. 105 and CMPT. 111.

CMPT. 105.3 — 1(3L-1.5T)
Introduction to Computing and Interactive Systems Design
Introduction to ideas and concepts in computer science and the design of interactive systems. Concepts in computing such as algorithms, problem solving, and programming are explored using interactive multimedia systems as the focus. Basic concepts in design and interaction, such as the interaction cycle, event-based behaviour, and prototyping are introduced.
Note: CMPT. 105 can be taken as a science course by non-science majors. Science majors may not receive science credit for this course. CMPT. 105 can be taken for credit after the completion of CMPT. 100, 102, 120 or 175; but CMPT. 100, 102, 120 and 175 cannot be taken for credit after completion of CMPT. 105. CMPT. 105 cannot be taken for credit after CMPT 111.

CMPT. 106.3 — 1(3L-1.5T)
Design and Construction of Games and Interactive Systems
Introduces additional basic concepts in computer science and interaction design, building on the algorithmic foundation of CMPT. 105, and adding topics such as representation of data, use of expressions, development of subprograms, and creation and manipulation of graphical images. Design topics include consideration of narrative, gameplay rules, collaboration, and animation.
Prerequisite(s): CMPT. 105 or CMPT. 111.
Note: Students cannot take CMPT. 106 for credit after CMPT 111.

CMPT. 111.3 — 1/2(3L-1T)
Introduction to Computer Science and Programming
Introduces basic concepts of computer science through the study of traditional elementary programming, object-oriented programming, debugging, design of objects, and standard algorithms with their analysis.
Prerequisite(s): Mathematics 830 or Foundations of Mathematics 30 or Pre-Calculus 30.
Note: While designed for students majoring in Computer Science, Computing, Bioinformatics, or Software Engineering, it is open to all students seeking a solid introduction to Computing. Students may receive credit for only one of CMPT. 111, CMPT. 113 or CMPT. 116.

CMPT. 113.3 — 1/2(3L-1.5P)
Computing Using Excel and VBA
Gives the fundamentals of programming, including functions, procedures and arrays. It introduces object-oriented programming and GUI components. Also some basic numerical methods and engineering applications are presented.
Prerequisite(s): Mathematics 830 or Foundations of Mathematics 30 or Pre-Calculus 30.
Note: Students who have credit for CMPT. 106, CMPT. 111, or CMPT. 116 may not receive credit for this course. CMPT. 113 cannot be used as a prerequisite for CMPT. 117 unless the student has achieved a grade of 75% or higher in CMPT. 113 and has permission of the instructor.

CMPT. 115.3 — 2(3L-1.5T)
Principles of Computer Science
Introduces more of the basic concepts of computer science and object-oriented software development with an emphasis on fundamental data structures (lists, stacks, queues, trees) and associated algorithms. This course includes recursion, abstract data types and selected topics exploring some of the breadth of computer science.
Prerequisite(s): CMPT. 106 or CMPT. 111.
Note: Students can have credit for at most one of CMPT. 115 and CMPT. 117. Students may not take CMPT. 100, 102, 106, 120 or 175 for credit concurrently with or after CMPT. 115.

CMPT. 116.3 — 1(3L-1.5P)
Computing I
Gives the fundamentals of programming, including functions, procedures and arrays. It introduces object-oriented programming and GUI components. Also some basic numerical methods and engineering applications are presented.
Restriction(s): Restricted to students in Physics and Engineering.
Prerequisite(s): Mathematics 830 or Foundations of Mathematics 30 or Pre-Calculus 30.
Note: Students who have credit for CMPT. 111 or CMPT. 113 may not receive credit for CMPT. 116.

CMPT. 117.3 — 2(3L-1.5P)
Computing II
Continues the development of programming skills started in CMPT. 116, with an emphasis on object-oriented programming. Data structures for the storage and efficient retrieval of information will be studied and analyzed, in particular stacks, queues, linked lists and simple binary trees. Examples and exercises will be drawn from engineering applications and numerical methods.
Restriction(s): Restricted to students in College of Arts and Science and College of Engineering.
Prerequisite(s): CMPT. 116, or a grade of at least 75% in CMPT. 113 and permission of the instructor.
Note: Students can have credit for at most one of CMPT. 117 and CMPT. 115. Students may not take CMPT. 100, 102, 106, 120 or 175 for credit concurrently with or after CMPT. 117.

CMPT. 120.3 — 1/2(3L-1.5P)
Digital Document Processing
Is intended for students interested in how to effectively use modern computer software, and in learning how computers work. It provides an overview of: computer and software components; networking; computer security; basic and advanced document preparation; spreadsheets; and data presentation.
Note: CMPT. 120 is a course in modern computer skills, but does not lead directly into a computer science major. After CMPT. 120, students can take any of CMPT. 105 and 111. Students can receive credit for only one of CMPT. 100, 102, 120, or 175. Students may not take CMPT. 120 for credit after taking CMPT. 105. Students may not take CMPT. 120 for credit concurrent with or following CMPT. 115 or CMPT. 117. Students wishing to major in computer science are advised to take CMPT. 111. In addition, students majoring in computer science may not use CMPT. 120 as a course in their major, but may count it as a junior elective as long as CMPT. 120 is taken before CMPT. 115 or CMPT. 117.

CMPT. 175.3 — 1/2(3L-1.5T)
Introduction to Computer Science for Business Students
Provides an overview of significant technical and social issues in information technology, including computer and social networking, eBusiness, new media, and artificial intelligence. The focus is on business systems examples, issues, constraints and opportunities, while introducing practical algorithmic problem solving.
Restriction(s): Only open to students enrolled in the Edwards School of Business
Note: After CMPT. 175, students can take any of 105, 111, or 175, but the usual course is CMPT. 175. Students can receive credit for only one of CMPT. 100, CMPT. 102, CMPT. 175. Students may not take CMPT. 175 for credit after taking CMPT. 105. Also, students may not take CMPT. 175 for credit concurrent with or following CMPT. 115 or CMPT. 117. Students wishing to major in computer science are advised to take CMPT. 111. In addition, students majoring in computer science may not use CMPT. 175 as a course in their major, but may count it as a junior elective as long as CMPT. 175 is taken before CMPT. 115 or CMPT. 117.
CMPT. 214.3 — 1(3L‑2P)
Programming Principles and Practice
A hands-on approach to software development at the individual and small team level. Application of software tools— including scripting languages, system utilities and libraries—for construction of small software systems. Integrated with and motivated by programming practices, system development, testing and maintenance issues.
Prerequisite(s): CMPT. 115 or 117, MATH. 110.
Note: Students who have credit for CMPT. 330 may not take this course for credit.

CMPT. 215.3 — 2(3L‑1.5T)
Introduction to Computer Organization and Architecture
An introduction to the design of contemporary computer systems, focusing on the hardware-software interface and the upper hardware levels. Topics include machine and assembly language, computer arithmetic, the processor datapath and control, pipelining, memory hierarchies, and I/O systems.
Prerequisite(s): CMPT. 214.
Note: A student cannot receive credit for more than one of CMPT. 215, EE 331, or CME. 331.

CMPT. 260.3 — 1(3L‑1.5T)
Mathematical Logic and Computing
An introduction to elementary applied propositional and predicate logic. Fundamental proof techniques with an emphasis on induction. The theory of sets, relations and functions. Course concepts are related to Computer Science areas, with an emphasis on relational databases.
Prerequisite(s): CMPT. 115 or 117, and MATH. 110.

CMPT. 270.3 — 1(3L‑1.5T)
Developing Object-Oriented Systems
Object-oriented programming. The use of modeling, abstractions, patterns, and GUIs to design and build a good OO system. Unit testing to ensure that it works. Application of the techniques to interactive systems.
Formerly: First half of CMPT. 250.6
Prerequisite(s): CMPT. 115 or 117, and 3 credit units of 100-level calculus or STAT. 245 or equivalent.
Note: Students with credit for CMPT. 250 may not take this course for credit.

CMPT. 275.3 — 1(3L)
Organizational Information Systems
Studies the development of information systems in organizations/businesses. The life cycle of information systems is used as a framework for studying the management and control of information, and the evaluation of opportunities for improving information systems and integrating them into organizations.
Prerequisite(s): Any one of CMPT. 100, 102, 105, 111, 113, 116, or 175.
Note: Students with credit for CMPT. 250, 355 or 370 cannot take CMPT. 275 for credit. CMPT. 275 can only be used as a general elective in a Computer Science or Computing major.

CMPT. 280.3 — 2(3L‑1.5T)
Intermediate Data Structures and Algorithms
Formal abstract data types; tree representations and searching: ordered trees, balanced trees, simple special trees; graph representations and searching: path algorithms, dfs, bfs, backtracking; direct and Btree files; and sorting algorithms.
Formerly: Second half of CMPT. 250.6.
Prerequisite(s): CMPT. 270.
Note: Students with credit for CMPT. 250 may not take this course for credit.

CMPT. 281.3 — 1(3L‑1P)
Website Design and Development
Introduction to design concepts and issues in the development of usable applications on the World Wide Web, including visual design concepts, the user-centered iterative design process, and development technologies that enable application development for the Web.
Prerequisite(s): CMPT. 106.3 or CMPT. 111.3
CMPT. 281 cannot be used towards requirements for a B.Sc. in Computer Science, but may be used as an open elective. CMPT. 281 cannot be taken after CMPT. 381 or CMPT. 370 (but may be taken concurrently).

CMPT. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CMPT. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CMPT. 306.3 — 1/2(3L‑1.5T)
Game Mechanics
Will cover aspects of game graphics, physics, sound, input, AI and networking at an introductory level. This course is intended to provide a broad basis in computer game-related fields, serving as the primer and providing context for specialized courses in fourth year.
Prerequisite(s): CMPT. 270, MATH. 264 or MATH. 266 are recommended.

CMPT. 317.3 — 2(3L‑1T)
Introduction to Artificial Intelligence
A survey of Artificial Intelligence techniques and underlying theory. Topics include problem solving and planning, knowledge representation techniques, reasoning engines and expert systems, and a tour of various application areas of Artificial Intelligence including machine learning, natural language processing and high-level computer vision.
Prerequisite(s): CMPT. 260 and 280.

CMPT. 332.3 — 1/2(3L‑1P)
Operating Systems Concepts
An introduction to the principles of modern operating systems. The synchronization and communication of cooperating processes. Process Scheduling. Virtual Memory. File System design and organization. Introduction to distributed systems.
Formerly: CMPT. 422.
Prerequisite(s): CMPT. 280, and CMPT. 215 or CME. 331.
Note: Students with credit for CMPT. 422 may not take this course for credit.

CMPT. 340.3 — 1/2(3L‑1T)
Programming Language Paradigms
A comparative study of programming languages and paradigms. Introduction to functional programming languages, such as Haskell; topics include: recursion, higher-order functions, polymorphic types, lazy evaluation. Introduction to logic programming languages, such as Prolog; topics include: unification, backtracking, resolution, non-determinism. An introduction to interpreters, parsers, program transformations, and semantic models.
Prerequisite(s): CMPT. 214, 260, and 270.
Note: One of CMPT. 215 or EE 331 recommended.

CMPT. 350.3 — 2(3L‑1.5T)
Web Programming
Focuses on the concepts, technologies and tools needed for the development of web-centric applications. Special emphasis will be given to client-server programming, scripting, integration of existing application and high-level networking issues, e.g., use of SOAP.
Prerequisite(s): CMPT. 280.

CMPT. 352.3 — 2(3L)
An Introduction to Information Security
Considers various aspects of security in information systems, both networked and non-networked. The challenges are managerial and administrative as well as technical. Students will have the opportunity to research real-world cases and to engage in classroom debates about current information security issues.
Prerequisite(s): CMPT. 270 or CMPT. 275.

CMPT. 355.3 — 2(3L‑1T)
Theory and Application of Data Bases
Lectures, assignments and projects dealing with the management, storage, and retrieval of large volumes of data. Concentrates on the relational data model, and relational data base management systems. Topics include: recovery and concurrency, integrity and security, query optimization, normalization, and semantic modelling. Additional topics include multimedia databases and other paradigms.
Formerly: CMPT. 374.
Prerequisite(s): CMPT. 260 and 270, or CMPT. 275.
Note: Students with credit for CMPT. 374 may not take this course for credit.

CMPT. 360.3 — 1(3L)
Machines and Algorithms
The first part develops and analyzes some standard techniques for algorithm development which are widely applicable to computer science problems. The second part analyzes several formal models of computers so that their capabilities are known.
Prerequisite(s): CMPT. 260 and 280, 6 credit units in 200-level MATH or STAT (excluding MATH. 213 and STAT. 244).

CMPT. 364.3 — 3L
Automata and Formal Languages
Introduces the foundations of Computer Science. The theory of computation is explored through automata and formal languages. In particular, finite automata, grammars, Turing Lachines and applications to Computer Science such as dynamic modeling, computer architecture, lexical analysis and parsing are studied.
Prerequisite(s): CMPT. 260 and 6 credit units in 200-level MATH or STAT.
CMPT. 370.3 — 1(3L-1.5T)
Intermediate Software Engineering
Principles and techniques for developing software combined with the practical experience of creating a mid-size software system as a member of a software development team. Includes: teamwork; projects, planning and process; users and requirements; use cases; modeling; quality; software architecture; testing; GUI design, design principles, patterns and implementation; ethics, professionalism.
Prerequisite(s): CMPT. 214 and 270.

CMPT. 371.3 — 2(3L-1.5P-1.5T)
Software Management
Covers software management topics in the context of a significant group project. Includes: software process; process improvement; project tracking and metrics; project planning; project and group management; IT enterprise strategy and planning; software configuration management; deployment and maintenance; inspection; testing; verification and validation; and quality assurance.
Prerequisite(s): CMPT. 370.
Prerequisite(s) or Corequisite(s): CMPT. 280.

CMPT. 381.3 — 2(3L-1P)
Implementation of Graphical User Interfaces
Advanced introduction to concepts and structures used to develop GUIs in software, focusing on building user interfaces. Covers the fundamentals of GUI toolkits including input, widgets, layout, events, model-view-controller architectures, and two-dimensional graphics.
Prerequisite(s): CMPT. 270

CMPT. 394.3 — 2(3L)
Simulation Principles
Introduction to the development of logical, numerical and statistical models of systems; deterministic and probabilistic models; Monte Carlo simulations. Basic elements involved in simulation such as entities, attributes, events and time representation. Properties of computer modelling languages; design, development and testing of models.
Prerequisite(s): CMPT. 270.
Prerequisite(s) or Corequisite(s): One of STAT. 242, 245, or EE 216 (STAT. 242 preferred)

CMPT. 398.3 — 1/2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CMPT. 399.6 — 1and2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CMPT. 400.3 — 1and2(1.5S)
Research Topics in Computer Science
Senior students will be introduced to research in an advanced area of computer science under the supervision of a faculty member specializing in the area.

Permission of the department required.
Prerequisite(s): In the final year of an Honours Program; or a cumulative percentage average of at least 70% in 24 credit units in computer science and written permission of the department.

CMPT. 401.0
Professional Internship I
Internship students register in this zero-credit-unit course for the first four-month installment of the 16 month internship placement. This course is graded on a Pass/Fail basis.

CMPT. 402.0
Professional Internship II
Internship students register in this zero-credit-unit course for the second four-month installment of the 16 month internship placement. This course is graded on a Pass/Fail basis.
Prerequisite(s): CMPT. 401.

CMPT. 403.0
Professional Internship III
Internship students register in this zero-credit-unit course for the third four-month installment of the 16 month internship placement. This course is graded on a Pass/Fail basis.
Prerequisite(s): CMPT. 402.

CMPT. 404.0
Professional Internship IV
Internship students register in this zero-credit-unit course for the last four-month installment of the 16 month internship placement. This course is graded on a Pass/Fail basis.
Prerequisite(s): CMPT. 403.

CMPT. 405.3 — 1and2(1.5P-1.5S)
Project Design and Implementation
Senior students apply engineering and scientific methods to develop a major computer system or system component. Students work individually or in teams and are supervised by a faculty member specializing in the area. Students prepare and present interim and final reports on their project.

CMPT. 408.3 — 2(3L)
Ethics and Computer Science
Addresses social, ethical, legal and managerial issues in the application of computer science to the information technology industry. Through seminars and case studies, human issues confronting computer science graduates will be addressed. Topics include managerial and personal ethics, computer security, privacy, software reliability, personal responsibility for the quality of work, intellectual property, environment and health concerns, and fairness in the workplace.
Prerequisite(s): Successful completion of 30 credit units in computer science, including at least 3 credit units at the 400-level of computer science.

CMPT. 412.3 — 3L
Social Computing and Participative Web 2.0
Will cover a variety of topics related to the emerging area of Social Computing and Participative Web. It will discuss theories, technologies and human issues of Web 2.0: how people network online, what communities they form, why they participate and contribute, and how to design infrastructures for successful online communities.
Prerequisite(s): CMPT. 350.

CMPT. 417.3 — 1(3L)
Knowledge Representation and Reasoning
An introductory study of logic-based approaches to knowledge representation and automated reasoning. Topics include search techniques, constraining satisfaction problems, meta-programming, truth maintenance systems, modal logics, and situation calculus. Besides these logic-based approaches, we will also discuss uncertainty formalisms such as probabilistic causal nets and the Dempster-Shafer theory.
Prerequisite(s): CMPT. 317, one of CMPT. 340 or 360.
Note: May only be offered every second year.

CMPT. 418.3 — 1(3L)
Intelligent Systems
Covers selected topics from the areas of intelligent information management and intelligent user interaction. The theme of the course is the management and effective use of data in largely non-formal application environments, such as the Web, unstructured documents, user interaction, and multi-agent systems.
Prerequisite(s): STAT. 245 and either CMPT. 317 or both CMPT. 355 and CMPT. 340.
Note: May only be offered every second year. Check registration guide for offerings.

CMPT. 432.3 — 2(3L)
Advanced Operating Systems Concepts
An advanced look at the principles of modern operating systems. The process and the kernel, communication between processes, interrupt handling in the kernel. Message passing and synchronization primitives and their implementation. Implementation of Virtual memory and file systems. Device drivers and I/O.
Prerequisite(s): CMPT. 332.
Note: May only be offered every second year.

CMPT. 433.3 — 2(3L)
System and Network Administration
The deployment and maintenance of modern computer systems. Topics to be covered include architectures, heterogeneous systems, authentication and security, network services including firewalls, storage services, performance analysis and tuning, management and configuration of services and system resources, system initialization, drivers, cross-platform services, policies and procedures.
Prerequisite(s): CMPT. 332.
Prerequisite(s) or Corequisite(s): One of CMPT. 352, 432, 434.
CMPT. 434.3 — 1/2(3L)
Computer Networks
The principles and practice of computer networking, focusing on the Internet and its structure, protocols, and applications. Topics include network applications and programming, reliable data transfer, flow and congestion control, routing, multimedia networking, local area networks, security, and network management.
Formerly: CMPT 424.
Prerequisite(s): CMPT 332.
Note: Students with credit for CMPT 424 may not take this course for credit.

CMPT. 435.3 — 2(3L-1P)
Foundations of Concurrent Programming
Theory and practice of concurrent programming. Process interaction using shared variables and message passing; parallel computing; development of correct programs; general problem solving techniques; scientific computing; distributed programming.
Prerequisite(s): CMPT 215 and 6 credit units from: CMPT. 332, CMPT. 340, CMPT. 360.

CMPT. 436.3 — 1(3L)
Mobile and Cloud Computing
Investigates the problems and possible approaches for enabling mobile and cloud computing. After a brief discussion of the basic problems in developing applications for the field, the class will focus on technologies such as RPC, RMI/Remoting, Web Services (SOAP/REST) and cloud platforms like IaaS, PaaS and SaaS.
Formerly: CMPT 426.
Prerequisite(s): One of CMPT. 332, 350 or 370.
Note: Students with credit for CMPT. 426 may not take this course for credit.

CMPT. 440.3 — 2(3L)
Advanced Topics in Programming Languages
Advanced topics in programming languages will be selected from: programming language design, programming language semantics, code optimization, memory management, garbage collection, closures, functional programming, logic programming, aspect-oriented programming, concurrent programming, history of programming languages, advanced programming language features and their implementation, polymorphic type systems, domain specific languages.
Prerequisite(s): CMPT. 340.
Note: May only be offered every second year.

CMPT. 442.3 — 2(3L)
Compiler Design and Implementation
Introduction to the systematic construction of a compiler: context-free and regular grammars, scanners, attribute grammars, parsing, syntax trees, runtime organization, symbol tables, internal representations, compile-time error handling, semantic analysis, storage allocation, code generation, linking, byte code, interpreters. Students will use compiler construction tools in a term project.
Prerequisite(s): CMPT. 360.
Note: CMPT. 340 recommended.

CMPT. 455.3 — 3L
Information Modeling and Retrieval
Addresses issues, approaches, and techniques for designing, using, and managing information in complex state-of-the-art databases. Issues include: optimizing the information from existing databases, information economics, information control, and information risk management. Approaches include: information engineering and information architecture. Techniques include: metadata and xml; data warehousing and OLAP; data mining, and data visualization.
Prerequisite(s): CMPT. 355.

CMPT. 461.3 — 2(3L)
Intractable Problems and Models of Computation
Problems which have no known efficient solution are studied; exact inefficient algorithm design techniques are introduced, as are efficient approximation algorithms. NP-completeness proofs are developed as evidence of intractability. Part of the course is a rigorous and systematic introduction to models of computation via formal language theory.
Formerly: CMPT. 361.
Prerequisite(s): CMPT. 360 or 364.
Note: Students with credit for CMPT. 361 may not take this course for credit.

CMPT. 463.3 — 1/2(3L)
Advanced Algorithms
A continuation of the algorithms part of CMPT. 360. Some of the algorithm techniques include: augmenting algorithms for network flows, matching and graph connectivity, geometric algorithms for nearest neighbour, intersection problems, and convex hull, parallel and distributed algorithms.
Formerly: CMPT. 416.
Prerequisite(s): CMPT. 360.
Note: Students with credit for CMPT. 416 may not take this course for credit.

CMPT. 470.3 — 1(3L)
Advanced Software Engineering
Covers advanced software engineering principles and techniques. Includes: software architecture; software evolution; reverse engineering; design recovery; refactoring; software comprehension; software analysis; domain specific techniques; requirements and specification; advanced design and modeling techniques; formal methods; and the business of software.
Prerequisite(s): CMPT. 370.

CMPT. 479.3 — 2(3L)
Usability Engineering
Usability Engineering (UE) is a structured approach to developing usable interface designs. UE helps integrate human-computer interaction (HCI) requirements and design approaches within development projects managed by software engineering (SE) methodologies. This course presents a requirements engineering (RE) approach to usability engineering by providing in depth coverage of the Putting Usability First.
Prerequisite(s): CMPT. 370 or permission of instructor.

CMPT. 480.3 — 2(3L)
Accessible Computing
Investigates accessibility issues and features relating to the analysis and design of computing applications. It introduces major sources of information on accessible computing and works towards developing a comprehensive strategy for improving the accessibility of computing applications.
Formerly: Was offered as Special Topics. 498.
Prerequisite(s): 9 credit units of CMPT courses at the 300-level or above.

CMPT. 481.3 — 1(3L)
Human Computer Interaction
Fundamental theory and practice in the design, implementation, and evaluation of human-computer interfaces. Topics include: principles of design, usability engineering, methods for evaluating interfaces with or without user involvement, techniques for prototyping and implementing graphical user interfaces.
Prerequisite(s): CMPT. 370 or CMPT. 381.

CMPT. 485.3 — 2(3L)
Computational Robotics
Will address the algorithms used in mobile robotics for map building, path planning and collision avoidance. At the end of this course, the student will be able to guide a mobile robot using sensor data, past random obstacles from a defined starting position to an ending position. The course will focus on mobile robot motion, and will touch on subjects from engineering, computer vision, computational geometry, artificial intelligence and multi-agent systems.
Prerequisite(s): (MATH. 264 or MATH. 266) and CMPT. 317.

CMPT. 488.3 — 2(3L-1P)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
CMPT. 499.6 — 1and2(3S) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CMRS. 399.6 — 1and2(3S) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CMRS. 499.6 — 1and2(3S) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CMRS — CLASSICAL, MEDIEVAL, AND RENAISSANCE STUDIES

College of Arts and Science

CMRS. 110.3 — 1/2(3L) The Graeco Roman Tradition Evolution and Reception
An introduction to the cultural and literary traditions of ancient Greece and Rome through the close reading of specific core texts. Emphasis will be placed on the development of key themes and values as they evolved in antiquity, and their reception in modern times.

Note: Students with credit for CMRS. 201.6 or INTS. 101.12 will not receive credit for this course.

CMRS. 111.3 — 1/2(3L) Medieval and Renaissance Civilization
An introduction to the civilization of the European Middle Ages and Renaissance through the lens of literature, philosophy, art, and other sources.

Note: Students with credit for CMRS. 201.6 or INTS. 101.12 will not receive credit for this course.

CMRS. 298.3 — 1/2(3L) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CMRS. 299.6 — 1and2(3L) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CMRS. 333.3 — 1/2(1.5L-1.5P) Exploring Medieval and Early Modern Manuscripts
Introduces the student to basic elements in the study of manuscripts. The greatest portion of the course will involve guided transcription, annotation, and analysis of manuscripts relevant to the research of the instructor. The texts in question will never have been edited and thus represent entirely original research. In part it will also involve learning about methods such as context function analysis, provenance research, and historical bibliography. Although this will be done initially through lectures, the experience of confronting pre-modern manuscripts first-hand in all of their richness will form the backbone of the course.

Prerequisite(s): 6 credit units. 200-level or above HIST, ENGS, or CMRS or permission of instructor.

Note: Pre-1815, Europe and Great Britain.

CMRS. 398.3 — 1/2(3S) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CMRS. 401.3 — 1(3S) CMRS Texts and Themes
Many aspects of medieval and renaissance culture had their roots in the Graeco-Roman Classical period. Detailed study of a selected text or theme and related scholarship aims to deepen understanding of cultural continuity and change between the three periods. Texts and themes will change yearly. Please consult CMRS homepage: http://www.artsandscience.usask.ca/crms/.

Prerequisite(s): CMRS. 110 and CMRS. 111, or INTS. 101.12, or permission of the program director.

Note: Pre-1815, Europe and Great Britain. Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

CMRS. 402.3 — 1and2(1.5S) Directed Research
A directed research course wherein students in biweekly meetings with a supervisor and a class seminar will develop skills required for graduate study: preparation of annotated bibliography, research proposal, major research paper and oral presentation. Projects will be focused on the classical, medieval or renaissance period.

Prerequisite(s): Permission of the Program Director.

Prerequisite(s) or Corequisite(s): CMRS. 401 Note: Pre-1815, Europe and Great Britain.

CMRS. 403.3 — 1/2(4P-.5T) Analysis and Public Exhibition of Cultural Artifacts
Independent study of a particular cultural artifact or artifact type, culminating in the public presentation of an exhibit in the Museum of Antiquities. Includes practical experience as a volunteer in the Museum. Contact CMRS director for details.

Prerequisite(s): Permission of the CMRS director is required

Restriction(s): Restricted to students majoring in Classical Medieval and Renaissance Studies

CMRS. 433.3 — 1/2(3L) Advanced Manuscript Studies
An independent study course in which the student works one-on-one with a CMRS faculty member on manuscript evidence relating to that faculty member's research. It involves students directly in the process of advanced primary research and the excitement of discovery using sources which may well never have been examined before.

Prerequisite(s): CMRS. 333.3 or permission of the instructor.

CMRS. 498.3 — 1/2(3S) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CMRS 499.6 — 1and2(3S) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

COMM — COMMERCE

College of Edwards School of Business

COMM. 101.3 — 2(1L-2T) Business Communication I
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, letters, and employment communication, write a group proposal and report, and deliver oral presentations.

Formerly: BSCM. 100.3

Note: Students with credit for BSCM. 100.3 or BAC 14 cannot take this course for credit.

COMM. 103.1 — 1/2(3L) Decision Making I
The focus of this course is on integrated organizational decision making. To achieve this, students will examine case studies requiring an integrated analysis across six business disciplines (Accounting, Finance, Human Resources, Management/Strategy, Marketing and Operations) over the four stages of an organizational life-cycle (start-up, growth, maturity and revitalization) as an organization’s activities shift from strategic exploration to exploitation and back to exploration again.

Note: Students with credit for BAC 11 will not receive credit for this course.

COMM. 102.3 — 1(3L) Introduction to Business Management
Examines the management processes including environment and business analysis, planning, decision making, execution and performance measurement. This course will make major use of case analyses, simulations, organizational audits or other instructional methods that allow the student to assume the role of manager of the organization.

Formerly: MGT. 103.3

Note: This course may not be used for credit towards the BCOMM degree.

COMM. 104.3 — 1/2(3L) Business Statistics I
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.

Formerly: QUAN. 194.3

Note: Students who wish to use this course toward an Arts and Science credit should first refer to Statistics Course Regulations in the Arts and Science section of the calendar.
COMM. 105.3 — 1/2(3L)
Introduction to Organizational Behaviour
Introduces various concepts and tools that will assist in understanding behaviour and enhancing effectiveness in organizations at individual, group and organization-wide levels. Topics include attitudes, values and ethics; motivation and rewards; leadership, communication and change. Also provides an applied foundation for work group effectiveness.
Formerly: COMM. 202.3
Note: Students with credit for COMM. 202.3 or HRM. 243.3 or BAC 28 cannot take this course for credit.

COMM. 109.0 — 2-Jan
Library Research I
Introduction to the University of Saskatchewan libraries and the wide variety of electronic resources available.

COMM. 110.0 — 1
Computer Skills
Introduction to the computer skills necessary to successfully use computers and software in upper year courses. Consists of three modules: General Computing, Spreadsheets and Word Processing.
Note: Workshops run for eight consecutive weeks.

COMM. 112.0 — 1(1L)
University Life
A zero credit course designed to build a set of skills to enhance success in the Edwards School of Business. Topics will include: welcome and orientation to St. Peter's College, student expectations, academic standards for promotion, getting involved in university clubs and lifestyle management in Canada.

COMM. 115.0 — 1(1L)
Business School Life I
A zero credit course designed to build a set of skills to enhance success in the Edwards School of Business. Topics will include: academic honesty and appropriate citation, presentations and case writing, study skills and exam writing skills, managing multiple tasks - time and stress management and an initial business tour.
Restriction(s): ABAC Students

COMM. 119.3 — 1(1.5L-1.5P-1.5S)
Business Competencies
Introduces students to business concepts, the business environment and delivers required business competencies that are relevant to business students. The course is designed to combine previously taught skills with other success factors into a unified whole. The skills ensure future success, retention and a sense of identification with the Edwards School of Business.
Restriction(s): Enrolment in the Edwards School of Business

COMM. 120.0 — 1(1L)
Business School Life II
A zero credit course designed to build a set of skills required for success in the North American business environment. Topics will include: career counseling and job search techniques, resume writing and interview skills, business etiquette, business networking event and a second business tour.
Restriction(s): ABAC Students

COMM. 201.3 — 1/2(3L)
Introduction to Financial Accounting
Helps the student 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.
Formerly: ACC. 120.3
Note: Students can receive credit for only one of COMM. 201.3 or ENT. 230.3

COMM. 203.3 — 1/2(3L)
Introduction to Finance
Deals with the functions of the financial manager, including the problems and techniques of financial decision-making. Topics include: goals of the firm, management of working capital, financial problems and decisions involving intermediate and long-term financing, capital budgeting under certainty, and capital structure as it relates to weighted average cost of capital.
Formerly: FIN. 260.3
Prerequisite(s): One of (MATH. 110.3 or MATH. 121.3) and COMM. 104.3
Note: Students can receive credit for only one of COMM. 203.3 or ENT. 300.3

COMM. 204.3 — 1/2(3L)
Introduction to Marketing
Introduction to the marketing concept in business. Business activities are analyzed from the point of view of recognition, stimulation and satisfaction of consumer demand.
Note: Students with credit for COMM. 203.3 or MKT. 251.3 or BAC 25 cannot take this course for credit. Students can receive credit for only one of ENT. 210.3 or COMM. 204.3.

COMM. 205.3 — 1/2(3L)
Introduction to Operations Management
Introduces students to concepts and decision-making techniques used in the design, planning, execution, control, and improvement of operations of world-class manufacturing and service companies. It begins with introductory issues such as operations strategy and forecasting, continue with design topics such as product design, capacity planning, process design, facility layout, work design, and location planning, then covers quality management and control, and finally ends with planning decisions such as inventory management, aggregate planning, material requirements planning, just-in-time systems, scheduling, and supply chain management. Time permitting, project management and waiting line management may be covered too.
Formerly: POM. 391.3
Prerequisite(s): COMM. 104.3

COMM. 207.3 — 1/2(3L)
Business Statistics II
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.
Formerly: QUAN. 295.3
Prerequisite(s): One of (MATH. 110.3 or MATH. 121.3) and COMM. 104.3
Note: Students who wish to use this course toward an Arts and Science credit should first refer to Statistics Course Regulations in the Arts and Science section of the Calendar.

COMM. 209.0 — 2-Jan
Library Research II
Introduction to a variety of sources of industrial information including company reports, standard industrial classification schemes, statistical information and stocks and bonds.
Prerequisite(s): COMM. 109.0.

COMM. 210.3 — 1/2(3L)
Introduction to Management Accounting
Introduces students to the vital role that modern management accounting information plays in running a successful business in today's business world. Topics covered include the use of management accounting information to support decision making, planning and controlling activities and the behavioral impact of using accounting information to make decisions. In addition, students will gain an appreciation of the limitations of accounting information and an understanding of the needs of management accounting systems.
Formerly: COMM. 301.3 or 302.3.
Prerequisite(s): COMM. 201.3
Note: Students with credit for ACC. 230.3, COMM. 301.3 or 302.3 cannot take this course for credit.

COMM. 211.3 — 1/2(3L)
Human Resource Management
Develops a framework for human resource management comprising the context, issues, strategies, and processes of managing people in organizations. The challenges arising from the context include legal and ethical issues as well as global perspectives. Processes include selection and recruitment, performance appraisal, training and development, compensation and benefits, labour relations, and managing employee and employer interests within the employment relationship.
Note: Students may receive credit for only one of COMM. 211.3, ENT. 220.3, COMM. 386.3, or BAC 15.
COMM. 300.3 — 1/3(L)
Business Communication II
Building upon the foundation of COMM. 100, this course focuses on responsible, professional internal and external communication in an environment of socio-cultural, economic, technological, regulatory, and other change. Students will examine the roles and responsibilities of individuals and organizations and the particular challenges and opportunities of communicating in an increasingly diverse workplace and a global knowledge economy. Topics include ethical communication, professional standards, and corporate social responsibility; cross-cultural communication; equity and diversity; and information technology policies, protocols, and procedures.
Prerequisite(s): BSCM. 100.3 or COMM. 100.3
COMM. 304.3 — 1/2(3L)
Introduction to Business Law
An introduction to the general principles of law relating to contract and tort. Special contracts to be considered include agency, assignment, bailment, employment, guarantee, insurance, negotiable instruments, sale of goods and contracts creating a security interest in goods. Some aspects of the law relating to real property, partnerships and corporations will be discussed.
Formerly: COMM. 208.3
Note: Students with credit for COMM. 208.3 or BAC 29 cannot take this course for credit.
COMM. 306.3 — 1/2(3L)
Business Decision Making II
Decision making in contemporary organizations is simultaneously impacted by a complex mingling of external policies - from both the private and public sectors - across the local, provincial, national and increasingly internationally levels. Therefore, this Policy Analysis course introduces students to strategic management frameworks for policy analysis that will assist them in understanding the impact that external policies have upon organizational decision making.
Prerequisite(s): COMM. 101.3
Note: Students with credit for BAC 37 will not receive credit for this course.
COMM. 308.3 — 1/2(3L)
Cost Management Systems
The objective of this course is to provide an in-depth understanding of cost management systems from a preparer focus. Particular attention will be devoted to providing students with an understanding of Job Order Costing, Process Costing, and Hybrid Costing Systems. Students will examine cost allocations, variance analysis, and absorption and variable costing. This will be complemented by examining topics such as target costing, life-cycle costing, total quality management, just-in-time management and activity based management.
Permission of the department required.
Prerequisite(s): COMM. 210.3.
COMM. 321.3 — 1(1L-2S)
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.
Formerly: ACC. 321.3
Permission of the department required.
Prerequisite(s): COMM. 201.3
COMM. 323.3 — 2(3L)
Corporate Financial Reporting II
A continuation of corporate financial reporting as described for COMM. 321.3 but focusing on issues regarding liabilities and owners' equity and related revenues and expenses. Consideration is also given to cash flow analysis, the impact of various accounting methods on the reported results of a firm's activities and interpretation of financial statements.
Formerly: ACC. 323.3
Permission of the department required.
Prerequisite(s): COMM. 321.3
COMM. 329.3 — 2(3L)
Personal Finance
Teaches students how to analyze personal goals and assess the financial implications of these goals, construct and examine financial statements for individuals, determine personal net worth, analyze financial products and services, and suggest investment alternatives appropriate to analyze individuals and families. In addition, this course explains personal taxation, insurance contracts to protect the life styles of families, financial alternatives in retirement, and estate planning.
Permission of the department required.
Prerequisite(s): COMM. 203.3
Note: Student may receive credit for only one of COMM 329.3 or COMM. 429.3. If COMM. 329.3 was taken prior to 200609, it can be used in the finance major, if COMM. 329.3 was taken in 200609 or after, the class cannot be used in the finance major.
COMM. 337.3 — 2(3S)
Business Information and Accounting Systems
The role of the accounting system in a total management information system is examined. In addition, the major considerations involved in the design and installation of accounting systems are discussed. Cases in systems review and analysis concerning matters such as internal control evaluation, forms design and flow charting are used extensively. Manual, mechanical and electronic data processing techniques are investigated in relation to their use in accounting systems.
Formerly: ACC. 337.3
Permission of the department required.
Prerequisite(s) or Corequisite(s): COMM. 308.3
COMM. 340.3 — 1/2(3L)
Introduction to International Business
Introduction to the global setting in which international business decisions are made. In addition to the basic economic factors, socio-cultural, legal and political considerations are examined. Emphasis is placed on the factors which are relevant to decision making in a wide range of international business functions (i.e. marketing, finance) and international business forms (i.e. export-import, foreign manufacturing, joint ventures).
Formerly: MGT. 340.3
Prerequisite(s): Completion of 30 COMM credits.
Note: Students outside the Edwards School of Business must seek permission from their college. B.Com. students do not require permission. Students with credit for BAC 35 will not receive credit for this course.
COMM. 342.3 — 1/2(3S)
Organization Structure and Design
Provides an understanding of the theory, research and managerial choices relevant in structuring, designing and maintaining effective organizations. A contingency approach will be used to examine the influence of factors such as environment, goals and strategy and technology on the structure and behaviour of organizations.
Formerly: HRM. 342.3
Permission of the department required.
Prerequisite(s): COMM. 105.3
COMM. 343.3 — 2(3L)
Recruitment Selection and Engagement
Designed to help students identify and apply appropriate practices (which are valid, reliable, and legally defensible) for recruiting and selecting people who will contribute to the overall success of an organization, and for engaging those employees toward favourable organizational (and individual) outcomes. In so doing, the theoretical and empirical underpinnings for these practices are presented.
Permission of the department required.
Prerequisite(s): COMM. 105.3 and COMM. 211.3
COMM. 345.3 — 1/2(3S)
Business and Public Policy
Considers various areas of government activities which affect business decision making and considers their impact on management decision making.
Formerly: MGT. 345.3
Prerequisite(s): COMM. 204.3
COMM. 346.3 — 2(1.5L-1.5S)
Technology Commercialization
Provides a practice oriented bridge between the physical sciences and the world of commerce. Examines the theory and practice of launching new business ventures in science and engineering related industries. Practicing managers, entrepreneurs and special advisors will describe their activities and experiences through guest lectures and an in-class project will put class content into practice.
Prerequisite(s): Completion of 30 COMM credits.
Note: Students outside the Edwards School of Business must seek permission from their college. B.Com. students do not require permission.
COMM. 347.3 — 2(3S)
Aboriginal Business in Canada
The Saskatchewan and Canadian business landscape is changing. Aboriginal Entrepreneurs and Businesses are making bigger impacts in the business community and this trend will continue. This course is intended to provide knowledge about the unique environment in which aboriginal owned businesses operate. This unique environment creates some interesting opportunities and even more unexpected challenges. The impact of treaties, the Indian Act, Land Claim Settlements and other issues are all discussed in the context of their impact on economic development for aboriginal peoples. This course also examines the best practices related to the legal structures, governance models and management systems of aboriginal businesses by studying successful aboriginal businesses and communities. These case studies focus on Western Canada and specifically Saskatchewan.
Prerequisite(s): Completion of 30 COMM credits.
Note: Students outside the Edwards School of Business must seek permission from their college. B.Comm. students do not require permission.
COMM. 349.3
Introduction to Entrepreneurship
Designed to provide both knowledge and evaluation skills needed to add value in the new venture sector of the economy. Students taking this course will acquire knowledge in respect to current concepts in entrepreneurship, primarily as it concerns the evaluation of entrepreneurs, their ventures, and the venturing environment.
Prerequisite(s): COMM. 201.3, COMM. 203.3 and COMM. 204.3
Note: Students may receive credit for only one of COMM. 349.3 or BPPE. 2303.
COMM. 352.3 — 1/2(2.5S+.5P)
Marketing Strategy
Concentrates on the development of marketing strategies. An operational framework is built for analysing the marketing environment and selecting among strategic alternatives, primarily through case analysis.
Formerly: MKT. 352.3
Permission of the department required. 
Prerequisite(s): COMM. 204.3
COMM. 354.3 — 1/2(3S)
Consumer Behaviour
Considers factors influencing consumer behaviour as a focal point of marketing decision making. Topics include market segmentation and positioning, and environmental and individual determinants of consumer behaviour and consumer decision processes. This material is analyzed for its usefulness in designing, evaluating and implementing marketing strategies.
Formerly: MKT. 354.3
Permission of the department required. 
Prerequisite(s): COMM. 204.3
COMM. 357.3 — 1/2(2S.5P)
Marketing Research
Examines the principles and procedures associated with the collection and analysis of relevant information in the context of solving practical marketing problems. Students have the opportunity to apply these principles at each stage of the marketing research process: problem definition, research design, data collection, data analysis and report preparation.
Formerly: MKT. 357.3
Permission of the department required. 
Prerequisite(s): COMM. 204.3
Prerequisite(s) or Corequisite(s): COMM. 207.3
COMM. 358.3 — 2(3L)
Sales Management
Will provide students with a preliminary understanding of sales; communicating information to customers within an effective relationship based on trust; fulfilling customer expectations through “partnering” relationships and creating a selling environment that requires the use of advanced customer relationship management (CRM). The material presented will be organized around the four pillars of personal selling: relationship strategy, product strategy, customer strategy and presentation strategy.
Formerly: COMM. 498.3 (Special Topics: Sales Management)
Prerequisite(s): COMM. 204.3
Note: Students with credit for COMM. 498.3 (Special Topics: Sales Management) will not receive credit for this course.
COMM. 363.3 — 1/2(3L)
Intermediate Corporate Finance
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.
Formerly: FIN. 363.3
Permission of the department required. 
Prerequisite(s): COMM. 203.3 and COMM. 207.3
COMM. 364.3 — 1/2(3L)
Risk and Insurance
Deals with the concepts of risk, risk measurement and treatment, various kinds of insurance including life, health and social security insurance; property and liability insurance; insurance institutions and contracts regulation. Other topics include theft insurance; surety bonds, re-insurance, insurance and inflation and business risk management.
Formerly: FIN. 364.3
Permission of the department required. 
Prerequisite(s): COMM. 203.3 and COMM. 207.3.
COMM. 367.3 — 1(3L)
Security Analysis and Evaluation
Principles and techniques of investing in securities are discussed. Other topics include sources and analysis of investment information and evaluation of risks and returns associated with various investment instruments. Security analysis includes fundamental and technical approaches.
Formerly: FIN. 367.3
Permission of the department required. 
Prerequisite(s): COMM. 203.3 and COMM. 207.3.
COMM. 368.3 — 1(3S)
Entrepreneurial Finance and Venture Capital
Analyzes the characteristics, unique features, and valuation methods associated with the various financing arrangements for start-up, growing and mature small firms. Topics include borrowing from banks, private debt and equity placements, venture capital financing, initial public offerings (IPO) and seasoned debt and equity offerings. In addition, the course investigates the implications of various financing arrangements for corporate control.
Formerly: COMM. 468.3
Permission of the department required. 
Prerequisite(s): COMM. 203.3 and COMM. 207.3.
Note: Students with credit for COMM. 468.3 cannot take this course for credit.
COMM. 371.3 — 1and2(1.5S)
Applied Security Analysis
Gives students practical experience in the identification and selection of financial assets with an application to managing the funds held in the Investment Account of the Student Managed Portfolio Trust (SMPT). Students will develop skills related to evaluating and interpreting financial reports, analyst forecasts, and economic outlooks to compare and contrast the relative merits of investment opportunities within particular industries.
Permission of the department required. 
Prerequisite(s): COMM. 203.3
Prerequisite(s) or Corequisite(s): COMM. 363.3 and COMM. 367.3
COMM. 380.0 — 2
Business Cooperative Education I
The first four-month work placement for B.Comm students admitted into the Business Co-operative Education option. The focus of the work experience will be for the student to gain experience is their chosen field of study. Evaluation will be based on the employer's performance evaluation, the site visit evaluation report and the student's performance on the work-term report. This course is graded on a Pass/Fail basis.
Acceptance to BCEP program and an approved work placement. Permission of director of BCEP program.
COMM. 381.3 — 1(3L)
Industrial Relations
Examines the Canadian employment relationship in unionized settings. Organized labour is explored as a response to the assumed inherent imbalance of power between an individual worker and an employer. While functional topics such as collective bargaining, strikes and lock-outs, and the grievance processes are studied, too are theoretical and historical conditions. Finally, union responses to globalization, such as international outsourcing, are reviewed.
Formerly: COMM. 206.3 and INDR. 281.3
Permission of the department required
Prerequisite(s): COMM. 211.3
Note: Students may receive credit for only one of COMM. 206.3, INDR. 281.3 or COMM. 381.3.

COMM. 382.3 — 1/2(3L)
Employment Law
Examination of the law relating to employment in the non-unionized sector, including the contract of employment, wrongful dismissal, and selected protective statutes such as the employment standards and human rights acts. Attention will focus on, but will not be limited to the law of Saskatchewan.
Formerly: HRM. 382.3
Permission of the department required.

COMM. 384.3 — 2(3L)
Workplace Health and Safety
Acquaints students with the full scope of job-related safety and health hazards, the key institutions and their responsibilities including government, industry, labour, medical/scientific and industrial engineering. Historical and economic developments, enforcement, and compliance will be reviewed. Special emphasis will be placed on the element of an effective workplace health and safety program.
Permission of the department required.
Prerequisite(s): COMM. 211.3.

COMM. 385.3 — 2(3L)
Training and Development
Focuses on training and development of employees within work organizations, as well as approaches to organizational development and change. Topics include the nature of organizational learning, needs analysis, training methods, the evaluation of training and techniques of change management.
Permission of the department required.
Prerequisite(s): COMM. 105.3 and COMM. 211.3.

COMM. 387.3 — 2(3S)
Labour Law
Examination of the system of collective labour law, including the certification process, organizing and other unfair labour practices, the duty to bargain in good faith, strikes, lockouts, picketing and essential service work stoppages. Attention will focus on, but will not be limited to the law of Saskatchewan.
Permission of the department required.
Prerequisite(s): COMM. 381.3.

COMM. 393.3 — 1(1.5L-1.5P)
Spreadsheet Modeling for Business Decisions
Deals with modelling business problems to help managers make better decisions regardless of their functional areas. It introduces students to analytical decision making tools including linear programming, integer programming, network models, decision analysis and simulation. Spreadsheets will be extensively used for solving managerial problems.
Formerly: POM. 393.3
Permission of the department required.
Prerequisite(s): COMM. 104.3

COMM. 395.3 — 1(2.5L-.5S)
Business Forecasting
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.
Formerly: POM. 395.3
Permission of the department required.
Prerequisite(s): COMM. 207.3.

COMM. 398.3
Special Topics
Develops students’ awareness of a number of specialized topics through class discussion and individual research reports. Content will vary depending on when the course is offered, as well as student and instructor interests.

COMM. 401.3 — 1/2(3S)
Business Policy
An integrative course which focuses on the functions and responsibilities of senior management. Deals with the concept of organizational strategy and how it is formulated, developed and implemented in real-life situations.
Formerly: MGT. 443.3
Prerequisite(s): COMM. 306.3 and student must be in graduating year.

COMM. 402.3 — 1/2(3S)
Management Skills for Strategy Implementation
Focuses on the skills necessary to manage ourselves as well as others in order to successfully execute a strategic vision. Topics broadly include managerial and leadership skills related to project management, performance management, negotiations, and organizational culture and change.
Prerequisite(s): Completion of 48 COMM credit units and student must be in graduating year.

COMM. 404.3 — 1(3L)
Business Law
Provides a more comprehensive examination of several of the topics surveyed in COMM. 304.3. Special attention will be given to those aspects of the law relating to real property, negotiable instruments secured transactions, partnerships and corporations. Other topics include administrative law, wills, creditor rights (including bankruptcy) and trade practices.
Formerly: BLAW. 401.3
Prerequisite(s): COMM. 304.3

COMM. 405.3 — 1/2(3L)
Taxation 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.
Permission of the department required.
Prerequisite(s): COMM. 210.3.
Note: Students may receive credit for only one of COMM. 405.3 or COMM. 406.3. Students may receive credit for only one of COMM. 405.3 and BPBE. 254.3.

COMM. 406.3 — 1(3L)
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.
Formerly: TAX. 406.3
Permission of the department required.
Prerequisite(s): COMM. 321.3.
Note: Students may receive credit for only one of COMM. 405.3 or COMM. 406.3.

COMM. 407.3 — 2(3L)
Individual and Corporate Taxes Payable and Tax Planning
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, 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, as well as tax planning issues related to these topics. Students are given the opportunity to further develop their tax research skills.
Formerly: TAX. 407.3
Permission of the department required.
Prerequisite(s): COMM. 406.3.

COMM. 410.3 — 1/2(3L)
Financial Statements Analysis
Emphasizing the accounting fundamentals of financial statements and the related financial reporting environment, various financial analysis tools for assessing an entity’s financial position, financial performance and cash flows are introduced. The use of financial analysis for enterprise valuation, and for investing and lending decisions, is illustrated and discussed.
Prerequisite(s): COMM. 201 and COMM. 210.
COMM. 412.3 — 1/2(3L-1.5S)
Accounting Theory
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.
Formerly: ACC. 412.3
Permission of the department required.
Prerequisite(s): COMM. 323.3

COMM. 413.3 — 1/2(3S)
Contemporary Issues in Accounting
Examines various contemporary issues facing the ‘accounting profession’. These issues are drawn from both the academic and professional accounting literatures. The course challenges students to develop (more) informed positions on various issues, and exercises and improves their skills in critical thinking, persuasive writing and effective oral communication. Class meetings take place in an interactive, ‘seminar-style’ format and include the use of formal debates. Students must also submit term papers.
Formerly: ACC. 413.3
Permission of the department required.
Prerequisite(s): COMM. 323.3

COMM. 419.3 — 1/3(3L)
Derivative Securities and Risk Management
Deals selectively with the theories, strategies, and applications of derivative securities. Topics include futures and forward contracts, swaps, standard options, exotic options and other derivative securities on different underlying assets; valuation techniques; empirical studies; governance and regulation of derivative securities trading and exposure; and management of financial risks.
Permission of the department required.
Prerequisite(s): COMM. 363.3

COMM. 420.3 — 1/3(3L)
Fraud Prevention Detection and Investigation
Will provide an overview of the nature of fraud and how it is committed. It will also provide an insight into: tools and procedures that can be utilized to detect the presence of fraud, controls that can be implemented in the organization to prevent or deter fraud, and an introduction into the investigative mindset and the proper manner in which allegations of fraud should be investigated.
Permission of the department required.
Prerequisite(s): COMM. 210.3

COMM. 421.3 — 1/2(3L)
External Auditing
Considers the demand for independent external audits, including environmental determinants (social, legal and professional) and individual auditor behaviour. The satisfaction of the demand for an audit is examined within a risk reduction expression of an auditor’s opinion formulation process.
Formerly: ACC. 421.3
Permission of the department required.
Prerequisite(s): COMM. 323.3

COMM. 429.3 — 1/3L
Personal Financial Planning
Deals with the advanced concepts related to personal financial strategies. The focus is on developing the skills and teaching the tools a professional will need to practice as a personal financial planner. Topics include knowing your client’s profile and financial situation, constructing appropriate investment strategies, advanced tax strategies, understanding of personal risks and risk management strategies, and advanced estate planning strategies. A major objective of this course is to teach the student how to integrate the various strategies to develop a comprehensive financial plan for the client. The legal and ethical considerations in personal financial planning will be considered separately and emphasized throughout the course.
Permission of the department required.
Prerequisite(s): COMM. 363.3 or COMM. 367.3
Note: Student may receive credit for only one of COMM. 329.3 or COMM. 429.3.

COMM. 433.3 — 1/2(1L-2T)
Accounting for Equity Interests
Focuses on accounting and reporting issues associated with economic entities consisting of multiple parts. The simplifying assumption that corporations operate independent from other organizations is relaxed. Theory and practice related to accounting for business combinations, intercorporate investments, foreign currency denominated transactions, and foreign investments will be examined. Accounting and reporting by not-for-profit organizations will be considered.
Formerly: ACC. 433.3
Permission of the department required.
Prerequisite(s): COMM. 323.3

COMM. 438.3 — 1/2(3L)
Management Planning and Control Systems
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.
Formerly: ACC. 438.3
Permission of the department required.
Prerequisite(s): COMM. 308.3

COMM. 447.3 — 1/2(1S-2P)
Entrepreneurship and Venture Development
Examines the processes and skills required for the successful formation of new business ventures and the on-going management of small businesses. Students can examine their own entrepreneurial potential and experience the process of new venture formation and financing through the preparation and formal presentation of a plan for the initiation of a business venture of their choice.
Formerly: MGT. 447.3
Note: Students may receive credit for only one of COMM. 447.3, BPBE. 495.3, or ENT. 310.3

COMM. 448.3 — 3S
Management Consulting Project
This course is designed to lead students through the management consulting process, including developing and presenting a consulting proposal and then completing the consulting project. Students will learn how to specify business research questions, propose appropriate methods of researching the questions, and analyze the results of the research, and present conclusions and recommendations. Real external business clients are expected for each consulting group (may be one or more students in a group, depending on the size of the consulting project). The most common types of business research requested by clients have been marketing research studies, business plans, feasibility studies, and industry opportunity surveys.
Formerly: COMM. 498.3 (Special Topics: Management Consulting Project)
Restriction(s): Application required. Normally will be fourth year students with approximately 90 credits.
Note: Students with credit for COMM. 498.3 (Special Topics: Management Consulting Project) may not take this course for credit.

COMM. 450.3 — 1/2(1P-1P)
Issues in Marketing
Deepens the student’s understanding of a specialized area in the field of marketing. Potential topics include marketing of agricultural products, business to business marketing, management of the sales forces, the impact of new technology on marketing practice and advanced marketing research. Contact the Department for details.
Formerly: MKT. 450.3
Permission of the department required.
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

COMM. 451.3 — 1/2(1P-1P)
Integrated Marketing Communication
Introduces students to the basic concepts which underlie the promotional activities of the firm. The concept of the promotional mix is introduced and the proper strategic roles for advertising, public relations and sales promotion are discussed in the context of the findings of communication theory.
Formerly: MKT. 451.3
Permission of the department required.
Prerequisite(s): COMM. 352.3 and COMM. 354.3.

COMM. 452.3 — 1/2(1P-1P)
Services Marketing
Considers the unique marketing issues and problems facing service organizations. Examines issues including the role of the client, quality in service organizations, demand management and pricing problems. Within the overall context of the service sector, marketing issues related to health care and non-profit organizations are also considered.
Permission of the department required.
Prerequisite(s): COMM. 204.3 and COMM. 352.3
COMM. 454.3 — 2(3L)
Retail Marketing
To familiarize students with the decisions involved in developing sustainable competitive advantage in retailing and the concepts and principles for making those decisions to promote higher sales and profits. Topics covered include but are not limited to the strategic importance of retailing in the distribution chain, the retailing environment, retail entrepreneurship, types of retailers, multi-channel and electronic retailing, retail strategy, customer relationship management, store location, design, layout and visual merchandising, buying merchandise, managing store operations and customer service. Permission of the department required. Prerequisite(s): COMM. 352.3 and COMM. 354.3

COMM. 456.3 — 2(3S)
International Marketing
Examines the managerial aspects of international marketing activities of the firm. The various decision areas in marketing including marketing research, product policy, pricing, distribution and promotion are considered in an international context. Also presented are the problems relating to the formulation and implementation of an integrated marketing plan for the firm’s international operations. Formerly: WKT 456.3
Permission of the department required. Prerequisite(s): COMM. 204.3 and COMM. 340.3

COMM. 457.3 — 2(3L)
Marketing and Popular Culture
Explores Marketing’s role in culture through reading about cultural theory and applying cultural theory to everyday cultural practices. Topics include meaning, identity, ritual, production, myth, and other cultural theories. Formerly: COMM. 450.3 (Popular Culture Topic) Permission of the department required. Prerequisite(s): COMM. 352.3 and COMM. 354.3
Note: Students with credit for COMM. 450.3 (Popular Culture Topic) cannot take this class for credit.

COMM. 458.3 — 1(3L)
Branding
This course is a hands-on class that focuses on how to analyze, evaluate, and manage a brand. Students will learn traditional brand management theory including brand equity and brand positioning. In addition, theories of emotional branding, such as brand personality and brand relationships, and theories of cultural branding will be discussed. All theories will be applied to real-world situations. Formerly: COMM. 450.3 (Branding Topic) Prerequisite(s): COMM. 352.3 and COMM. 354.3
Note: Students with credit for COMM. 450.3 (Branding Topic) will not receive credit for this course.

COMM. 461.3 — 1/2(3L)
Theory of Finance
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. Formerly: FIN. 461.3
Permission of the department required. Prerequisite(s): COMM. 363.3 and COMM. 367.3.

COMM. 465.3 — 1(3L)
Financial Modeling with Spreadsheets
Applies spreadsheet software to analyse corporate and investment finance theory. Consideration will be given to good model building practices such as model structure, cell reference, array labelling, unit of measurement choice, function usage, and macro usage. Particular attention will be paid to the topics of decision analysis, sensitivity analysis, estimation and forecasting, optimisation, and simulation. Permission of the department required. Prerequisite(s): COMM. 363.3 and COMM. 367.3.

COMM. 466.3 — 2(3L)
International Business Finance
Involves analysis of the problems, opportunities and questions confronting the financial management of multinational enterprises. Consideration is given to macro aspects of international finance including the problems of international liquidity and related institutional developments as inputs to the financial decision making of multinational enterprises. Formerly: COMM. 366.3
Permission of the department required. Prerequisite(s): COMM. 363.3.
Note: Students with credit for FIN. 466.3 or COMM. 366.3 cannot take this class for credit.

COMM. 467.3 — 1(3L)
Portfolio Theory and Management
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. Formerly: FIN. 467.3
Permission of the department required. Prerequisite(s): COMM. 367.3.

COMM. 469.3 — 2(3L)
Management of Financial Institutions
The objective of this course is to provide necessary background for understanding the nature of risk facing depository institutions and the techniques that are used to manage these risks. This course will introduce different types of risks (interest rate risk, credit risk, foreign exchange risk, liquidity risk) faced by deposit taking institutions. Then it will discuss both on balance sheet and off balance sheet risk management techniques (using futures, forwards, options and swaps) of financial institutions. Formerly: FIN. 469.3
Permission of the department required. Prerequisite(s): COMM. 363.3 or COMM. 367.3.

COMM. 471.3 — 1and2(1.5S)
Applied Investment Management
Gives students practical experience in the acquisition, managing, and monitoring of investment securities and the Managed Portfolio Trust (SMPT). Students will develop skills related to managing a group of financial analysts to compare and contrast the relative merits of investment opportunities among different industries and asset classes. The legal and ethical considerations of investing will be emphasized throughout. Permission of the department required. Prerequisite(s): COMM. 363.3, COMM. 367.3, and COMM. 371.3

COMM. 480.0 — 2
Business Cooperative Education II
The second four-month work placement for BComm students admitted into the Business Co-operative Education option. The focus of the work experience will be for the student to perform work directly related to their chosen field of study. Evaluation will be based on the employer’s performance evaluation, the site visit evaluation report and the student’s performance on the work-term report. This course is graded on a Pass/Fail basis. Permission of the BCEP director. Prerequisite(s): COMM. 380.0

COMM. 485.3 — 2(3S)
International and Comparative Employment Relations Systems
Examines the triangular relationship between employers, government, and organized labour in the context of developed regions such as North America and Western Europe, as well as in emerging economic regions such as Asia, Africa, and South America. Globalization and firm internationalization is explored as it affects organized labour. The aim is to introduce students to a broad range of unionized work environments to facilitate economic, social and legal comparison. Formerly: INDR. 485.3
Permission of the department required. Prerequisite(s): COMM. 381.3

COMM. 486.3 — 3S
Case Analysis and Presentation Skills (JDC West)
Focuses on the skills and competencies necessary to successfully compete in the JDC West business competition. Topics include technical expertise, case analysis, presentation skills and competitive strategies. Formerly: COMM. 498.3 Special Topics: Experiential Learning (JDC West)
Permission is granted based on selection to participate on a JDC West academic competition team. Permission is granted based on selection to participate on a JDC West academic competition team. Note: Students may compete multiple times in the JDC West business competition during the completion of their degree; however they are only eligible to enroll and receive credit once for this course.

COMM. 487.3 — 1/2(3L)
Collective Agreement Arbitration
Deals with administering grievances under a collective agreement; drafting collective agreement articles; preparing and presenting a case for arbitration; jurisdictional irregularities in grievance arbitration and other forums for processing employment claims. Permission of the department required. Prerequisite(s): COMM. 381.3
COMM. 488.3 — 1(2L-1P)
Strategic Compensation
Provides a comprehensive framework for the development of compensation strategy and compensation systems by organizations. Topics include job evaluation, compensation surveys, performance pay, stock and profit sharing plans, and employee benefits plans. This course's primary focus is a major project in which students develop a complete compensation system for a simulated organization.
Formerly: COMM. 388.3
Permission of the department required.
Prerequisite(s): COMM. 105.3 and COMM. 211.3
Note: Students with credit for HRM 388.3 or COMM 388.3 cannot take this class for credit.

COMM. 489.3 — 1(3L)
Strategic Human Resource Management
This course integrates concepts and foundations from the functional areas of human resource (HR) management within a strategic human resources framework. Emphasis is placed on development of analytical and problem solving abilities to formulate and apply HR solutions to real-life organizational problems. The guiding premise for the course is that HR strategies are most effective when internally consistent and aligned with the strategic objectives of the organization.
Permission of the department required.
Prerequisite(s): COMM. 342.3 and COMM 385.3

COMM. 491.3 — 2(2L-1S)
Purchasing and Supply Management
Introduces fundamentals of purchasing and supply management, including terminology, procedures, and models. It includes purchasing objectives and organization, operating procedures, specification, supplier selection, price determination, bidding and negotiation, forward buying, cost and value analysis, outsourcing, legal and ethical issues, supplier relations and partnerships, warehousing, inventory control, and material requirements planning. The first 2/3 of the course concentrates on purchasing, while the remaining 1/3 focuses on inventory control systems. Purchasing uses decision-making concepts, whereas Inventory Control emphasizes quantitative problems and models. Where appropriate and available, selected software programs will be used.
Formerly: POM. 491.3
Permission of the department required.
Prerequisite(s): COMM. 205.3

COMM. 493.3 — 1(3L)
Total Quality Management
Basic concepts of total quality control, strategic quality planning, quality value and engineering, loss function and quality level, statistical process control, management of process quality, quality and operation results, Taguchi methods, preventive maintenance and other aspects of quality management.
Formerly: POM. 493.3
Permission of the department required.
Prerequisite(s): COMM. 205.3

COMM. 494.3 — 3S
Topics in Field Investigation in OM
This course provides a hands-on experience for students interested in the practical application of operations management approaches. Student groups will apply quantitative model-building, analysis and process improvement principles and tools to real problems facing local organizations. Particular attention will be paid to setting up a project statement, determining particular project aims, identifying areas for improvement, clearly communicating with client organizations, establishing project milestones, applying appropriate analytical methods, preparing interim and final reports, and presenting results to clients.
Formerly: COMM. 498.3 (Special Topics: Field Investigation in OM)
Prerequisite(s): COMM. 205.3
Note: Students with credit for COMM. 498.3 (Special Topics: Field Investigation in OM) may not take this course for credit.

COMM. 495.3 — 2(3L)
Supply Chain Management and E-Commerce
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.
Formerly: POM. 495.3
Permission of the department required.
Prerequisite(s): COMM. 205.3

COMM. 498.3 — 1/2(3S)
Special Topics
Develops students' awareness of a number of specialized topics through class discussion and individual research reports. Content will vary depending on when the course is offered, as well as student and instructor interests.
Formerly: MGT. 498.3

COMM. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CREE — CREE

CREE. 101.6 — 1and2(3L-3P)
Introductory Cree
Presents the elements of the grammar and vocabulary of Cree as spoken in central Canada and will introduce the oral literary tradition associated with it. Its objective will be to develop elementary competence in the language and a basic acquaintance with Cree culture and traditions.

CREE. 120.6 — 1and2(3L-3P)
Intermediate Cree
Continues the study of the Y dialect of Cree at the intermediate level, with increased emphasis on Cree literary traditions. The structure of transitive verbs, noun inflections, various interrogative forms, imperatives, subjunctives and complex syntactic forms will be treated. Textual material will be analyzed and discussed.
Prerequisite(s): CREE. 101.

CREE. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

CREE. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

CREE. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CREE. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CREE. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

CREE. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
CSCH — COLLEGE SCHOLARS

CSCH. 298.3  
College Scholar  
Designed for students who wish to study a subject which cannot normally be attempted in one course or which includes the disciplines of more than one department. These individual research projects credit only as electives. Please consult the Undergraduate Office for more information.

CSCH. 299.6  
College Scholar  
Designed for students who wish to study a subject which cannot normally be attempted in one course or which includes the disciplines of more than one department. These individual research projects credit only as electives. Please consult the Undergraduate Office for more information.

CSCH. 398.3  
College Scholar  
Designed for students who wish to study a subject which cannot normally be attempted in one course or which includes the disciplines of more than one department. These individual research projects credit only as electives. Please consult the Undergraduate Office for more information.

CSCH. 399.6  
College Scholar  
Designed for students who wish to study a subject which cannot normally be attempted in one course or which includes the disciplines of more than one department. These individual research projects credit only as electives. Please consult the Undergraduate Office for more information.

CSCH. 498.3  
College Scholar  
Designed for students who wish to study a subject which cannot normally be attempted in one course or which includes the disciplines of more than one department. These individual research projects credit only as electives. Please consult the Undergraduate Office for more information.

CSCH. 499.6  
College Scholar  
Designed for students who wish to study a subject which cannot normally be attempted in one course or which includes the disciplines of more than one department. These individual research projects credit only as electives. Please consult the Undergraduate Office for more information.

CTST — CATHOLIC STUDIES

CTST. 105.3  
Catholic Studies for Teachers I  
Introduces students to the central, historical components of both Eastern and Western Catholic belief and identity, the Bible as revelation, the person of Jesus, and the nature of the Church.  
Note: Not acceptable for credit in the College of Arts and Science. This course is intended to be an elective in the College of Education and is beneficial for students planning to teach in the Catholic school system.

CTST. 106.3  
Catholic Studies for Teachers II  
Introduction to Eastern and Western Catholicism as a way of life, focusing on liturgical practice, personal morality in contemporary society, and corporate morality as related in Catholic teaching on social justice.  
Note: Not acceptable for credit in the College of Arts and Science. This course is intended to be used as an elective in the College of Education and is beneficial for students planning to teach in the Catholic school system.

CTST. 200.3  
Introduction to Catholicism  
Provides a brief introduction to the academic study of Catholicism in its ecclesial, intellectual, and cultural expressions from antiquity to the present. A variety of texts are used to illustrate how Catholic faith and theology have played a role in science, philosophy, and the arts.  
Prerequisite(s): 15 credit units of University study.

DENT — DENTISTRY

DENT. 200.0  
Pre-Clinical Learning Experience  
Pre-clinical or clinical practice outside of the academic year for College of Dentistry students. The experience complements the first-year curriculum and may be recommended as additional preparatory work for the second year students in the program.  
Note: For students who have completed the first year of the D.M.D. program.

DENT. 208.3  
Principles and Practice of Dentistry  
Introduces students to a number of topics related to the social context within which dentistry exists. These include the history of dentistry, dentistry and ethics, the development of dental education, cariology, oral health care delivery systems, current issues in oral health and oral health services in Saskatchewan.

DENT. 210.2  
Application of Dental Research to Clinical Decision Making I  
Provides students with knowledge of how to access, understand and critically evaluate dental scientific literature. The course will consist of lectures and laboratory sessions. In the laboratory sessions, students will perform computer generated literature searches in the Health Science Computer Lab.

DENT. 214.2  
Oral Histology and Embryology  
A lecture and laboratory course that studies the development, histology and function of oral structures that have special significance to dentistry. Course content considers the processes involved in craniofacial development; the development of the teeth and palate; and the histology of hard and soft tissues of the oral and peririnal regions.

DENT. 220.6  
Operative Dentistry I  
A preclinical lecture/demonstration/laboratory course introducing the student to the basic biomechanical principles of tooth restoration. The course emphasizes the development of manual dexterity skills using rotary and hand instruments. Attention is also given to the development of professional skills in terms of organization, tidiness and time management. The need for infection control is also introduced.

DENT. 221.2 — 1and2(1L)  
Dental Materials I  
A basic program to familiarize students with the terminology and theoretical concepts of dental materials used in clinical dentistry, as well as the safety issues concerning dental materials.

DENT. 225.2 — 1(2L/P)  
Dental Anatomy and Morphology  
An introductory course in dental anatomy and morphology. The general objective is to provide the undergraduate dental student with the knowledge of dental anatomy and morphology that forms the basis for much of the practice of clinical dentistry.

DENT. 226.3  
Occlusion  
A lecture and laboratory course that provides an in-depth study of the interrelationships of the components of the stomatognathic system as these apply to the principles of intermaxillary occlusion. Included will be discussions of sleep apnea, bruxism, occlusal traumatism, and occlusal equilibration.

DENT. 288.3  
Infection Control in Dentistry  
Successful prevention of disease spread and proper maintenance of clinic safety require the knowledge of infection control. Dental students must play key roles in the maintenance of the well being of patients and in the organization of safe dental clinics. These responsibilities require an understanding of procedures used for infection control. The objective of the course is to provide a basic concept of infection control in the form of didactic lectures and clinical practice.

DENT. 291.2 — 1(2L)  
Principles of Biomedical Science for Dentistry Students  
Provides basic concepts related to biomedical sciences to include: Introduction to Homeostasis, Anatomy and Histology, and Physiology; the Cell, Genetics and Neoplasia; Nutrition; and Pharmacology, Therapeutics and Toxicology.  
Restriction(s): Restricted to students enrolled in the College of Dentistry.  
Note: Students with credit for DENT. 292, DENT. 294, MED. 102, MED. 109, or MEDC. 115 will not receive credit for this course.
DENT. 300.0
Clinical Learning Experience
Clinical practice outside of the academic year for College of Dentistry students. The experience complements the second-year curriculum and may be recommended as additional preparatory work for the third year in the program.

Note: For students who have completed the second year of the D.M.D. program.

DENT. 301.2
Oral Radiology I
Provides didactic information on: basic radiation physics; radiation biology; creation of a film-based radiographic image; digital radiography; intraoral, panoramic and extraoral radiographic technique; introduction to normal radiographic appearances; and radiographic localization techniques. The preclinical laboratory component provides instruction in intraoral radiographic techniques, and introduces digital radiography, pantomography and other extraoral imaging procedures.

DENT. 306.6 — 1and2(3L)
Human Oral Infectious Diseases
Consists of didactic lectures, laboratory exercises, and clinical microbiology conferences, part of which are taken in conjunction with the College of Medicine. Deals with the general principles of medical bacteriology, mycology, virology, parasitology, and the organisms involved in systemic infections in general and oral infections in particular. Complications of systemic infections with oral manifestations or oral infections resulting from dental procedures are discussed. The role of the medical laboratory in the diagnosis of infectious diseases is also discussed together with consideration of antimicrobial therapy in relation to both systemic and oral infections.

Formerly: PATH. 305.6
Prerequisite(s): Restricted to students enrolled in the College of Dentistry.

Note: Students with credit for PATH. 305.6 may not receive credit for this course.

DENT. 310.2 — 1and2(1L)
Dental Research
The concepts learned in DENT. 210.2 will be extended through basic and clinical research by computer assisted literature review and basic biostatistical analyses.

Formerly: DENT. 410
Note: Students with credit for DENT. 410 will not receive credit for this course.

DENT. 314.3 — 1(2L)and2(2L)
Oral Microbiology Immunology and Physiology
Considers those areas of microbiology, immunology and physiology with special significance to dentistry. Major topics are oral microflora and ecology; molecular biology of microbial adherence; formation and metabolism of dental plaque; microbiology of dental caries and periodontal disease; immunology of dental caries and periodontal disease; physiology of salivary glands and saliva; classification and physiology of neureceptors and their integration/modulation by the central nervous system; and the physiology of pain, taste, swallowing and mastication.

DENT. 317.3 — 2(1L-2P)
Orthodontics I
The orthodontic lectures in this year emphasize the diagnostic and treatment planning aspect of simple and complex orthodontic cases, as well as their treatment and management. Second year provides the basics of case presentation and patient evaluation and prepares the student for the orthodontic clinic.

DENT. 319.4
Periodontics I
A lecture and clinical demonstration course which provides an introduction to the etiology, pathogenesis and epidemiology of diseases that affect the periodontal tissues. Students will be given opportunities to provide preventive periodontal care in the clinic.

DENT. 320.5 — 1and2(1L-2.5P)
Operative Dentistry II
Term 1 consists of an extension of material learned in DENT. 220.6 with the addition of complex operative procedures. Term 2 consists of a five week competency after which there is an introduction to patient care followed by eight weeks of patient treatment in the clinic.

DENT. 321.2 — 1(3L)
Dental Materials II
A continuation of Dent. 221: Dental Materials I, covering the remaining materials used in clinical dentistry. Completion of this course will provide the student with theoretical and practical concepts of modern dental materials, and provide the skills necessary to remain current in this rapidly changing field.

Formerly: DENT. 398

DENT. 324.3 — 2(1L-2P)
Pedodontics I
Strives to introduce students to various aspects of basic Pediatric Dentistry. Consists of a series of lectures, laboratory exercises, and a visit to a pre-kindergarten classroom. Develops skills required for clinical diagnosis and restorative treatment of the primary and young dentition. Pulpal therapy for primary and permanent young teeth is covered. Clinical skills and knowledge for identifying the indications and contraindications for the restoration of primary teeth using fissure sealants, resin, amalgam, and full coverage is explored. Students will gain knowledge of the development, morphology, and eruption of the dentition. Differences between the permanent and primary dentition and how these apply to restoration procedures are dealt with. A basic knowledge of space maintenance and basic management skills are introduced.

DENT. 330.5 — 1and2(1L-2.5P)
Removable Prosthodontics II
A preclinical/clinical lecture/demonstration/laboratory course in which students undertake exercises relating to technical procedures involved in fabricating complete dentures and treatment planning of removable partial dentures.

DENT. 340.4 — 1and2(1L-2.5P)
Fixed Prosthodontics I
A preclinical course that introduces basic fixed prosthetic principles and techniques required to prepare teeth, to fabricate provisional restorations and to learn the clinical and laboratory techniques necessary to fabricate definitive fixed prostheses.

DENT. 348.3 — 1and2(1L-2C)
Diagnosis I
Prepares students for clinical management of patients. It includes a systematic approach to diagnosis and patient management. Students are introduced to history taking, patient examination, laboratory testing and record systems. The problem-oriented approach to diagnosis and management is presented. A complementary clinical course provides experience to prepare students for clinical sessions in diagnosis and patient management. Principles of treatment planning are also covered to prepare students for practice in the clinic.

DENT. 353.2 — 1and2(1L)
Local Anaesthesia
The objectives are to teach the students the basic principles of administering local anesthetics safely and effectively. Topics to be discussed will include the indications and advantages of regional anesthesia, and the various techniques available to the dentist. Emphasis will be placed upon an understanding of the pharmacologic actions of local anesthetics and vasoconstrictors and their side effects and complications. Proper patient evaluation to identify high-risk patients will be stressed.

DENT. 360.5 — 1and2(1L-SC)
Endodontics II
Presents three segments: a lecture series, a preclinical laboratory, and clinical procedures on patients. The lectures outline the basic rationale and treatment materials and techniques. In addition, clinical topics regarding specific treatment modalities are covered. Technical procedures are learned through laboratory exercises designed to permit visualization and practice, and examined via competencies. The clinical management of lesions of endodontic origin through treatment of patients occurs in the second term.

Note: Students with credit for DENT. 450 will not receive credit for this course.

DENT. 391.4 — 1and2
Pharmacology
Students will learn the scientific rationale for the use of therapeutic drugs. Information presented in the lectures is reinforced in small group clinical case participation sessions. The objective is to provide a sound knowledge of pharmacological concepts and principles to assist the students in their future clinical practice.

Restriction(s): Restricted to students enrolled in the College of Dentistry.

Note: Students with credit for MED. 201 will not receive credit for this course.

DENT. 398.2 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
DENT. 400.0  
**Clinical Learning Experience**  
Clinical practice outside of the academic year for College of Dentistry students. The experience complements the third-year curriculum and may be recommended as additional preparatory work for the fourth year in the program.  
*Note:* For students who have completed the third year of the D.M.D. program.  

DENT. 401.3 — 1and2(1L)  
**Oral Radiology II**  
Lectures, self-instructional packages, and seminars cover normal radiographic appearances in the jaws as well as the radiographic manifestations of disease processes. Time is also spent discussing general principles of radiographic interpretation. The clinical component of this course involves selecting an appropriate intra-oral radiographic series, taking intra-oral radiographs and interpreting intra-oral and panoramic radiographs of clinic patients that the student sees in the Diagnosis clinic.  

DENT. 417.4 — 1and2(1L-2.5C)  
**Orthodontics II**  
Orthodontic lectures in this year will continue to emphasize the diagnostic and treatment planning aspects of simple and complex orthodontic cases, as well as provide an insight into their treatment techniques and patient management.  

DENT. 419.5 — 1and2(1L-3C)  
**Periodontics II**  
A lecture/seminar/clinic course designed to enable students to become competent in periodontal diagnosis and to develop the clinical skills necessary to perform periodontal therapy within the context of a comprehensive dental treatment plan. In term 2, the interrelationship of periodontics to other disciplines is emphasized and a review of current aspects of the periodontal scientific literature is undertaken.  

DENT. 420.5 — 1(1L-2.5C)and2(4C)  
**Operative Dentistry III**  
A program of continued experience in the discipline of operative dentistry, providing treatment planning and efficient delivery of restorative dental procedures. Students will build upon previous experience tackling more complex cases and utilizing a broader array of dental materials. The lecture program will provide supplemental knowledge to encourage independent inquiry and self-evaluation.  

DENT. 424.4 — 1and2(1L-2.5C)  
**Pedodontics II**  
A continuation of DENT. 324 and strives to introduce further aspects of basic pedodontics not covered in the introductory course. The course objectives have also been designed to aid the students in gaining a clinical knowledge of subjects such as traumatic injuries to primary and young permanent teeth, child growth and development, behaviour management.  

DENT. 430.6 — 1and2(1L-3C)  
**Removable Prosthodontics III**  
Lecture/discussion/seminar sessions in clinical application of complete and removable partial denture theory. Clinical practice in complete and partial denture therapy.  

DENT. 440.5 — 1and2(1L-3C)  
**Fixed Prosthodontics II**  
Lectures throughout the year concentrate on basic fixed prosthodontic clinical procedures and treatment. Practical experience is gained through basic treatment on clinical patients.  

DENT. 448.3 — 1and2(1L)and2(3C)  
**Diagnosis II**  
Various oral medicine topics, emphasizing temporomandibular disorders (TMD) and other orofacial pain states, are covered. In Term 2, students are responsible for performing diagnosis and treatment planning (and dental emergency procedures) under faculty guidance.  

DENT. 450.5 — 1and2(1L-5C)  
**Endodontics II**  
Presents three segments: a lecture series, a preclinical laboratory, and clinical procedures on patients. The lectures outline the basic rationale and treatment materials and techniques. In addition, clinical topics regarding specific treatment modalities are covered. Technical procedures are learned through laboratory exercises designed to permit visualization and practice, and examined via competencies. The clinical management of lesions of endodontic origin through treatment of patients occurs in the second term.  

DENT. 455.2 — 2(1L)  
**Basic Internal Medicine**  
Consists of lectures/seminars. Common medical problems affecting dental management are discussed and illustrated using case reports.  

DENT. 463.3 — 1and2(1L-3C)  
**Oral and Maxillofacial Surgery I**  
Introduces students to the basic principles on which the practice of oral and maxillofacial surgery is founded. Proper history taking and patient assessment are stressed, and students are introduced to the core theoretical knowledge and basic surgical skills and sterile techniques needed to practice minor oral surgery. Students are taught basic and advanced techniques for the removal of teeth, and the prevention and management of their intraoperative and postoperative complications. The selection and prescribing of appropriate anesthetic and antibiotic medications is discussed. Students are rostered into the oral surgery clinic where opportunity is given initially to observe and assist, and then to participate in minor oral surgical procedures. Students are also introduced to hospital dentistry, including operating room protocol and observing major maxillofacial surgery. Lectures and demonstrations are used to introduce concepts of managing patient apprehension through the use of various techniques of conscious sedation. Although students will gain experience mainly with the use of nitrous-oxide/oxygen inhalation sedation, other modalities will also be covered. The indications, advantages and disadvantages, and complications of the various techniques will be discussed. Introductory implant lectures will be given.  

DENT. 466.2 — 1and2(1L)  
**Hospital Rosters**  
Students are assigned for one week to Royal University Hospital and rotate through various medical services and hospital dentistry. Under the guidance of the medical and house staff, students observe and participate in the patient care and management of diseases that they have studied to appreciate the effects of these and gain further insight into medical problems they may encounter in their practice.  

DENT. 475.4 — 1and2(1L-2.5C)  
**Implant Prosthodontics I**  
Lectures describe the biology of osseointegration; the principles of implant prosthodontics; the surgical placement of fixtures; and the restorative options and procedures. The practical sessions demonstrate the various implant components and provide clinical simulations of the treatment options. Clinical sessions provide exposure to patients, screening and treatment planning for implant prosthetic treatment.  

DENT. 480.2 — 1and2(1L)  
**Dental Practice Management I**  
Introduces the concepts of practice management to the dental student. The first term deals with the Dental Profession Act and the regulations under the Act, the Dental Code of Ethics, and Dentistry and the law. The second term provides an introduction to the business and legal aspects of dental practice.  

DENT. 486.3 — 1(3L)and2(2L)  
**Oral Pathology**  
Provides the students with the knowledge and understanding of diagnosis, pathogenesis, clinical and histologic features, management, and prognosis of oral diseases with emphasis on their oral manifestations and implications. Topics include developmental abnormalities of the oral hard and soft tissues; infections of the oral cavity; physical and chemical injuries of the oral cavity; benign and malignant neoplasms; the oral manifestations of metabolic, dermatologic, hematologic and immunologic disease; fibro-osseous lesions; non-odontogenic and odontogenic tumors and cysts; salivary gland disease; and forensic odontology. Supplementary clinical case exercises are given weekly to enhance, examine and reinforce students’ knowledge.  

DENT. 501.2 — 1(4C)  
**Oral Radiology**  
Clinical course involving the selection of intra-oral radiographic series in the Diagnosis clinic, taking intra-oral radiographs in the Radiology roster and occasionally the Diagnosis clinic, and the interpretation of intra-oral and panoramic and other selected radiographs in interpretation sessions.
DENT. 517.4 — 1and2(1L-2.5C)  
Orthodontics  
Orthodontic lectures in this year will continue to emphasize the diagnostic and treatment planning aspects of simple and complex orthodontic cases, as well as provide insight into their treatment techniques and patient management. Content is mainly directed to various areas not previously covered or where a need for further in-depth study is indicated. The objective is to refine the final-year dental student's diagnostic abilities, and emphasis is directed at orthodontic case selection and treatment modalities as well as the interdisciplinary and ethical aspects of orthodontic dental treatment.

DENT. 519.5 — 1and2(1L-4C)  
Periodontics  
Emphasizes and reinforces the methods of managing periodontal diseases that have been learned earlier. Recent advances in periodontics will be introduced and seminars involving student presentation of case reports will be held. Student clinical experience is continued in the form of comprehensive care.

DENT. 520.3 — 1and2(1L-3C)  
Operative Dentistry IV  
Consists mainly of routine general dental care of patients, providing the full range of restorative dental procedures including the examination, diagnosis and treatment of traumatic injuries to teeth as well as damage due to dental caries. More complex situations will be encountered and new materials and techniques included. Emphasis will be placed on independent and comprehensive dental care.

DENT. 524.4 — 1and2(1L-2.5C)  
Pedodontics III  
Continues the objectives and philosophy of Year 3. In addition, issues that are related to adolescence, patients with handicapping conditions, medical issues, developmental issues such as speech, special interest topics as applicable, and the use of sedation and other modalities are explored. The objective is to provide a format for review and discussion of certain advanced topics in pediatric dentistry, to discuss what is considered to be new in pediatric dentistry, to review interesting journal articles, and to present interesting cases which have been treated by students.

DENT. 530.5 — 1and2(1L-3C)  
Removable Prosthodontics IV  
Clinical practice in complete and removable partial dentures with an emphasis on self-evaluation and peer evaluation. This course also includes lectures and seminars with in-depth discussions of selected prosthodontic and related topics.

DENT. 540.5 — 1and2(1L-3C)  
Fixed Prosthodontics III  
Lectures, seminars and clinical practice in fixed prosthodontics with a strong emphasis on treatment planning and sequencing.

DENT. 542.2 — 2(1L)  
Health Sciences Interdisciplinary Relationships  
The relevance of the basic sciences to clinical dentistry and the scientific basis of various aspects of clinical dentistry are examined in detail. As well, this course provides opportunities to learn more about and discuss the impact of the medical conditions on dental treatment, and the interaction between dentists and physicians with regard to the medical management of patients under the care of dentists.

DENT. 548.3 — 1(2L-3C)and2(3C)  
Oral Medicine and CPRCs  
Various oral medicine topics are covered, including the management of oral lesions, radiation therapy and chemotherapy patients, patients with salivary disorders and patients with infectious diseases. In addition, students participate in multi-disciplinary seminars to gain experience in applying previous knowledge to simulated clinical patient cases (CPRC's). Students also perform dental emergency procedures and diagnosis and treatment planning under faculty guidance in the emergency, diagnosis and oral medicine/oral pathology clinics.

DENT. 550.3 — 1and2(1L-3C)  
Endodontics III  
Students enhance their clinical skills by managing patients with endodontic problems on an increasingly independent basis. Conservative orthograde endodontic therapy is the treatment of choice; however, students are encouraged to observe the surgical management of endodontic lesions. Students should develop an appreciation of the varying degrees of difficulty associated with endodontic procedures, and an understanding of their own limitations in certain cases. The ability to review the literature critically and evaluate objectively new concepts and techniques should enter into their decision making. Lastly, the need for self-evaluation and continuing education is stressed.

DENT. 563.3 — 1and2(1L-3C)  
Advanced Oral and Maxillofacial Surgery II  
This course is a continuation of DENT. 463 and covers more advanced topics in oral surgery. Topics discussed include orofacial infections, major maxillofacial surgery (i.e., cleft palate surgery, preprosthetic surgery, orthognathic surgery, maxillofacial traumatology, etc.), and the surgical management of head and neck cancers. Students are given more opportunity to develop expertise in minor oral surgery in a clinical setting. A portion of this course focuses on the prevention, recognition and management of medical emergencies in the dental office. Common medical emergencies that could be encountered and the agent(s) used to treat them are discussed. Clinical experience continues with more advanced patient management in order to develop competence in routine minor oral surgery.

DENT. 575.3 — 1and2(2.5C)  
Implant Prosthodontics II  
Clinical sessions only in fourth year. This course provides clinical exposure to implant restorations for clinic patients who were treatment planned during the third year implant prosthodontics course and had implant fixtures placed.

Prerequisite(s): DENT 475.2

DENT. 580.2 — 1and2(1L)  
Dental Practice Management II  
Continues with the concepts, theory and practical approaches to dental practice management that began in DENT. 440. The student will already have begun to apply this knowledge.

DENT. 585.5  
Comprehensive Care Clinics  
The Comprehensive Care Clinics will allow patient care to be provided in a comprehensive manner. Procedures from multiple disciplines will be able to be done at the same appointment, if deemed appropriate at the time.

DRAM — DRAMA  
College of Arts and Science

DRAM. 101.3 — 1/2(3L)  
How to Read Drama  
An introductory course in the reading and analysis of playscripts. The course will offer a brief survey of script analysis techniques (used by directors, actors, and other theatre personnel) as applied to major plays from various genres and historical contexts.

Note: Students with credit for DRAM. 100 may not take DRAM. 101 for credit

DRAM. 104.6 — 1and2(3P)  
Introduction to Theatre  
Direct experience of theatre arts and crafts. Designed to encourage the individual's creative impulse. Dramatic activities for teachers at all levels are explored and students move toward an understanding of drama as education.

Note: Not accepted in a drama major except with written permission of the Head of the department.

DRAM. 105.0 — 2-Jan  
Aboriginal Theatre Program Mentored Learning I  
The course (0 cu) offers students enrolled in ATP, wOchitowin - Aboriginal Theatre Program (Certificate of Proficiency), mentorship provided by the course coordinator, visiting theatre practitioners, elders, cultural leaders and traditional Knowledge Keepers. Students will share culturally relevant information and reflect upon their experiences in ATP as related to the acquisition of performance and technical theatre skills. Topical assignments will be distributed (via email) five days in advance of each class meeting. Guest speakers will be drawn from the University and the surrounding community. Additional guests (artists and elders alike) will be brought to campus as funding permits. DRAM. 105 meets jointly with DRAM. 205, and hence a broad network of student peers will be established, helping to intensify the sense of an inclusive creative artistic community which is central to the mission of wOchitowin - Aboriginal Theatre Program.

Permission is required. Students must be registered in wOchitowin - Aboriginal Theatre Program (Certificate of Proficiency Program)

Note: This course meets jointly with DRAM. 205 (0 cu)
DRAM. 110.3 — 1/2(1.5L-3P)
Technical Theatre I Scenic Construction
Introduces the fundamentals of scenic construction techniques including construction methods and materials, scene painting and aesthetic aspects of producing scenery for the stage. Requires a minimum of 25 hours of production work beyond the regular class and lab hours. Students should avoid taking any evening classes because of the demands of evening production set-up and rehearsals.

DRAM. 113.3 — 1/2(1.5-3P)
Technical Theatre II Stage Properties
Introduction to the fundamentals of stage properties construction, materials and techniques. Emphasis will be placed on the practical and aesthetic aspects of producing stage properties for theatre productions. There is a requirement of a minimum of 25 hours of production work beyond the regular class and lab hours. Students should avoid taking any evening classes because of the demands of evening production set-up and rehearsals.

DRAM. 118.3 — 1/2(1L-2P)
Acting I
The essentials of acting through the exploration of body, voice, idea, and imagination.
Note: Students with credit for DRAM. 118 may not take DRAM. 119 for credit.

DRAM. 119.3 — 1/2(1L-2P)
Acting II
Fundamentals introduced in Acting I will be applied to the process of interpreting the dramatic text.
Prerequisite(s): DRAM. 116 or 118.
Note: Students with credit for DRAM. 117 may not take DRAM. 119 for credit.

DRAM. 121.3 — SP/SU(1L-2P)
Directing for the Non Specialist
A practical and theoretical course for those interested in directing plays for amateur bodies such as schools and community groups. The directing process will be explored in terms of script analysis, script scoring, audition methods, coaching techniques, the development of rehearsal schedules, and the design of floor plans and blocking.
Note: Normally offered only in Spring and Summer Session. Open to drama majors as an elective only under Requirement 7 of Program Type D.

DRAM. 203.3 — 1/2(3L)
History of Theatre from 600 BCE to 1850 CE
History of theatre, dominantly in the Western tradition, from antiquity through to the Romantic revolt and the beginnings of realism. The evolution of theatrical production (acting, production, theatre architecture) will be emphasized, with assigned plays being examined largely within the context of the production and performance dynamics of their period.
Prerequisite(s): Completion of 30 credit units at the university.
Note: Students with credit for DRAM. 201 may not take DRAM. 203 for credit.

DRAM. 204.3 — 1/2(3L)
History of Theatre from 1850 to Present
History of theatre, dominantly in the Western tradition, from the rise of the modern theatre to the present day. Evolution of theatrical production (acting, directing, production, theatre architecture) will be emphasized, with assigned plays being examined largely within the context of the production and performance dynamics of their period.
Prerequisite(s): Completion of 30 credit units at the university.
Note: Students with credit for DRAM. 202 may not take DRAM. 204 for credit.

DRAM. 205.0 — 2-Jan
Aboriginal Theatre Program Mentored Learning II
The course (0 cu) offers students enrolled in ATP wōčíhtowin - Aboriginal Theatre Program (Certificate of Proficiency), mentorship provided by the course coordinator, visiting theatre practitioners, elders, cultural leaders and traditional Knowledge Keepers. Students will share culturally relevant information and reflect upon their experiences in ATP as related to the acquisition of performance and technical theatre skills. Topical assignments will be distributed (via email) five days in advance of each class meeting. Guest speakers will be drawn from the University and the surrounding community. Additional guests (artists and elders alike) will be brought to campus as funding permits. DRAM. 205 meets jointly with DRAM. 105, and hence a broad network of student peers will be established, helping to intensify the sense of an inclusive creative artistic community which is central to the mission of wōčíhtowin - Aboriginal Theatre Program.

Permission is required. Students must be registered in wōčíhtowin - Aboriginal Theatre Program (Certificate of Proficiency Program).
Note: This course meets jointly with DRAM. 105 (0 cu)

DRAM. 210.3 — 1/2(3L-3P)
Technical Theatre III Costume Construction
A study of the craft and art of the theatre costume designer. Emphasizes the practical and aesthetic aspects of producing costumes for the stage. There is a requirement of 30 hours of production work beyond the regular class and lab hours. Students should avoid taking any evening classes because of the demands of evening production set-up and rehearsals.
Prerequisite(s): DRAM. 110 or 113.

DRAM. 211.3
Indigenous Performance Methods
Indigenous culture and worldviews are explored by using the communicative methods fundamental to the field of language instruction. This course is divided into three distinct modules: “Acquisition,” “Application,” and “Expression.” Module One, “Acquisition,” uses immersion techniques to introduce students to an Indigenous language via a practical and expressive approach. Module Two, “Application,” focuses on the application of an Indigenous language to various methods of creative expression: oratory, storytelling and especially performance arts and focuses on both individual and group exercises. In Module Three, “Expression,” students develop, rehearse and present individual and group-generated creative works completely driven by the specific Indigenous language explored in Modules One and Two. The course is delivered in an integrated approach combining seminars, and lab/practicum sessions. Language and cultural specialists, elders, traditional Knowledge Keepers, guest lecturers/artists, enrich this course through socio-cultural activities intended to provide a foundation for the exploration of contemporary Indigenous worldviews and cultural arts.

DRAM. 213.3 — 1/2(3L-3P)
Technical Theatre IV Stage Management
Introduction to the fundamentals of the craft and art of stage lighting, sound production, and theatre stage management. There is a requirement of a minimum of 50 hours of production work beyond the regular class and lab hours. Students should avoid taking any evening classes because of the demands of evening production set-up and rehearsals.
Prerequisite(s): DRAM. 110 or 113.

DRAM. 218.3 — 1/2(1L-3P)
Acting III
The exploration of character in acting.
Prerequisite(s): DRAM. 117 or 119.
Note: Students with credit for DRAM. 216 may not take DRAM. 218 for credit.

DRAM. 219.3 — 1/4(2L-2P)
Acting IV Scene Study and Textual Analysis for the Stage
A practical exploration of the table work process of script analysis, supplying the keys to creating a dramatic character. Students will learn how to analyze and interpret the text, while continuing to develop and hone their own creative imagination and impulses.
Formerly: DRAM. 217.
Prerequisite(s): DRAM. 216 or 218.
Note: Students with credit for DRAM. 217 may not take DRAM. 219 for credit.

DRAM. 220.3 — 1/2(2L-4P)
Theatre Design I Introduction
Introduction to the technical and aesthetic skills and methods required of the theatre designer. Special consideration will be given to the development of skills required to communicate with fellow theatre practitioners, directors, designers and technicians in the visual medium.

Permission of the instructor required.
Prerequisite(s): DRAM. 110, 113.

DRAM. 221.3 — 1/2(2L-4P)
Theatre Design II Introduction
An exploration of the role of the theatre designer in the areas of setting, costumes and lighting. Special consideration will be given to the development of skills required to communicate with fellow theatre practitioners, directors, designers and technicians in the visual medium. An application of the technical skills learned in DRAM. 220.

Permission of the instructor required.
Prerequisite(s): DRAM. 220.
DRAM. 231.3 — 1/2(3S)
Introduction to Aboriginal Playwrighting
The purpose of DRAM. 231 is to learn the basics of
dramatic writing, with a focus on writing for
the stage. The course is intended for students with little
to no previous University-level writing experience,
but who have an intense interest in theatre. The
dramaturgical approach employed in the
course focuses on the actor/character relationship
to text, where the actor is always the first audience
of any script. In that the actor is ultimately responsible
for interpreting the text (through performance to the
audience), it is the playwrights goal to create a script
that both challenges and engages the actor. The craft
of writing plays is explored through exercises and
class discussion, and the course focuses on First
Nations and Métis cultural concerns.

DRAM. 236.3 — 1/2(3P-1T)
Stage Combat
The principles and techniques used to successfully
achieve the illusion of physical violence for the stage.
Actor safety, effective blocking, believable energy
transfer and the analysis of physical motion during
conflict will be examined.
Prerequisite(s): DRAM. 116 or 118.

DRAM. 285.3
Theatre Studies in London
A study abroad course in drama and theatre history
Prerequisite(s): 30 credit units of university-level course
work, including at least 6 credit units in Drama and/or
English.

DRAM. 286.3
Studies in Theatre Centres
A study abroad course in Drama with a dual
emphasis on theatre history and practical elements
pertaining to the making of theatre (direction,
acting, design, playwriting) in recognized theatre
centres in North America and abroad.
Prerequisite(s): 30 credit units of university-level course
work, including at least 6 credit units in Drama and/or
English.
Note: This is a course that would only be offered in
Spring and Summer, and always in a location other than
Saskatoon.

DRAM. 298.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other
special situations to cover, in depth, topics that are
not thoroughly covered in regularly offered courses.

DRAM. 299.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other
special situations to cover, in depth, topics that are
not thoroughly covered in regularly offered courses.

DRAM. 303.3 — 1/2(3L)
Advanced Studies in Theatre History I 1600 BCE
to 1850 CE
Intended for students who have acquired some
background in the theatre from. 600 BCE to 1850 CE.
The course will involve more intensive study of the
aesthetic, literary and production/performance
aspects of the theatre of the past, integrating
theoretical and practical approaches to the material.
Prerequisite(s): DRAM. 203 or permission of the department.
Note: Students with credit for DRAM. 201 may not take
DRAM. 303 for credit.

DRAM. 304.3 — 1/2(3L)
Advanced Studies in Theatre History II 1850 to
Present
Intended for students who have acquired some
background in the theatre from. 1850 to the present.
The course will involve a more intensive study of the
aesthetic, literary and production/performance
aspects of the theatre of the contemporary period,
integrating theoretical and practical approaches to
the material.
Prerequisite(s): DRAM. 204 or 209 or the permission of
the department.
Note: Students with credit for DRAM. 202 may not take
DRAM. 304 for credit.

DRAM. 309.3 — 1/2(3L)
Theories of Acting and Directing
Acting and directing theory from the Enlightenment
to the present day. Emphasis will be placed on the
evolving role of the director and actor, as conceived
of by important theoretician/practitioners, and on
the influence of accelerating technology and
changing trends in social, political, psychological and
cultural thought.
Prerequisite(s): Completion of 30 credit units at the
university.
Note: Students with credit for DRAM. 209 may not take
DRAM. 309 for credit.

DRAM. 310.3
Aboriginal Theatre Program Capstone Course
This Capstone course for the wOChTowin - Aboriginal
Theatre Program provides the opportunity to apply
performance techniques and skills, the theory and
practice of writing for the theatre, basic theatre design
and production concepts, and the skills required for
production coordination, stage and house management,
in a public performance. The course requires prior
knowledge of general acting, playwriting, technical and
design skills and in particular, skills that are acquired in
the two-year culturally-based wOChTowin - Aboriginal
Theatre Program. DRAM. 310 requires a minimum of
25 hours of production work beyond class and lab/
practicum hours (note: listed as “Other” in the “Meeting
Hours” segment of the “Course Proposal” document).
Students should avoid taking other courses (and
especially evening classes) when enrolled in DRAM. 310
because of the demands of production set-up,
rehearsals, and evening performances. The course
features four live performances of a collaboratively
developed new production, showcasing the techniques
and skills gained over the course of wOChTowin - Aboriginal
Theatre Program (Certificate of Proficiency Program).
Prerequisite(s): DRAM. 219, DRAM. 322, or by approval of
Department

DRAM. 318.3 — 1/2(6P)
Acting V
A course in acting styles. Scene study and exercises
in various periods and genres, which may include
Greek theatre, medieval theatre, Elizabethan theatre,
comedy of manners, farce, absurdist, and epic
theatre.
Formerly: DRAM. 316
Permission of the department required.
Prerequisite(s): DRAM. 219 and an audition.
Note: Students with credit for DRAM. 316 may not take
DRAM. 318 for credit.

DRAM. 319.3 — 1/2(6L)
Acting VI
Studio productions that focus on the acting
demands of a specific period, genre, or style. The
course will be an introduction to the concept of the
ensemble as well as rehearsal and performance
strategies.
Formerly: DRAM. 317
Prerequisite(s): DRAM. 318.
Note: Students with credit for DRAM. 317 may not take
DRAM. 319 for credit.

DRAM. 320.3 — 1/2(2L-4P)
Theatre Design III Intermediate
Further development of the theatre designer in the
areas of costume, lighting and set design. Continued
exploration of design aesthetics in theoretical design
projects. Focus is on individual "paper projects" involving
the complete planning and execution of projects in
costume, sets and lighting.
Prerequisite(s): DRAM. 221 and permission of the
instructor.
Note: Students with credit for DRAM. 314 may not take
DRAM. 320 for credit.

DRAM. 321.3 — 1/2(2L-4P)
Theatre Design IV Intermediate
Continued exploration and identification of concepts
and methods as they relate to costume, set and
lighting design. Focus on continued exploration of
the theatre design process and the continued
improvement of technical and aesthetic skills. Course
may involve a design project that relates to a
departmental production.
Prerequisite(s): DRAM. 320.
Note: Students with credit for DRAM. 314 may not take
DRAM. 321 for credit.

DRAM. 322.3 — 1/2(4P-2T)
Technical Theatre I
For the student who wishes to pursue advanced
studies in technical theatre practices in such areas as
stage management, lighting and sound, theatre
properties and effects. Studies will be closely related
to the department’s schedule of productions.
Prerequisite(s): DRAM. 220 is a prerequisite to 322;
completion of 60 credit units at the university; and
permission of the department.
DRAM. 323.3 — 1/2(4P-2T)
Technical Theatre II
For the student who wishes to pursue advanced studies in technical theatre practices in such areas as stage management, lighting and sound, theatre properties and effects. Studies will be closely related to the department’s schedule of productions.
Prerequisite(s): DRAM. 322 is a prerequisite to 332; completion of 60 credit units at the university; and permission of the department.

DRAM. 330.3 — 1/2(6P)
Physical Theatre I Clown
Neutral mask and clown: studies in physical theatre. The first half will consist of the student’s discovery of neutral expression and expressiveness through the use of neutral mask. The second half will allow the student to develop the personal clown.
Prerequisite(s): DRAM. 219 and 318.
Note: Students with credit for DRAM. 327 may not take DRAM. 330 for credit.

DRAM. 331.6 — 1and2(3S)
Playwriting
The craft of writing plays, explored through exercises and class discussions.
Prerequisite(s): At least 12 credit units in Drama and 12 credit units in English.

DRAM. 340.3 — 5L-1P
Play Directing
Challenges in researching, rehearsing, and staging plays. Play Directing will impart the skills required to mount a production, covering every aspect of the directorial process. Focus will be on pre-production and the rehearsal process, charting the course when one takes a group of actors from the first day of rehearsal to opening night.
Formerly: DRAM. 341.
Prerequisite(s): DRAM. 110, (210 or 213), 219.
Note: Students with credit for DRAM. 341 may not take DRAM. 340 for credit.

DRAM. 362.3 — 1(4.5P)
Voice and Speech for the Actor I
Development of the student’s vocal technique and awareness of the vocal process through exercises in relaxation, body alignment, support of tone and placement of sound. Emphasis on freeing the vocal apparatus of tension.
Formerly: DRAM. 364.
Permission of the department required.
Prerequisite(s): DRAM. 219 and an audition.
Note: Students with credit for DRAM. 364 may not take DRAM. 362 for credit.

DRAM. 363.3 — 1(4.5P)
Voice and Speech for the Actor II
Further development of the student’s vocal and speech technique and heightened awareness of the vocal process through increasingly subtle exercises in relaxation, body alignment, support of tone and placement of sound. Extension of range and control of pitch. The voice as a communicative instrument, and the beginning of its technical control through the speaking of prose and poetry.
Formerly: DRAM. 364.
Prerequisite(s): DRAM. 362.
Note: Students with credit for DRAM. 364 may not take DRAM. 363 for credit.

DRAM. 366.3 — 1(4.5P)
Fundamentals of Movement I
The student will address the building blocks in linking the mind and body through the fundamentals of actor movement. The student will focus on a limber incorporating strength, balance, flexibility, breath and alignment. The aim is to help the student decipher habitual movement from expressive movement.
Formerly: DRAM. 365.
Permission of the department required.
Prerequisite(s): DRAM. 219 and an audition.
Note: Students with credit for DRAM. 365 may not take DRAM. 366 for credit.

DRAM. 367.3 — 2(4.5P)
Fundamentals of Movement II
Will address physical styles exploring Greek Chorus through to Victorian Era. Latter half of the course will address more abstract concepts of physical exploration addressing time, weight and space.
Formerly: DRAM. 365.
Prerequisite(s): DRAM. 219 and 366.
Note: Students with credit for DRAM. 365 may not take DRAM. 367 for credit.

DRAM. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

DRAM. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

DRAM. 401.3 — 1/2(3L)
Dramatic Theory and Criticism
An examination of significant theories of major critics, theorists and writers of the theatre from ancient to modern.
Prerequisite(s): At least 12 credit units in English.

DRAM. 402.3 — 1/2(3L)
Studies in Canadian Theatre
An examination of dominant trends in Canadian theatre practice.
Prerequisite(s): At least 12 credit units in English.

DRAM. 418.3 — 1/2(6P)
Acting VII
A laboratory course to assist in the preparation for transition into the professional world. The course will focus on solo rehearsal, audition and performance techniques for the stage. Special concentration will also encompass the technical demands of acting for the media.
Prerequisite(s): DRAM. 317 or 319.
Note: Students with credit for DRAM. 415 or 416 may not take DRAM. 418 for credit.

DRAM. 419.3 — 1/2(6P)
Acting VIII
Final studio production(s) that further explore(s) the acting demands of a text from the classical repertoire. The course will strengthen the concept of the ensemble as well as rehearsal and performance strategies.
Prerequisite(s): DRAM. 416 or 418.
Note: Students with credit for DRAM. 415 or 417 may not take DRAM. 419 for credit.

DRAM. 420.3 — 1/2(2L-4P)
Theatre Design V Advanced
An advanced study of set, costume and lighting design. Emphasis will be placed on the student’s growing independence as a practicing theatre designer.
Prerequisite(s): DRAM. 321 and approval of the instructor.
Note: Students with credit for DRAM. 414 may not take DRAM. 420 for credit.

DRAM. 421.3 — 1/2(2L-4P)
Theatre Design VI Advanced
An advanced study of set, costume and lighting design as it relates to practical application. The student will be assigned a design project that relates to a departmental production.
Prerequisite(s): DRAM. 420.
Note: Students with credit for DRAM. 414 may not take DRAM. 421 for credit.

DRAM. 440.3 — 1(4L-2P)
Advanced Direction
Presents an opportunity for DRAM. 340 students, interested in continuing their exploration of the art of directing, to build on the skills acquired and discoveries made in that class.
Formerly: DRAM. 341.
Prerequisite(s): DRAM. 213, 219, 340 and permission of the instructor.
Note: Students with credit for DRAM. 341 may not take DRAM. 440 for credit.

DRAM. 462.3 — 1(4.5P)
Voice and Speech for the Actor III
Specialized problems for the vocal professional will be addressed: physical characterizations and their effect on voice and speech; rehearsal and extreme performance demands (shouting, crying, laughing), keeping the vocal performance fresh; vocal coaching in support of performances for acting class projects and/or performances for Greystone productions.
Formerly: DRAM. 464.
Prerequisite(s): DRAM. 363.
Note: Students with credit for DRAM. 464 may not take DRAM. 462 for credit.

DRAM. 463.3 — 1(4.5P)
Voice and Speech for the Actor IV
Specialized problems for the vocal professional will be addressed, focusing on dialects and cold readings. Vocal hygiene and vocal coaching in support of performances for acting class projects and/or performances for Greystone productions.
Formerly: DRAM. 464.
Prerequisite(s): DRAM. 462.
Note: Students with credit for DRAM. 464 may not take DRAM. 463 for credit.
DRAM. 466.3 — 1(4.5P)
Expressive Movement III
Consolidates the training given in DRAM. 367 with an emphasis on linking fundamental movement with expressive movement. The course will assist an actor in the facilitation of a clear emotional journey through the physical, linking the external and internal life of an actor's craft.
Formerly: DRAM. 465.
Prerequisite(s): DRAM. 219, 367.
Note: Students with credit for DRAM. 465 may not take DRAM. 466 for credit.

DRAM. 467.3 — 1(4.5P)
Expressive Movement IV
The emphasis of this module is to introduce expressive gesture/movement and the Viewpoints method with an emphasis towards devised physical theatre. The projects will entail individual and group process.
Formerly: DRAM. 465.
Prerequisite(s): DRAM. 466.
Note: Students with credit for DRAM. 465 may not take DRAM. 467 for credit.

DRAM. 485.6 — 1/2(40P-1T)
Internship in Drama and Theatre
An internship course, normally taken in the final year of a Drama program, which will provide the student with the opportunity to intern with one of several professional theatre companies and with other theatre-related groups.
Prerequisite(s): 60 credit units of university-level course work, including at least 21 credit units in Drama.

DRAM. 498.3 — 1/2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

DRAM. 499.6 — 1and2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

EADM — EDUCATIONAL ADMINISTRATION

College of Education

EADM. 422.3 — 1/2(3L)
Leading Organizations An Introduction to Leadership Theory and Practice
Designed to familiarize prospective and practicing professionals with the nature of public, private, and not-for-profit structures and social systems and to examine the effects of the organization and group interaction patterns on the experiences and life course trajectories or directions of individual professionals.
Note: Completion of 60 credit units of university level courses prior to registration in this course is recommended.

EADM. 423.3 — 1/2(3L)
The Professional Leader and Organizational Development
Designed to prepare students for diverse working environments and to have students explore trends and issues regarding organizational development and transformation. Research on organizational effectiveness in various situations will be examined. Models for developing organizational capacity employed within specific organizations and through contextual actions will be assessed.
Note: Completion of 60 credit units of university level courses prior to registration in this course is recommended.

EADM. 424.3 — 1/2(3L)
The Diligent Leader
Designed to provide students with a comprehensive understanding of leadership concepts by integrating theory, research, philosophy, and practice. Students will discuss: the history and nature of leadership; the tasks, contexts, attributes, and powers associated with leadership; and the related role of professionals and individuals assuming leadership responsibilities.
Note: Completion of 60 credit units of university level courses prior to registration in this course is recommended.

EADM. 425.3 — 2(3L)
Legal and Institutional Contexts of Education
Students will integrate the knowledge and experience acquired in earlier coursework and the extended practicum by examining the components of governmental, administrative, legal, ethical and professional aspects of public education in Saskatchewan and Canada.
Prerequisite(s): EXPR. 402 or EDUC. 421 and EDUC. 471.
Note: Students with credit for EADM. 321 may not take this course for credit.

EADM. 498.3 — 1/2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

EAP — ENGLISH FOR ACADEMIC PURPOSES

College of Continuing and Distance Ed

EAP 40.0
High to Intermediate English
Full time English program with 20 hours of classroom instruction weekly for ten weeks including reading, writing, speaking, listening, grammar, pronunciation and vocabulary skills development. An extracurricular cultural adaptation program is a required component of this course for new students, and class sizes are kept small to provide more interaction between students and teachers. This course focuses on English preparation for success in a post-secondary educational environment, and addresses essential communication skills within the context of academic lectures, presentations, reading and academic writing with the inclusion of source materials though citation and references.
Permission required: Permission of the College of Graduate Studies and Research and the U of S Language Centre is required.

EAP 50.0
University Preparation II
Full time English program with 20 hours of classroom instruction weekly for ten weeks including reading, writing, speaking, listening, grammar, pronunciation and vocabulary skills development. An extracurricular cultural adaptation program is a required component of this course for new students, and class sizes are kept small to provide more interaction between students and teachers. This is a highly intensive academic English program preparing students to be successful in a post-secondary academic setting, enabling participants to learn through interactive academic processes and advancing their skills in reading, writing, presenting, and classroom discussion for academic purposes. Students are required to write a full term paper with appropriate referencing and citation. The curriculum also requires students to complete a textbook project that entails reading and writing a test on a chapter from a first year university level text. Other requirements include formal presentations, note-taking with academic lectures, term tests, and a cumulative final exam. Class sizes are kept small to provide more interaction between students and teachers.
Permission of the College of Graduate Studies and Research and the U of S Language Centre is required. Prerequisite(s): EAP 50.

EAP 60.0
University Preparation I
Full time English program with 20 hours of classroom instruction weekly for ten weeks including reading, writing, speaking, listening, grammar, pronunciation and vocabulary skills development. An extracurricular cultural adaptation program is a required component of this course for new students, and class sizes are kept small to provide more interaction between students and teachers. This course focuses on English preparation for success in a post-secondary educational environment, and addresses essential communication skills within the context of academic lectures, presentations, reading and academic writing with the inclusion of source materials though citation and references.
Permission required: Permission of the College of Graduate Studies and Research and the U of S Language Centre is required.

EART — ART EDUCATION

EART. 300, 303, 310 and 311.
Students may receive credit for only one of EART. 300, 303, 310 and 311.
EART. 331.3 — 1/2(1L-1S-2P)
Methods in Secondary Visual Art
Provides prospective secondary teachers in art an overview of history and practice, current concerns, principles, teaching methods, and resources for curriculum planning and teaching art in secondary schools.
Prerequisite(s) or Corequisite(s): 12 credit units in ART or ARTH, including 6 credit units in ARTH.

EART. 433.3 — 2(1L-1S-2P)
Advanced Methodology in Art Education
Helps prospective art teachers to study personal strengths and to work on their shortcomings in moving towards preparedness for teaching. Topics will include knowledge of methodology in art education, media and processes, classroom management, health and safety, cultural and historical approaches, gender equity, evaluation, fostering individual growth in perception, cognition, creativity and skill.
Prerequisite(s) or Corequisite(s): EART. 303 or 311 or 331 and Expr. 402 or EDUC. 421.

EART. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

EBAC — EXECUTIVE BUSINESS
ADMIN CERT.

College of Edwards School of Business

EBAC 50
Marketing in Dynamic Environments
Will invoke processes to analyze market opportunities, planning, implementing and controlling the marketing activities of the start-up venture. Advanced strategic marketing will be investigated through discussion of selected articles, case studies and other supporting material. Marketing practice is explored through case study analysis, development of a marketing plan and guest speakers.
Note: Students with credit for COMM. 352.3 may not take this course for credit.

EBAC 51
Strategic Management and Implementation
Designed to enable students to initially view strategy formulation as a logical and rational process, this course will assist in developing skills in the analysis of a firm’s financial, strategic and competitive position. The firm’s value proposition and the competitive environment will be assessed as part of the process of recommending a general competitive strategy.
Note: Students with credit for COMM. 401.3 may not take this course for credit.

EBAC 52
Venture Management
Designed to assist students in developing and understanding the skills and tools required in preparing and presenting a complete and professional business plan for a business entity. All aspects of the business plan are discussed, including operations, human resources, marketing and finance.
Note: Students with credit for COMM. 447.3 may not take this course for credit.

EBAC 53
Special Topics Seminar Panel
Students will be exposed to a series of special topics. The topics to be covered will include Leadership, Innovation, International Affairs, Customer-centric Marketing, Services-based Marketing, Entrepreneurial Orientation, Personal Financial Planning, Negotiation, Sales Management and other relevant and current business topics.
Prerequisite(s): EBAC 50, 51, 52.

ECON — ECONOMICS

College of Arts and Science

ECON. 111.3 — 1/2(3L)
Price Theory and Resource Allocation
Shows the student how to understand the individual consumption and production decisions which are made within a market economy, guided by prices and costs. Economic concepts of supply, demand, cost, response to price changes, production, equilibrium, and income distribution are analyzed.

ECON. 114.3 — 1/2(3L)
Money and Income
Shows the student how to understand the collective problems in economic policy, and the choices which face a modern economy. Social accounting, national income, consumption, saving, government spending, taxation, investment, interest rates, money and banking, foreign trade, and balance of payments are analyzed.
Note: ECON. 111 recommended.

ECON. 204.6 — 1and2(3L-1P)
Statistical Applications in Social Sciences
An introduction to statistical methods and their application to problems in economics and related disciplines.
Prerequisite(s): ECON. 111.
Note: Students who wish to use this course toward an Arts and Science credit should first refer to Statistics Course Regulations in the Arts and Science section of the Calendar.

ECON. 211.3 — 1/2(3L)
Intermediate Microeconomic Theory
Presents the student with a formal analysis of demand, elasticity, cost, production, firm and market equilibrium, competition, monopoly, oligopoly, factor demand and prices, general market equilibrium, and welfare.
Prerequisite(s): ECON. 111.
Note: Students with credit for ECON. 213 may not take this course for credit.

ECON. 214.3 — 1/2(3L)
Intermediate Macroeconomic Theory
Presents the student with a formal analysis of national accounting, the consumption function, investment, public expenditure, taxes, budgets, money and interest, IS-LM analysis of general equilibrium in an open economy, aggregate supply and demand, public policy, inflation, and the rudiments of growth theory.
Prerequisite(s): ECON. 114, and one of ECON. 211 or 213.

ECON. 221.3 — 1/2(3L)
Women and the Economy
An examination of women’s changing economic roles. Includes an analysis of labour force participation, wage inequality, gender differences in education, intra-household distribution of resources, economics of reproduction, and how technological change affects women.
Prerequisite(s): ECON. 111.

ECON. 223.3 — 1/2(3L)
Labour Economics
An economic analysis of the labour market. Topics discussed will include the allocation of the labour force among sectors, industries and occupations and the functions and nature of the labour market. The problem of unemployment and public policy will be considered.
Prerequisite(s): ECON. 111 and 114.

ECON. 227.3 — 1/2(3L)
Wage Determination
A study of the theories of wage determination in various institutional settings. Analysis of the general level of wages and employment will also be considered. Emphasis will be on theoretical models.
Prerequisite(s): ECON. 111 and 114.

ECON. 231.3 — 1/2(3L)
Co-operatives
The historical background, philosophy and development of co-operatives are studied with special reference to the experience and problems of the prairie economy. Economic problems peculiar to co-operative organization are analyzed.
Prerequisite(s): ECON. 111.

ECON. 234.3 — 1/2(3L)
Economics of Health Care
An application of economic analysis to selected aspects of the health care delivery system. Emphasis will be placed upon an evaluation of the applicability of consumption and production theory to the delivery of physicians’ services. Empirical work on the demand for and supply of physicians’ services will be reviewed with particular reference to its significance for public policy.
Prerequisite(s): ECON. 111.

ECON. 254.3 — 1/2(3L)
International Trading System
A survey of the development of the international trading system with particular attention to its evolution in the post-World War II period.
Prerequisite(s): ECON. 111.
ECON. 256.3 — 1/2(3L)
International Monetary System
A survey of the development of the international monetary system with particular attention to its evolution in the post-World War II period.
Prerequisite(s): ECON 114.

ECON. 264.3 — 1/2(3L)
Chinese Economic Development
This course focuses on modern China’s economic development, especially in the post-1979 reform period, and its relationship to the economic development of the Greater China Circle: China, Hong Kong, and Taiwan.
Prerequisite(s): ECON 111 and ECON 114.

ECON. 270.3 — 1/2(3L)
Development in Non Industrialized Countries
A review of the economic development of selected countries. The relevance of resources, financial institutions, government action and regional differences to problems of industrialization in these countries will be studied in the light of past and current theories of economic development.
Prerequisite(s): ECON 111 and 114.

ECON. 272.3 — 1/2(3L)
Economics of Transition
Surveys core issues in transition economics. It discusses the legacy of the central planners, the progress achieved so far, and the need for further reforms. Topics include democratic transition and eintegration to the European Union, oligarchic transition, and gradualist transition. The course also introduces economic analysis of corruption.
Prerequisite(s): ECON 111 and 114.

ECON. 275.3 — 1/2(3L)
Economics of Natural Resources
The application of economic analysis to issues concerning the use of natural resources, their management and conservation, as well as environmental effects following therefrom. Policy problems related to the ownership of natural resources, their management, and taxation will also be discussed.
Prerequisite(s): ECON 111 and 114.

ECON. 277.3 — 1/2(3L)
Economics of the Environment
An introduction to the economic analysis of environmental issues. It will include analysis of environmental quality, benefit-cost analysis, and evaluation of different environmental policies and their application in Canada and Saskatchewan. It will conclude with analysis of global environmental issues.
Prerequisite(s): ECON 111 and 114.

ECON. 280.3 — 1/2(3L)
Classical Economics
The history of classical economics: Adam Smith, David Ricardo and Karl Marx, among others, with emphasis on the theories of value, distribution, growth, population, money and trade.
Prerequisite(s): ECON 111 and 114.

ECON. 298.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ECON. 299.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ECON. 305.3 — 1(3L)
Quantitative Methods in Economics I
An introduction to the application of quantitative methods in Economics.
Prerequisite(s): ECON. 111; ECON. 114; and one of MATH. 104 (formerly 101), 110, 121, 123, 125.
Note: Students with credit for a course in linear algebra may not take this course for credit.

ECON. 306.3 — 2(3L)
Quantitative Methods in Economics II
An introduction to comparative statics and optimization methods in Economics.
Prerequisite(s): ECON. 111; ECON. 114; one of MATH. 104 (formerly 101), 110, 121, 123 or 125; and one of ECON 305, MATH. 264. MATH. 266.
Note: Students with credit for a course in the calculus of multiple variables may not take this course for credit.

ECON. 307.3 — 1/2(3L)
Economic Forecasting
Presents forecasting techniques for the economic variables necessary for planning by business, government and NGOs. The course includes choosing forecasting techniques. The course discusses both how to prepare a forecast and how to attack or defend a forecast.
Prerequisite(s): ECON. 214 and one of MATH. 104 (formerly 101), 110, 121, 123 or 125.
Prerequisite(s) or Corequisite(s): 3 cu in STAT or one of PLSC. 214, GE 210, COMM. 104, EPSE. 441, PSY. 233, SOC. 225.

ECON. 311.3 — 1(3L)
Money Banking and Capital Markets
A study of the evolution and kinds of money, its functions and its economic significance. Topics discussed include theories of the demand for money, the money supply process with particular emphasis on the role of chartered banks, central banking, and financial intermediation. The concepts developed in this analytical survey are then utilized to evaluate recent Canadian monetary policy.
Prerequisite(s): ECON. 214 and one of MATH. 104 (formerly 101), 110, 121, 123 or 125.

ECON. 314.3 — 1/2(3L)
Development Economics
Studies theories of economic development. Topics include human resources, financial institutions, sectoral composition, international trade, and income distribution.
Prerequisite(s): ECON. 111 and ECON. 214
Note: Students with credit for ECON. 417 will not receive credit for this course. This course was labeled ECON. 417 until 2013.

ECON. 316.3 — 1/2(3L)
Portfolio Theory and Investment Analysis
Concerned with the theory of asset choice under conditions of risk and uncertainty. It considers various models of portfolio analysis, and capital market equilibrium.
Formerly: ECON 216.
Prerequisite(s): ECON. 114; ECON. 204 (or equivalent courses in statistics); one of ECON 211 or 213; and one of MATH. 104 (formerly 101), 110, 121, 123, or 125.

ECON. 343.3 — 1/2(3L)
Industrial Organization
Extends the use of basic price theory to the study of market structure, conduct, and performance results. The major structural characteristics of industries in Canada, and their market conduct and performance in relation to general standards of economic welfare will also be discussed.
Prerequisite(s): One of ECON. 211 or 213; and one of MATH. 104 (formerly 101), 110, 121, 123 or 125.

ECON. 347.3 — 1/2(3L)
Design and Evaluation of Regional Economic Policy
This class will consider the theory and practice of the evaluation of public regional policy initiatives.
Prerequisite(s): One of ECON. 211 or ECON. 213; and one of MATH. 104 (formerly MATH. 101), MATH. 110, MATH. 121, MATH. 123, or MATH. 125.

ECON. 348.3 — 1/2(3L)
Urban Economics
A consideration of those factors which systematically influence the development and growth of cities, their spatial structure, the markets for selected public services, and some special problems of urban public finance. Selected reference is made to empirical studies of Canadian cities.
Prerequisite(s): One of ECON. 211 or 213; and one of MATH. 104 (formerly 101), 110, 121, 123 or 125.

ECON. 349.3 — 1/2(3L)
Regional Economic Models and Methods
Using the Arts Computer Lab examines a series of currently-used regional economic models and the practical applications of these models to data sets from various sorts of regions, both industry-based and resource-based.
Prerequisite(s): One of ECON. 211 or 213; and one of MATH. 104 (formerly 101), 110, 121, 123 or 125.

ECON. 350.3 — 1/2(3L)
Economics of Public Expenditures
A survey of the principles of resource allocation in the public sector in relation to the role and effect of expenditure policies on the achievement of the major economic objectives. Topics include public choice, cost-benefit analysis and major expenditure programs.
Prerequisite(s): One of ECON. 211 or 213; and one of MATH. 104 (formerly 101), 110, 121, 123 or 125.
ECON. 372.3 — 1/2(3L)
Economics of Taxation
A survey of the principles of resource allocation in the public sector in relation to the role and effect of taxation policies on the achievement of the major economic objectives. Topics include the major taxes, fiscal federalism, and growth and the debt.
Prerequisite(s): One of ECON. 211 or 213; and one of MATH. 104 (formerly 101), 110, 121, 123 or 125.

ECON. 354.3 — 1/2(3L)
International Trade and Commercial Policy
A survey of the theory and practice of international trade and commercial policy. Topics include theories of the determinants of trade, the effects of customs unions, imperfect competition and growth on trading patterns and welfare, and the theory of trade policies.
Prerequisite(s): One of ECON. 211 or 213; and one of MATH. 104 (formerly 101), 110, 121, 123 or 125.

ECON. 356.3 — 1/2(3L)
International Monetary Economics
A survey of the theory and practice of the international monetary system. Topics examined include the determination of exchange rates, the international movements of capital, the conditions for balance of payments equilibrium, the process adjustment to disequilibria, and policy options in open economics.
Prerequisite(s): ECON. 214 and one of MATH. 104 (formerly 101), 110, 121, 123 or 125.

ECON. 373.3 — 1/2(3L)
Topics in Intermediate Microeconomic Theory
Extensions and applications of microeconomic theories. Topics include pricing with market power; game theory; factor markets; choice under uncertainty, intertemporal choice; asymmetric information; contracts; externalities, public goods.
Prerequisite(s): One of ECON. 211 or 213; and one of MATH. 104 (formerly 101), 110, 121, 123 or 125.

ECON. 376.3 — 1/2(3L)
Energy Economics
Energy Economics studies a wide range of issues dealing with energy consumption, energy production, and energy markets. It covers a variety of topics in microeconomics, macroeconomics, and energy economics.
Prerequisite(s): ECON. 214; and one of MATH. 104 (formerly 101), 110, 121, 123 or 125.

ECON. 393.3 — 1/2(3S)
Washington Center Topics in Economics
Prerequisite(s): 60 credit units of university-level study including 6 credit units senior ECON.
Note: Registration in this course is restricted to students selected for the Washington Center Term Abroad program.

ECON. 380.3 — 1/2(3L)
History of Economic Thought after 1870
The marginal utility theory, marginal productivity theory, neoclassical monetary theory and Keynesian economics; Menger, Jevons, Walras, Wicksteed, Marshall, Wicksell and Keynes, among others.
Prerequisite(s): ECON. 214 and one of MATH. 104 (formerly 101), 110, 121, 123 or 125.

ECON. 385.6 — 1and2(15-1T-3P)
Economics Career and Research Internship Course
Designed to provide students an opportunity to study and practice the application of economic theory and analytical and quantitative methods, and general economic analysis from the perspective of public, private, and non-profit organizations through a combination of on-site observations, office work, directed readings, and completion of a set of research and organization-related projects.
Prerequisite(s): ECON. 114; ECON. 204 (or equivalent courses in statistics); and one of ECON. 211 or ECON. 213.

ECON. 387.3
Economics Career Internship
Designed to provide students with an opportunity to study economic policy development, the application of economic theory and quantitative methods, and general economic analysis from the perspective of public, private, and non-profit organizations through a combination of on-site observations, directed readings, research and analysis.
Prerequisite(s): ECON. 214.
Note: A junior course in calculus may be required when necessary for the specific internship.

ECON. 389.3 — 1/2(3S)
Research Project in Economics
Research work on theoretical, empirical, and policy topics in microeconomics, macroeconomics, econometrics, or economics history/economic thought, under the supervision of members of the department.
Prerequisite(s): ECON. 111, 214, a junior course in calculus, and permission of the department.

ECON. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
ECON. 450.3 — 1/2(3L)
Strategic Choice
A study of game theory - the analysis of choice in situations involving strategy, in which optimal behaviour depends explicitly on the behaviour of others. Covers the theories of bargaining games, both cooperative and non-cooperative games, both zero-sum and non-zero-sum games, and the analysis of uncertainty.
Prerequisite(s): ECON. 211 and one of MATH. 104 (formerly 101), 110, 121, 123 or 125.

ECON. 470.3 — 1/2(3L)
Economics of Behaviour and Behavioural Economics
The economics of behaviour and the importance of behavioural assumptions for the analytical predictions of economic theory. The economics of behaviour also has significant implications for public and private economic policy and decision making, which will be discussed in some detail in this course in the context of an analysis of the overlapping and competing theoretical frameworks for human agency used by economists.
Prerequisite(s): ECON. 214 and one of MATH. 104 (formerly 101), 110, 121, 123 or 125.

ECON. 473.3 — 1/2(3L)
Mathematical Introduction to Micro Theory
Introduction to theories of consumer demand and of cost and production by means of the calculus and linear algebra. The necessary mathematical tools will be taught in the course. Recommended for potential honours and graduate students.
Prerequisite(s): ECON. 114; one of ECON. 211 or ECON. 213; and one of MATH. 104 (formerly MATH. 101), MATH. 110, MATH. 121, MATH. 123, or MATH. 125.

ECON. 474.3 — 1/2(3L)
Mathematical Micro Theory
Some modern theories of consumer demand to be followed by linear models of the firm: revealed preference, demand under risk and uncertainty, characteristics theory of demand, input/output analysis and linear programming. This course is an extension of ECON. 473.
Prerequisite(s): ECON. 473.

ECON. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ECUR — CURRICULUM STUDIES
College of Education

ECUR. 200.3 — 1and2(3L-1.5P)
Curriculum and Instruction
Introduces students to the fundamental processes of curriculum development and teaching. Sets out a conceptual framework (the transmission, transaction and transformation modes of curriculum) and uses that structure to present and critique the K-12 core program of the province. The learning component provides students with experiences in learning how to teach, resource-based learning, and the preparation of pedagogical materials.
Note: Students with credit for ECUR. 201 may not take this course for credit.

ECUR. 234.3 — 1/2(3L)
Curriculum in Practical and Applied Arts
Deals with the planning and organization of courses of study in both Vocational Education and Industrial Arts. Students in either of these specializations may pursue work that is pertinent to their fields. Emphasis is on systematic and methodical preparation of learning programs.
Formerly: ETEC. 272.

ECUR. 273.3 — 1(3L)
Oracy and Literature Elementary
An introduction to the methods available to elementary classroom instructors in the integrated language arts: reading, writing, listening, speaking, viewing and representing. Focuses on the oracy, literature and educational drama aspects of the language arts.
Note: Students with credit for ECUR. 270 or 275 may not take this course for credit.

ECUR. 275.3 — 1(3L)
Introduction to Oracy and Literature Middle Years
Introduction to the methods available to middle years classroom instructors in the integrated language arts: reading, writing, listening and speaking. Focuses on the oracy, literature and educational drama aspects of the language arts.
Note: Students with credit for ECUR. 270 or 275 may not take this course for credit.

ECUR. 279.3 — 1(3L)
Introduction to Literacy Secondary
Provides students with an understanding of secondary education literacy issues in order to improve instruction in content areas through appropriate reading, writing, and oracy strategies. Topics include strategic reading, study skills, writing processes, technical and vocational reading and writing, vocabulary development, assessment, materials selection, computers and resource-based learning, and equity issues.

ECUR. 291.3 — 1/2(3L)
Introduction to Teaching of English as Second Language
Prepares elementary, secondary and community college teachers to teach English as a second language to non-English speaking children and adults. Students will have an opportunity to study and examine: background; socio-cultural considerations; theoretical considerations about language learning comparison of L1 and L2; analysis of the structure of English; issues and problems inherent in the acquisition of second language; and introduction to specific instructional techniques for teaching a second language.
Prerequisite(s): ENG. 110 or 6 credit units from ENG. 111, 112, 113, 114, and 115.

ECUR. 298.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ECUR. 301.6 — 1and2(3L) or SP(10L)
Teaching Procedures Elementary
An overview and critical assessment of existing practices and of new movements in elementary education. Students will be required to do a considerable amount of reading of the literature in selected journals. Topics include: Children, their needs and motives; Society’s concern for education; The content of elementary education; Planning for instruction: Selecting objectives, Utilizing staff resources, Utilizing space and curriculum resources, Meeting individual differences, Methods in selected subjects of the curriculum, Measurement and evaluation, Reporting.

ECUR. 305.3 — 2(2L-1S)
Methods for Multi Grade Classrooms
Introduces students to the “Multi-grade Classroom” as an organizational unit for instructional purposes in rural and urban school districts. Emphasis is on the instructional strategies utilized by multi-grade classroom teachers and on the management and organizational skills necessary for teaching in such classrooms.

ECUR. 311.3 — 1(3L)
Methods in K to 9 Mathematics I
Designed to prepare students for teaching K-9 provincial mathematics curriculum and to improve their knowledge of mathematics, especially in the areas of problem solving, data management, numeration, calculation, and fractions. Students will become familiar with the current curriculum and useful support materials including manipulatives, print resources and other useful media.
Restriction(s): Only open to students in the ITEP and SUNTEP programs.
Note: Completion of both ECUR. 311 and ECUR. 316 satisfy the math methods and External math requirements for the College of Education. Completion of only one of these courses will satisfy neither requirement.
ECUR. 312.3 — 1/2(3L)
Methods in Elementary Mathematics
Helps prospective elementary school teachers develop instructional techniques that reflect current knowledge of mathematics, learning theories such as constructivism, and classroom practice. It includes the K-5 elementary mathematics curriculum and useful resource materials including manipulatives, textbooks and other print material, computer software, videos, calculators, and children’s literature.
Note: Students may receive credit for only one of ECUR. 311, 312, 315, 317 and the combination of 311 and 316.

ECUR. 316.3 — 2(3L)
Methods in K to 9 Mathematics II
Designed to prepare students for teaching K-9 provincial mathematics curriculum and to improve their knowledge of mathematics, especially in the areas of measurement including the Pythagorean theorem, geometry, (polygon properties, symmetry, tessellations), ratio and proportion, integers, and number theory. Students will become familiar with the current curriculum and useful support materials including manipulatives, print resources and other useful media.
Restriction(s): Only open to students in the ITEP and SUNTEP programs.
Note: Completion of both ECUR. 311 and ECUR. 316 satisfy the math methods and External math requirements for the College of Education. Completion of only one of these courses will satisfy neither requirement.

ECUR. 318.3 — 1/2(3L)
Methods in Secondary Mathematics
An introductory mathematics methods course for prospective secondary students. Topics include the current secondary mathematics curriculum, forces affecting the curriculum, and teaching methodology. Emphasis is on the development of problem solving skills, the use of manipulatives, and the use of computational technology to support instruction in mathematics.
Prerequisite(s): 12 credit units in MATH or STAT.

ECUR. 322.3 — 1/2(3L)
Methods in Elementary Science
Students will be introduced to teaching children science and to the Saskatchewan Science Curriculum for the Elementary Level. Various methods and resources needed to teach the Curriculum at this level will be demonstrated. Specific issues related to Science Education will be explored.
Note: Students may receive credit for only one of ECUR. 322, 323, 324 and 325.

ECUR. 327.3 — 2(3L)
Methods in Secondary Life Sciences
Students will develop and demonstrate an informed and practical philosophy of teaching the life sciences by exploring the nature of science, reflecting on the pedagogical implications of provincial science curriculum intentions and examining how current research in science education informs planning, the development of resource materials, and teaching methodologies.
Prerequisite(s): 12 credit units in Biology.

ECUR. 328.3 — 2(3L)
Methods in Physical Sciences
Students will develop a series of conceptual frameworks that have practical implications for reflecting on classroom practice. Topics include: curriculum intentions, the nature of the scientific enterprise, concept development, assessment and evaluation, and pedagogical methods and strategies that support curriculum intentions.
Prerequisite(s): 12 credit units in CHEM, PHYS, GEOL or GEOG.

ECUR. 332.3 — 2(3L)
Safe and Effective Learning Environments in PAA
Deals with creating and maintaining safe and effective learning environments in practical and applied arts. Student candidates will research various approaches to the above topics and then develop their own philosophy, theory and management plan for facilities, classroom management and crisis in PAA.

ECUR. 333.3 — 1/2(3L)
Preparing and Evaluating Instructional Materials in Practical and Applied Arts
Deals with preparing and selecting learning aids appropriate for Vocational Education and Industrial Arts. Emphasis is on the development of teacher-competence in designing, developing, and applying materials that can be used to facilitate individual as well as group learning.
Formerly: ETEC. 273 or 373.
Restriction(s): Only open to third and fourth year Practical and Applied Arts students.

ECUR. 334.3 — 1/2(3L-2P)
Methods of Teaching Practical and Applied Arts
The teacher’s role is regarded as being a manager of learning and the organizational, leadership, and control aspects of this role are examined. Experience will be gained in planning instructional activities and in delivering instruction through the use of micro-teaching.
Formerly: ETEC. 276 or 374.
Restriction(s): Only open to third and fourth year Practical and Applied Arts students.

ECUR. 335.3 — 1/2(3L)
Evaluation in Practical and Applied Arts
Deals with evaluating Practical Arts students through testing, observation and project assessment. Item preparation will focus on practical or performance tests. The nature of most Practical Arts activities requires an emphasis on performance observation. Basic statistical concepts appropriate for Practical Arts teachers are studied.
Formerly: ETEC. 275 or 375.
Restriction(s): Only open to third and fourth year Practical and Applied Arts students.

ECUR. 349.3 — 2(3L)
Methods in Middle Years and Secondary Drama
Designed for pre-service teachers of middle and secondary level drama programs. Students will both explore the theoretical bases of drama education and participate in dramatic activities for use both in and out of the classroom.

ECUR. 352.3 — 1/2(2L-1P)
Methods in Elementary Physical Education
Familiarizes elementary students with theoretical and practical material in Physical Education at the elementary school level. Particular emphasis will be placed upon the selection of the movement activities and their progression as related to growth and development characteristics of the elementary school child.
Note: Students may receive credit for only one of ECUR 352, 353, 355 and. 356.

ECUR. 357.3 — 2(3L)
Methods in Secondary Physical Education
For prospective secondary teachers of physical education. The philosophy, objectives, teaching methods, and evaluation of secondary school physical education programs are emphasized. Students are given opportunities to gain experience in planning, implementing and evaluating physical education classes and programs.
Prerequisite(s): 12 credit units in Kinesiology.

ECUR. 362.3 — 1/2(3L)
Introduction to Principles and Practices of Second Language Teaching
For prospective teachers of any second language offered in elementary and secondary schools. Involves a study of major theories of second language acquisition and use in various contexts, and their relevance to language teaching approaches. Emphasis is on communicative/ experiential and content-based approaches.
Note: If English is your first language then at least 12 credit units in a modern language other than English is required.

ECUR. 370.3 — 2(3L)
Introduction to Elementary Literacy Education
Introduction to elementary classroom instruction in the integrated language arts: reading, writing, listening, speaking, viewing and representing. Highlights reading and writing process. Emphasizes instructional principles and strategies through the integration of theory and practice.
Prerequisite(s): ECUR. 273 or 275.
Note: Students with credit for ECUR. 376 may not take this course for credit.

ECUR. 371.3 — 1/2(3L)
Developing Writing Abilities
Develops English writing skills and abilities. Some sections make use of computers and other technologies exclusively for instruction.

ECUR. 376.3 — 2(3L)
Introduction to Literacy Education Middle Grades
Compulsory for students in the middle years program. An introduction to middle years classroom instruction in the integrated language arts: reading, writing, listening and speaking. Highlights reading and writing. Emphasizes instructional principles and strategies through the integration of theory and practice.
Prerequisite(s): ECUR. 273 or 275.
Note: Students with credit for ECUR. 370 may not take this course for credit.
ECUR. 378.3 — 2(3L)
Creative Activities in Elementary and Middle Years Language Arts
Deals with the philosophy, materials and methods for introducing creative activities into elementary and middle years ELA classrooms, with a focus on process drama. The significance and function of drama across the curriculum will be explored in conjunction with selections of children’s literature.

ECUR. 379.3 — 2(3L)
Introductory Methods in Secondary English Language Arts
Introduction to classroom instruction in English language arts, with a special focus on preparation for 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.
Prerequisite(s): 12 credit units in English.

ECUR. 382.3 — 1/2(3L)
Methods in Elementary Social Studies
Focuses on teaching Social Studies in primary and elementary schools. It is an activity-oriented course which provides students with opportunities to participate in instructional methods and approaches for children.
Note: Students may receive credit for only one of ECUR. 382, 383, 385 and 387.

ECUR. 386.3 — 1/2(3L)
Methods in Secondary Social Studies
Identifies major concepts selected from history, geography and other social sciences. Emphasis is placed upon the learner’s ability to demonstrate skill in selecting methods, strategies, materials and forms of evaluation in social studies. In turn, there will be an in-depth examination of the Saskatchewan secondary social studies curriculum.
Prerequisite(s): 12 credit units in Social Studies/Social Sciences.

ECUR. 391.3 — 1/2(3L)
Theory of Second Language Learning and Methods of Skills Development
The second of a 3-course sequence designed to prepare elementary, secondary, and community college teachers to teach English as a second language to non-English speaking children and adults. Includes second language learning theories, the psychology of second language learning, ESL materials, analysis of written language, materials of teaching, and oral language in the ESL program and the evaluation of oral language.
Prerequisite(s): ECUR. 291.

ECUR. 393.3 — 1/2(3L)
Advanced Methods in Teaching English as Second Language
Provides for intensive training in the theories and techniques of English as a second language; the extensive development of learning materials; the development of techniques of assessing students’ problems in speaking and writing English; developing techniques for solving existing problems and for providing the opportunity to study more intensively the structure of the English language.
Prerequisite(s): ECUR. 391.
Note: Students with credit for TESL 35 may not take this course for credit.

ECUR. 394.3 — 2(3L)
Methods in Secondary Religion
Reviews the methods of teaching religious education in the secondary school. The curriculum requirements of the Department of Education will be examined, and the appropriate methods for teaching these requirements will be reviewed in the context of adolescent faith development and the specific school context and situation in which the teaching will occur.
Prerequisite(s): 12 credit units in RLST.
Note: Students with credit for ECUR. 392 may not take this course for credit.

ECUR. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ECUR. 400.3
Curriculum and Instruction for Saskatchewan Secondary Schools
Enables students with a teaching certificate or an education degree from another jurisdiction to plan for instruction in their minor teaching area. Plans will demonstrate an understanding of Saskatchewan curricula, the use of generic and subject-specific instructional methods, and be designed to accommodate cultural diversity (particularly the needs of Metis and First Nations students).
Permission of the department required.

ECUR. 401.3 — 2(2L-1P)
Teaching and Learning in Community Education
Provides students who have completed their Extended Practicum with additional practical experience in community education in the Saskatchewan context. Students study issues of intercultural education in urban settings, and are expected to spend at least twenty hours working in community schools and other organizational settings.
Prerequisite(s): EXPR. 402.15 or EDUC. 421.12.

ECUR. 402.3 — 1/2(3L)
Language Schools Society
Provides students with a solid understanding of the nature of language, language and learning, language in schools and society, and language as a human construct.

ECUR. 406.3 — 2(3L)
Curriculum Development Post Internship
Students learn the fundamentals of curriculum development within a transactional tradition, critique curricula in their teaching areas, and undertake a curriculum development project in their teaching areas.
Prerequisite(s): EXPR. 402 or EDUC. 421.
Note: For students in areas where no advanced methods courses are available, this course is the preferred alternative.

ECUR. 421.3 — 2(3L)
Epistemology and Sociology of Science
Students examine how scientists know what they know, what kind of knowledge this is, how the social and technological milieu interacts with scientists and their knowledge, and implications for teaching science. Emphasis is given to analyzing scientific events from a number of different perspectives: historical, philosophical, sociological, and pedagogical.

ECUR. 442.3 — 2(3L)
Emergent Literacy in Elementary English Language Arts
Develops an understanding of literacy as social-cultural practice. Emphasis is on the relationship between talk, reading and writing and the young child’s own environment in varying cultural and cross-cultural contexts. Students will explore instructional and assessment strategies to support young children’s emerging literacy in primary classrooms.

ECUR. 444.3 — 2(3L)
Assessment and Instruction of Children Experiencing Reading Difficulties
Examines procedures and materials for assessing and teaching children who experience difficulty acquiring reading proficiency. The use of daily classroom data and the making of appropriate interventions to foster inner control will be emphasized within the context of the regular classroom.
Prerequisite(s) or Corequisite(s): ECUR. 370 or 376 and EXPR. 402 or EDUC. 421.

ECUR. 472.3 — 2(3L)
Methods in Middle Years and Secondary Writing
For middle, secondary, and post-secondary teachers of any discipline. Topics include writing process, development of students’ writing abilities, evaluation, remediation, grammar and usage, ESL writers, and equity issues. Some sections of this course will use computers and email.

ECUR. 475.3 — 2(3L)
Study of Language for Secondary Teachers
Studies aspects of structural linguistics, traditional grammar, transformational/generative grammar, systemic-functional grammar, and language content, usage, and conventions to enable teachers to develop and evaluate language programs.
Prerequisite(s): ECUR. 379.
Note: Students in the secondary option with English as Teaching Area I or II must take this course.

ECUR. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
EDST — EDUCATION STUDENT TEACHING

EDST. 103.0
Student Teaching Sequential Program
Elementary Middle Years Secondary Year 3
Involves directed observation and participation in a school classroom under the guidance of a cooperating teacher. The course carries no credit, but is a program requirement.

Note: Students with credit for STTC. 103 may not take this course for credit.

EDST. 130.0
Student Teaching BMus Music Education
Elementary Middle Years Year 1
Involves one week of directed observation in a music classroom after the conclusion of final examinations. The course carries no credit but is a program requirement.

EDST. 137.0
Student Teaching BMus Music Education
Secondary Year 1
Involves one week of directed observation in a music classroom after the conclusion of final examinations. The course carries no credit but is a program requirement.

EDST. 200.0
Student Teaching
Involves demonstrations of teaching competence in a second-language classroom setting. The course carries no credit but is a requirement for the Certificate in Methods of Teaching Heritage Languages program.

EDST. 213.0
Student Teaching Concurrent Program
Elementary Middle Years Secondary Year 2
Involves directed observation and participation in a school classroom. It consists of a two-week experience in rural Saskatchewan after the conclusion of final examinations. The course carries no credit but is a program requirement.

EDST. 230.0
Student Teaching BMus Music Education
Elementary Middle Years Year 2
Involves three weeks of directed observation and participation in a music classroom after the conclusion of final examinations. The course carries no credit but is a program requirement.

Prerequisite(s) or Corequisite(s): EDST. 130

EDST. 237.0
Student Teaching BMus Music Education
Secondary Year 2
Involves three weeks of directed observation and participation in a music classroom after the conclusion of final examinations. The course carries no credit but is a program requirement.

Prerequisite(s): EDST. 137

EDST. 303.0
Student Teaching Concurrent Program
Elementary Middle Years Year 3
Involves directed observation and participation in a school classroom and consists of a two-week experience in rural Saskatchewan after the conclusion of final examinations. The course carries no credit but is a program requirement.

Prerequisite(s) or Corequisite(s): EDST. 213.

EDST. 304.0
Student Teaching Concurrent Program
Secondary Year 3
Involves directed observation and participation in a school classroom and consists of a two-week experience in rural Saskatchewan after the conclusion of final examinations. The course carries no credit but is a program requirement.

Prerequisite(s) or Corequisite(s): EDST. 213.

EDST. 330.0
Student Teaching BMus Music Education
Elementary Middle Years Year 3
Involves three weeks of directed observation and participation in a music classroom after the conclusion of final examinations. The course carries no credit but is a program requirement.

Prerequisite(s) or Corequisite(s): EDST. 230.

EDST. 337.0
Student Teaching BMus Music Education
Secondary Year 3
Involves three weeks of directed observation and participation in a music classroom after the conclusion of final examinations. The course carries no credit but is a program requirement.

Prerequisite(s) or Corequisite(s): EDST. 237.

EDST. 420.0
Student Teaching BEd BMusMusEd Elementary
Middle Years Year 4
Involves three weeks of directed observation and participation in a regular classroom after the conclusion of final examinations. The course carries no credit but is a program requirement.

Prerequisite(s) or Corequisite(s): EDST. 330.

EDST. 427.0
Student Teaching BEd BMusMusEd Secondary
Year 4
Involves three weeks of directed observation and participation in a Teaching Area II after the conclusion of final examinations. The course carries no credit but is a program requirement.

Prerequisite(s) or Corequisite(s): EDST. 337.

EDST. 497.3
Advanced Student Teaching
This elective course is intended to provide a Saskatchewan-based school experience, supplemental to required school experiences. It is open to students who have completed at least one school experience previously. Approval of the Field Experience Office.

Permission of the department required.

EDST. 498.0
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

EDUC — EDUCATION

EDUC. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

EDUC. 301.3 — 3L
Educator Identity in Contexts Anti-Oppressive and Ethical Beginnings
This course will have a central focus on an anti-racist and anti-oppressive examination of self and learners, with an understanding that education is an ethical and political act. Specific attention will be paid to the Saskatchewan context. Teacher candidates will connect these understandings to teaching practice as they develop their professional identities.

EDUC. 302.3 — 3L
Situated Learners Contexts of Learning and Development
Teacher candidates will investigate the contexts of understanding knowledge and learning, learner diversity and development. This will include child and adolescent development, assessment, exceptionalities, and language use in learning. It will also include a focus on related implications for pedagogical decision-making, with attention to the adaptive dimension of curriculum to support diverse learners' cognitive, emotional, physical, spiritual, and age-specific growth.

EDUC. 303.3 — 3L
Education in Society Structures Systems and Stakeholders
This course considers the structures and contexts that shape education for learners and teachers. Examining historical, cultural, and strategic perspectives as a way of understanding current systems, institutional policies, and educational philosophies, governance issues, law, institutional norms, family and community contexts will support the exploration of one's own philosophies and practices of teaching and being a member of a learning community (and professional learning community).

EDUC. 309.3 — 3L
Applied Literacies of Knowing ELA Elementary
This course will examine languages of knowing that are dominant within and across English Language Arts (listening, speaking, reading, writing, viewing and representing) across the curriculum, and their relation to cultural contexts; media as a dominant language of knowing in relation to youth identity and society (including an introduction to First Nations, Métis, and Inuit authors); and the resulting importance of considerations of interdisciplinarity and diverse knowledges in curriculum-making and pedagogy.
EDUC. 311.3 — 3L
Applied Literacies of Knowing: English Language Arts (Secondary)
This course will examine languages of knowing that are dominant within and across English Language Arts (listening, speaking, reading, writing, viewing, and representing) across the curriculum and their relation to cultural contexts; media as a dominant language of knowing in relation to youth identity and society (including an introduction to First Nations, MÉtis, and Inuit authors); and the resulting importance of considerations of interdisciplinary and diverse knowledges in curriculum-making and pedagogy.

EDUC. 312.3 — 3L
Relational Curriculum Making Intersections of Educators Learners Contexts and Subject Matters Elem
Curriculum-making is an intentional act of organizing, designing, developing, and assessing outcomes of learning experiences in subject areas. Curriculum is made through the interaction of educators, learners, contexts and subject matters, including ELA, Social Studies, Mathematics, Technology, PAA, Sciences, Fine Arts and Physical Education. Considerations for planning, intellectual practice, assessment, and building learning experiences will be aspects of this course, including a focus on lesson and unit planning for literacy across the curriculum (with specific attention to the classroom actualization of resources by First Nations, MÉtis, and Inuit authors).

Prerequisite(s): EDUC. 309 or EDUC. 311.

EDUC. 313.3 — 3L
Pedagogies of Place: Context Based Learning (Elementary)
This course considers pedagogical, planning, and assessment choices in relation to geographical and cultural contexts, the specific knowledges and situations of learners, subject learning and relational curriculum-making, and social and ecological justice priorities. Holistic, experiential, and inquiry-based pedagogical methodologies will be examined and experienced. This course addresses integrated methods content in language arts, science, social studies, and mathematics, and appropriate adaptation, assessment and evaluation.

EDUC. 314.3 — 3L
Relational Curriculum Making Intersections of Educators Learners Contexts and Subject Matters Second
Curriculum-making is an intentional act of organizing, designing, developing, and assessing outcomes of learning experiences in subject areas. Curriculum is made through the interaction of educators, learners, contexts and subject matters, including ELA, Social Studies, Mathematics, Technology, PAA, Sciences, Fine Arts and Physical Education. Considerations for planning, intellectual practice, assessment, and building learning experiences will be aspects of this course, including a focus on lesson and unit planning for literacy across the curriculum (with specific attention to the classroom actualization of resources by First Nations, MÉtis, and Inuit authors).

Prerequisite(s): EDUC. 311.

EDUC. 315.3 — 3L
Pedagogies of Place: Context Based Learning (Secondary)
This course considers pedagogical, planning, and assessment choices in relation to geographical and cultural contexts, the specific knowledges and situations of learners, subject learning and relational curriculum-making, and social and ecological justice priorities. Holistic, experiential, and inquiry-based pedagogical methodologies will be examined and experienced. This course addresses integrated methods content in language arts, science, social studies, and mathematics, and appropriate adaptation, assessment and evaluation.

EDUC. 321.3 — 3L
Field Experience: Learning in Contexts
This field study includes one full-time week within the first month of the term. 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.

EDUC. 322.3
Field Experience Relational Curriculum-making in Practice Planning Adapting and Assessing
Teacher candidates will engage in weekly school-based experiences, and in one full-time week at the end of the term, where they will engage with learners, peers and partner teachers in practice to more deeply understand curriculum making, languages of knowing, socio-culturally responsive pedagogies and implications in planning and assessment.

EDUC. 398.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

EE — ELECTRICAL ENGINEERING

EE 202.3 — 1(3L-3P alt weeks)
Electric and Magnetic Fields and Circuits
Further develops the theory and analysis of electric and magnetic fields and circuits beyond the level of the prerequisite courses. Fundamental topics include electrostatics, magnetostatics, electromagnetic force, Faraday's and Lenz's Laws, capacitance and inductance. Circuit topics include transient RC and RL circuits, a.c. sources, impedance, phasors, a.c. network analysis, ferromagnetism and magnetic circuits, basic transformers, and linear motors and generators. Students are expected to have facility with using complex numbers but not vector calculus.

Restriction(s): Restricted to students in the Electrical Engineering, Computer Engineering, Engineering Physics, and Geophysics programs.
Prerequisite(s): (MATH. 123 or MATH. 110), (MATH. 124 or MATH. 116), and (PHYS. 155 or PHYS. 115).
Note: Students with credit for EE 201 or EP 229 will not receive credit for this course.
EE 204.3 — 1(3L-3P alt weeks)  
Basic Electronics and Electrical Power  
This is a basic course on electrical topics for non-electrical engineering disciplines. It explores basic electrical and electronic devices as well as AC power and energy. Topics include force on a wire carrying a current, Faraday’s and Lenz’s Laws, electromagnetic induction, inductors, self and mutual inductance, DC inductive transient circuits, basic generator and motor principles, basic transformer operation, single-phase and three-phase complex power and power factor correction, transistor switches, basic logic, operational amplifiers and integrated circuits, microprocessor-based controllers, protection devices and basic test equipment.

Formerly: EE 201.3  
Restriction(s): Restricted to students in the Biological Engineering, Chemical Engineering, Environmental Engineering, and Mechanical Engineering programs.  
Prerequisite(s): MATH. 123, MATH. 124, and PHYS. 155.  
Note: Students with credit for EE 201, BLE. 312, or EP 229 will not receive credit for this course.

EE 205.1 — 1(1L)  
Safety and Stewardship in Electrical and Computer Engineering  
Explores issues involving safety and environmental concerns in the context of the practice of electrical and computer engineering.

Restriction(s): Restricted to students in the Electrical Engineering and Computer Engineering programs.

EE 216.3 — 2(3L-1.5P)  
Probability Statistics and Numerical Methods  
The solution and understanding of engineering problems and system behavior will be studied with emphasis on implementation using computer-based methods. Topics include numerical modeling, roots and optimization, linear algebra, solving systems of equations, numerical integration and differentiation, solving differential equations, basic probability, statistics, distributions, expectation, and curve fitting. A computer laboratory is an important element of the class.

Prerequisite(s): MATH. 123 and MATH. 124.

EE 221.3 — 1(3L-3P alt weeks)  
Analog Electronics  
Introduction to solid state electronics. Emphasis is on circuit design concepts with extensive discussion on diodes and diode circuits and on bipolar junction transistors (BJT) and field effect transistors (FET) as amplifiers and as switches.

Prerequisite(s) or Corequisite(s): EE 202.  
Note: Students with credit for EP 311 may not take this course for credit.

EE 232.3 — 2(3L-3P alt weeks)  
Digital Electronics  
An introduction to digital logic including combinational and sequential logic devices and circuits. Covers the range from the fundamentals of Boolean algebra and the binary number systems to combinational and sequential circuit functional blocks such as adders, multiplexers, counters and state machines. Some coverage is also given to electronic characteristics of real logic devices and field programmable gate arrays (FPGA).

Prerequisite(s): EE 221.
EE 391.3 — 1(6P)
Electrical Engineering Laboratory II
A laboratory course that familiarizes the students with laboratory equipment, techniques and methods required to design, construct, troubleshoot, verify and characterize electrical circuits and assemblies. Practical laboratory sessions or projects supplement and complement the requisite courses and the EE program material in general. Students will investigate and apply the principles of inductive devices; apply their knowledge of complex AC power and electronic measurement; and employ their knowledge of microcontroller programming and control system theory to design, build and test various electronic systems.
Prerequisite(s) or Corequisite(s): EP 313 and CME 331.
Note: This course was last offered in 2012-13.

EE 392.3 — 2(6P)
Electrical Engineering Laboratory III
A laboratory course that supplements and complements the requisite courses and the EE program material in general. Experiments investigate bipolar transistor characteristics, three-phase transformers, DSPs, sampling, modulation, microcontrollers, Labview, and DC machines.
Prerequisite(s): CME. 331 and EE 342 and EE 372 and EE 391.
Prerequisite(s) or Corequisite(s): EE 352 and (EE 341 or EE 362).
Note: Students with credit for CME. 392 may not take this course for credit. This course was last offered in 2012-13.

EE 395.3 — 2(1.5L-1.5P)
Electrical Engineering Design
Covers the top down approach applied to engineering design. The students will exercise the approach by designing, building and testing one or two projects. The course also includes aspects of manufacturing engineering, project organization and control.
Prerequisite(s): EP 313 or CME. 331.
Prerequisite(s) or Corequisite(s): RCM. 300.
Note: This course was last offered in 2012-13.

EE 402.3 — 2(3L-2P)
Microwave and RF Circuits
Focuses on practical realization of microwave and radio frequency circuits, with emphasis on both passive and active design. Topics include network analysis, transmission line theory, impedance matching and tuning, filters, couplers, power dividers, amplifiers, and oscillators. Circuit design and performance optimization will be done using computer-aided design software.
Prerequisite(s): EE 301 or PHYS. 356.

EE 441.3 — 1(3L-3P alt weeks)
Power Systems Analysis
This course covers in depth the topics: 1-Analysis of faulted power systems which includes bus impedance and admittance matrices; network equations in matrix form; symmetrical components; sequence networks; balanced and unbalanced faults, 2- Load flow studies; the static load flow equations, classification of system buses, Gauss-Seidel and Newton-Raphson methods, 3- Power system stability; modeling of the synchronous machine during transients; swing equation; equal area criterion; digital computer solution of the swing equations; small signal stability, 4- Smart grid.
Prerequisite(s): EE 342.

EE 442.3 — 1(3L-3P alt weeks)
Power Systems Operation and Control
Covers economic dispatch: the lossless case, inequality constraints, participation factors, consideration of transmission system effects, penalty factors, and unit commitment; power system control: the control loops, the automatic voltage regulator, automatic load frequency control; and power system protection: subsystems and 2 attributes, zones of protection, protection of lines, protection of transformers and machines. An electromagnetic transient simulation program (e.g. PSCAD/EMTDC) is used for the laboratories.
Prerequisite(s) or Corequisite(s): EE 441 and 481.

EE 443.3 — 1(3L-1.5P)
Power Electronics
This course discusses the fundamental concepts and introduces the essentials of analyses and design of power electronic circuits. Topics include power electronics 2 devices, switching losses, analyses and design of single-phase ac-dc converters, analyses and design of three-phase ac-dc converters, analysers and design of ac-dc converters, analyses and design of single- and three-phase ac-dc converters.
Prerequisite(s): EE 221.
Note: Students with credit for EE 344 may not take this course for credit.

EE 444.3 — 2(3L-3P alt weeks)
Advanced Analysis of Electric Machines and Drive Systems
This course provides an in-depth analysis of electric machines, the drive systems and the dynamic behavior of electric machines. Topics include inrush current, current and voltage transformer errors, dc saturation, synchronous machine capability curves, effect of salient poles, wind power generation (induction generators, doubly fed induction generators, simulation models, design of control systems for stability), variable reluctance and stepping motors, power electronic drives for speed and torque control of machines, transients and dynamics of AC machines. An electromagnetic transient simulation program (e.g. PSCAD/EMTDC) is used for the laboratories.
Prerequisite(s): EE 341 and EE 443.

EE 445.3 — 1(3L-3P alt weeks)
Digital Communication
Examines the transmission of information (voice, video or data) over a noisy channel and presents the ideas and techniques fundamental to digital communication systems. Emphasis is placed on system design goals and the need for trade-offs among basic 2 system parameters such as signal-to-noise ratio, probability of error, and bandwidth expenditure. Topics include binary baseband/ passband data transmission, M-ary modulation techniques (QPSK, OQPSK, MSK, M-ASK, M-PSK, M-QAM and MFSK), signaling over band limited channels and methods to deal with ISI, and signaling over channels with amplitude and phase uncertainties.
Prerequisite(s): EE 365.

EE 461.3 — 1(3L-3P alt weeks)
Digital Filter Design
This course covers several techniques for designing and implementing digital filters with the primary objective of minimizing the number of multipliers used in the filters. The course gives insight into the effects of finite word length arithmetic on the performance of filters.
Prerequisite(s): EE 365.

EE 465.3 — 2(3L-3P)
Design of a DSP System
This course falls into the category of “guided design”. The students will be guided through the design and implementation of a complex DSP-based system. The course covers the application specific theory as well as the application specific implementation issues for a specific DSP-based system. The specific DSP system that is designed in this course will change from time to time as necessary to maintain relevancy. The current design problem is a digital communication system based on quadrature amplitude modulation. The students will be guided through the design of the system, design of the modulator, the modelling of the channel and the design of the demodulator.
Prerequisite(s): EE 456.

EE 471.3 — 1(3L-2P)
Introduction to Micro and Nanotechnology
A multidisciplinary introduction to the processing of micro and nano scale structures that are applied in emerging fields of high resolution patterning such as micro/nano electronics, photonics and fluids. Fundamental technology issues including materials, equipment, fabrication, and inspection are discussed.
Prerequisite(s): EE 271 or EP 317 or ME 214.

EE 472.3 — 2(3L-2P)
Optoelectronics and Photonics
Topics include physical optics, Gaussian beams, thin film optics, Fabry-Perot resonators, diffraction, dielectric planar waveguides, optical fibers in optical communications, dispersion, bit-rate and bandwidth, direct and indirect semiconductors, E-k diagrams, semiconductor device principles, hetero junctions, light emitting devices, stimulated emission, Einstein coefficients for losing devices, gas lasers, semiconductor lasers, new solid state lasers, emitters for optical communications, photodetectors, heterojunction photodiodes, noise in detectors, photodetectors for optical communications, polarization, Fresnel's ellipsoid, birefringence, light modulation, nonlinear effects, Pockels effect and modulators.
Prerequisite(s): EE 372 or EP 317.
Note: Students with credit for EP 431 may not take this course for credit.
EE 480.3 — 2(3L)
Digital Control Systems
Covers the fundamentals of linear control systems specifically discussed in discrete time. The main emphasis is the design and analysis of controllers for digital and analog mixed systems. The z-transform is used for discrete time system modeling both in transfer function and state-space models. Based on the discrete time model, negative feedback, simulation, stability analysis, simplification of a block diagram, and z mode controllers are discussed. Digital controller design methods such as z-domain root locus, frequency response by the bilinear transformation, and the pole assignment method are discussed with practical examples. MATLAB and Simulink are used to practice computer-based control system design.
Prerequisite(s): EE 481.
Note: This course will not be offered in 2014-15.

EE 481.3 — 2(3L)
Control Systems
Topics include mathematical modeling of control elements and systems, performance analysis, stability assessment and system compensation. Both time domain and frequency domain techniques are used. Multivariable processes are discussed using state-space models. Controller design methods specific to phase lead/lag compensators are presented using root-locus and frequency response. Control-law design using state-space is discussed. MATLAB control tools are used in computer simulations and in various analyses of control systems.
Prerequisite(s): (EP 214 and EE 265) or (EP 320 and MATH 331)

EE 495.6 — 1and2(6P)
Senior Design Project
Emphasizes the application of a formal design process. Students are divided into working groups of two or three to design, in a top down fashion, a product or system. The students start from a layman’s statement of what is needed and produce a requirement specification, system analysis and specification, block level design and a working unit. The students are required to give a formal oral presentation of their year’s work to a group of their peers.
Prerequisite(s): EE Program Core and 6 credit units from the EE Program Focus Areas.
Prerequisite(s) or Corequisite(s): 9 additional credit units from the EE Program Focus Areas.

EE 498.3 — 1/2(3L)
Special Topics
Offered occasionally to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
EMUS. 270.3 — 1/2(3L)
Classroom Guitar Techniques
Designed for teachers who plan to use the guitar as a vehicle for teaching music concepts and skills at the elementary or secondary level. Teaching methods and materials include a review of audiovisual and other materials, teaching and motivational strategies, classroom routines and evaluation strategies.

Prerequisite(s): EMUS. 238.

Note: Students with credit for EMUS. 340 may not take this course for credit.

EMUS. 238.3 — 1/2(3L)
Brass Techniques
A study of teaching techniques and methodologies for teaching trumpet, French horn, trombone/euphonium, and tuba within a school-based music curriculum. Selected topics in brass pedagogy and a topographical survey of cognate instrumental method books are included in the content of this course.

Prerequisite(s): EMUS. 134.

Note: Students with credit for EMUS. 433 may not take this course for credit.

EMUS. 337.3 — 1/2(3L)
Jazz Pedagogy
An introduction to the study and application of techniques in reading jazz, improvisation, jazz ensemble rehearsal, and the management of the successful school jazz ensemble program. Other areas of study include: the rhythm section, literature selection, score analysis and preparation, basic jazz theory, and the use of technology in jazz education.

Prerequisite(s): MUS. 134.

EMUS. 339.3 — 1/2(3L)
Percussion Techniques
An intensive study of playing and teaching techniques of percussion instruments including equipment and materials. Special topics in elementary and secondary school percussion pedagogy are included.

Formerly: EMUS. 436.

Prerequisite(s): MUS. 134.

Note: Students with credit for EMUS. 436 may not take this course for credit.

EMUS. 431.3 — 1/2(3L)
Teaching Music in the Elementary School
An introduction to the study of school music methods and materials essential for the sequential development of the musical learning process of elementary school students. Studies include principles of growth and development as applied to children and the music learning process. This course is intended for Elementary/Middle Years Music Specialists in the combined B.Ed./B. Mus.(Mus.Ed.) program and College of Education students electing music as a Teaching Area.

Formerly: EMUS. 331

Prerequisite(s): MUS. 238

Note: Students with credit for EMUS. 331 may not take this course for credit.

EMUS. 438.3 — 1/2(3L)
Choral Music Teaching in the Secondary School
A study of choral methods and materials, including exemplary curricula, curriculum and administration standards, lesson and unit planning, repertoire selection including programming and analysis, teaching strategies, materials and resources, musical literacy, evaluation, and an understanding of the characteristics of successful school band programs.

Prerequisite(s): MUS. 234 and MUS. 325.

EMUS. 441.3 — 1(3L)
Philosophy of Music Education
An introduction to the philosophical, psychological and curricular foundations of music education.

Formerly: EMUS. 342

Prerequisite(s): MUS. 134

Note: Students with credit for EMUS. 342 may not take this course for credit.

EMUS. 442.3 — 1/2(3L)
Organization and Administration of School Music Program
Besides topics in organization and administration, studies include music and arts education curricula. Leadership and managerial styles pertaining to the music educator will be explored. Students will gain first hand experience in planning, coordinating and managing a major music festival.

Prerequisite(s): MUS. 234 and 12 credit units in EMUS.

EMUS. 448.3 — 1(3L)
Instrumental Music Teaching in the Secondary School
A study of instrumental methods and materials, including exemplary curricula, curriculum and administration standards, lesson and unit planning, repertoire selection and analysis, teaching strategies, materials and resources, evaluation, and an understanding of the characteristics of successful school band programs.

Formerly: EMUS. 340

Prerequisite(s): MUS. 234

Note: Students with credit for EMUS. 340 may not take this course for credit.
EMUS. 490.3 — 1/2(3L)
Seminar in Music Education
A senior seminar for students who have completed the Extended Practicum in Music. It involves directed readings, seminar discussions, written assignments, classroom and rehearsal observation, and other experiences to assist students in integrating knowledge and abilities acquired from courses in Music and Music Education and the Practicum.
Prerequisite(s): EXPR. 402.

EMUS. 498.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover in depth topics that are not thoroughly covered in regularly offered courses.

ENG — ENGLISH
College of Arts and Science

ENG. 110.6 — 1and2(3L)
Literature and Composition
An introduction to the major kinds of literature. In addition to learning the tools of critical analysis, students will study and practise composition.
Note: Only 6 credit units of 100-level English may be taken for credit.

ENG. 111.3 — 1/2(3L)
Literature and Composition Reading Poetry
An introduction to the major forms of poetry in English. In addition to learning the tools of critical analysis, students will study and practise composition.
Note: Only 6 credit units of 100-level English may be taken for credit.

ENG. 112.3 — 1/2(3L)
Literature and Composition Reading Drama
An introduction to major forms of dramatic activity in English. In addition to learning the tools of critical analysis, students will study and practise composition.
Note: Only 6 credit units of 100-level English may be taken for credit.

ENG. 113.3 — 1/2(3L)
Literature and Composition Reading Narrative
An introduction to the major forms of narrative literature in English. In addition to learning the tools of critical analysis, students will study and practise composition.
Note: Only 6 credit units of 100-level English may be taken for credit.

ENG. 114.3 — 1/2(3L)
Literature and Composition Reading Culture
An introduction to historical and contemporary cultural forms in English. In addition to learning the tools of critical analysis, students will study and practise composition.
Note: Only 6 credit units of 100-level English may be taken for credit.

ENG. 202.6 — 1and2(3L)
Reading Canon Texts and Contexts
A survey of English literature with primary emphasis on the historical development of the British canon (including Chaucer, Shakespeare, Milton, Wordsworth, and Austen, for example), with some attention to the critical issues raised by the concept of "canon" itself, to non-canonical writers, and to other literatures in English.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.
Note: Students with credit for ENG. 200 may not take this course for credit.

ENG. 203.6 — 1and2(3L)
Reading English Critical Approaches
An introduction to the major critical perspectives on reading literature, with particular emphasis on the 20th century. The course will typically explore a number of critical approaches to reading and test them on a selection of literary works.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.
Note: Students with credit for ENG. 282 may not take this course for credit.

ENG. 204.6 — 1and2(3L)
History and Future of the Book
An introductory history of the concept and technology of the book. The course focuses on the development of the book as a vehicle of communication and on its ideological and political impact, with some attention to the emergence and consequences of digital platforms such as e-mail, the web, and electronic books.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.

ENG. 206.3 — 1/2(3L)
An Introduction to Cultural Studies
Cultural studies is the exploration of "culture," what Raymond Williams calls nothing less than "one of the two or three most complicated words in the English language." Cultural studies analyzes the artistic, social, political, and historical texts and objects that help construct our contemporary lives, and it assumes that such objects go well beyond "mere entertainment" and affect deeply how we perceive class, race, gender, and other markers of identity. As an introduction to the theory and practice of cultural studies, this course will familiarize students with some of the most important thinkers and methodologies in the field and will allow students to use some of the tools of critical analysis to analyze different forms of cultural production, including literature, popular culture, and print and electronic media.
Prerequisite(s): 6 credit units of 100-level English.

ENG. 207.3 — 1/2(3L)
Decolonizing Literatures and Their Cultural and Expressive Contexts
An introduction to one of the decolonizing world’s Anglophone literatures and its cultural and expressive contexts and to the theory of literary decolonization. Among the literatures on which the course could be focussed are those of the Indian subcontinent, sub-Saharan Africa, the Caribbean, and Australia and New Zealand.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.

ENG. 209.3 — 1/2(3L)
Transnational Literatures
An introduction to literatures written between histories, geographies, and cultural practices and produced at the borders of nations and languages/lects, when authors move from one national and/or linguistic context to another, or when peoples are dispersed from their original homelands and settle in diasporic socio-cultural formations.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.

ENG. 212.3 — 1/2(3L)
Life Writing
A study of the forms that Life Writing has taken from the Middle Ages to the present, with attention to such issues as constructions of the self, themes, language, and audience.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.
Note: Students with credit for ENG. 370 may not take this course for credit.

ENG. 214.3 — 1/2(3L)
Shakespeare Comedy and History
This course will focus on the romantic comedies and English history plays that Shakespeare wrote for Elizabethan audiences in the first half of his theatre career; it will also include the darker, more tragicomic problem comedies that he wrote under James I.
Prerequisite(s): 6 credit units. 100-level English, or 3 credit units English and INTS. 101.
Note: Students with credit for ENG. 221.6 or 321.6 may not take this course for credit.

ENG. 215.3 — 1/2(3L)
Transnational Literatures
An introduction to literatures written between histories, geographies, and cultural practices and produced at the borders of nations and languages/lects, when authors move from one national and/or linguistic context to another, or when peoples are dispersed from their original homelands and settle in diasporic socio-cultural formations.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.

ENG. 217.3 — 1/2(3L)
Mythologies of Northern Europe
A study of the mythology of medieval northern Europe, including a survey of the sources, an examination of several chief deities and myths associated with them, and a consideration of some old northern European literary evidence.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.
Note: Students with credit for ENG. 317 may not take this course for credit.

ENG. 224.3 — 1/2(3L)
Shakespeare Tragedy and Romance
Throughout his career Shakespeare wrote tragedies of romantic love, family and political conflict, and revenge, reaching his peak in this genre in the first decade of the 17th century. This course will focus on a selection of plays in this genre, and will also treat his late romances, a comic genre in which fateful adventures end in forgiveness and reconciliation between enemies.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level English and INTS. 101.
Note: Students with credit for ENG. 221.6 or 321.6 may not take this course for credit.
ENG. 226.3 — 1/2(3L)
Fantasy and Speculative Fiction
Examines literary genres that explore alternative worlds, experiment with the bounds of the real, and challenge the norms of reading. The course moves from precursors in legend, folklore, and romance, to Victorian fantasy, science fiction, utopian and dystopian fiction, and late 20th-Century feminist revisionary narratives.
Prerequisite(s): 6 credit units. 100-level English.

ENG. 230.3 — 1/2(3L)
Literature for Children
A critical study of literature written or adopted for children and young adult readers. Emphasis will be placed on the historical significance of key forms, such as fables, folk stories, fairy tales, and nursery rhymes, as well as later developments in drama, poetry, and prose fiction, including fantasy, realism, animal stories, historical fiction, and the young adult “problem novel.” The interplay between oral, written, and visual texts will be considered, as will the cultural contexts that inform changing attitudes towards children, childhood, and adolescence.
Prerequisite(s): 6 credit units. 100-level ENG.

ENG. 232.3 — 1/2(3L)
Gothic Narrative
This course will trace the Gothic mode, in its various forms, from its origins in Britain in the 1760s through its assimilation into mainstream literature in the nineteenth century and beyond.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.
Note: Students with credit for ENG. 332 may not take this course for credit.

ENG. 233.3 — 1/2(3L)
Page and Stage
Will examine English drama in performance and will be offered in conjunction with the offerings of one of Saskatoon’s theatre companies. It will focus on dramaturgy, staging, and interpretation through performance and will involve live performances, film adaptations, lecture and class discussion, seminar reports, and guest lectures from theatre professionals and drama scholars.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101; or permission of department.
Note: Students with credit for ENG. 333 may not take this course for credit.

ENG. 242.3 — 1/2(3L)
Indigenous Storytelling of the Prairies
A study of the aboriginal storytelling traditions in the prairie region, including oral traditions and written literature.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.
Note: Students with credit for ENG. 342 may not take this course for credit.

ENG. 246.3 — 1/2(3L)
Short Fiction
Examines the development of short fiction from its origins in myth, fable, and folklore to its flourishing in the 19th and 20th Centuries. While some attention will be paid to works in translation, the emphasis will be on writing in English.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.
Note: Students with credit for ENG. 346 may not take this course for credit.

ENG. 253.6 — 1and2(3L)
Canadian Literature in English
A survey of English-Canadian literature (principally poetry and fiction), with emphasis on the 20th century.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.
Note: Students with credit for ENG. 353 may not take this course for credit.

ENG. 260.3 — 1/2(3L)
Crime and Detective Fiction
Through the study of novels, short stories, critical essays, and historical documents, this course explores the roots of the modern detective story, its golden age consolidation in the 1920s and 30s, and its recent variations.
Prerequisite(s): 6 credit units. 100-level English.

ENG. 277.3 — 1/2(3L)
Literary Uses of Mythology
An introduction to the theory of myth and selected examples of the classical and other myths most frequently adapted and reinterpreted in literature in English. Emphasizes the ways in which different writers can find quite different kinds of significance in the same myth.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.

ENG. 278.3 — 1and2(3L)
English Satire
A study of selected satire in English.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.
Note: Students with credit for ENG. 378 may not take this course for credit.

ENG. 281.6 — 1and2(3L)
Introduction to Film
A survey of world cinema from the silent era to the present and an introduction to the fundamental formal concepts of film analysis including mise en scène, cinematography, editing, and sound. Emphasis will be placed on historically important films, directors, genres, and movements.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.
Note: Students with credit for ENG. 381 may not take this course for credit.

ENG. 286.3 — 1/2(3L)
Courtly Love and Medieval Romance
An examination of romantic love, chivalry, and the family during the Middle Ages. The course will focus on a number of medieval romances, but will also cover many areas of women's cultural expression, including musical composition and mystical visions, and the tensions between the various forms of medieval women's experience and models of clerical authority.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.
Note: Students with credit for ENG. 386 may not take this course for credit.

ENG. 290.6 — 1and2(3L)
Introduction to English Linguistics and History of English Language
An introduction to English linguistics with special attention to the history of the English language, its Germanic origins, and its development as a world language.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101; or LING. 111; or a senior course in a language.
Note: Students with credit for ENG. 390 may not take this course for credit.

ENG. 293.3 — 1(3L)
Medieval Devotional Literature
A study of the medieval self in the devotional writing of the later Middle Ages. Discussion of theological sources, devotional art, popular piety, and the reading practices of lay and female readers will provide context for examining English mystics, such as Julian of Norwich and Richard Rolle.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.
Note: Students with credit for ENG. 393 may not take this course for credit.

ENG. 294.3 — 1/2(3L)
Techniques of Canadian Poetry From Sonnet to Spoken Word
This course instructs students in the critical methodology of the study of poetry. It examines such mechanics as rhyme, rhythm and meter, imagery and symbolism, figurative language, sound devices, and the conventions of verse forms. Students thus enhance their literary-critical vocabulary and learn a range of methods for building an understanding and appreciation of poems. The course uses as its primary texts Canadian poems that range from the sonnet to contemporary spoken word, and it engages with diverse poets, texts, and movements in Canadian poetry.
Prerequisite(s): 6 credit units of 100-level ENG; or 3 credit units. 100-level ENG and INTS. 101.
ENG. 298.3 — 1/2(3L)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ENG. 299.6 — 1and2(3L)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ENG. 300.3 — 3L  
New Directions in English Research  
Explores cutting-edge research taught by a senior PhD candidate, overseen by a faculty mentor. Students will engage not only with ground-breaking topics, issues, and sources, but also with the process by which scholars of English literature choose topics and develop research, writing and teaching strategies.

Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

ENG. 301.3 — 1/2(3L)  
Old English Languages and Culture  
Discussion of the importance of Old English language and literature for the Anglo-Saxon culture of early medieval England. Investigation of this language as foundation for the development of English. Introductory study of texts such as Beowulf and writings such as King Alfred.

Prerequisite(s): 6 credit units of 100-level English.  
Note: Students with credit for ENG. 208 may not take this course for credit. This course was formerly labeled ENG. 208.

ENG. 303.3 — 1/2(3L)  
Canadian Fiction from Beginnings to 1960  
This course studies the development of Canadian fiction in English to 1960 and may examine storytelling and non-fictional prose.

Prerequisite(s) or Co-requisite(s): 6 credit units of 200-level English.  
Note: Students with credit for ENG. 352 may not take this course for credit.

ENG. 307.3 — 1(3L)  
Digital Literature and New Media  
An introduction to digital narrative, poetry, and media theory. This course investigates the ways in which text, language, and writing have been used in creative and experimental digital media, including artworks and installations, e-literature and e-poetry, video games, websites, and so on. Students will read a variety of digital works alongside critical readings in new media theory and practice.

Prerequisite(s): 42 credit units at the university.

ENG. 308.3 — 1(6S)  
Creative Nonfiction I  
An introductory seminar/workshop in the basic techniques and methods of writing creative nonfiction. By examining the works of established writers, studying craft and history, engaging in workshop discussions, and producing a portfolio, students will be prepared to move forward to the advanced study of creative nonfiction.

Prerequisite(s): 6 credit units of 100-level English and permission of the instructor.

ENG. 309.3 — 2(6S)  
Creative Nonfiction II  
An advanced course for those with prior experience in the craft of writing creative nonfiction. Students will read and practice writing vigorous and compelling work. Mentorship is central; the instructor will aid students in compiling individual reading lists as they write and workshop intensive projects of their own devising.

Prerequisite(s): successful completion of 6 credit units of 100-level English; a portfolio of 1500-2000 words and permission of the instructor.

ENG. 310.3 — 1/2(3L)  
Old English Literature  
A study of several poems and some prose passages in Old English, including elegies, battle narratives, and a more extensive consideration of Beowulf than in English. 201, including its backgrounds and analogues.

Prerequisite(s): ENG. 301.3.  
Note: Students with credit for ENG. 208 may not take this course for credit. This course was formerly labeled ENG. 208.

ENG. 311.3 — 1/2(3L)  
The Canterbury Tales  
An introduction to the works of Geoffrey Chaucer, with principal attention to The Canterbury Tales.

Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.  
Note: Students with credit for ENG. 212 may not take this course for credit. This course was formerly labeled ENG. 212.

ENG. 312.3 — 1/2(3L)  
Early Chaucer Dream and Romance Tragedy  
The course examines Geoffrey Chaucer’s literary works before The Canterbury Tales, namely, the dream visions and the romance tragedy Troilus and Criseyde.

Prerequisite(s): 6 credit units of 100-level English.

ENG. 313.3 — 1/2(3L)  
Middle English Romances  
An introduction to late medieval stories of adventure, through the Middle English romance genre and its contexts.

Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.  
Note: Students with credit for ENG. 212 may not take this course for credit. This course was formerly labeled ENG. 212.

ENG. 314.3 — 1/2(3L)  
Early British Drama  
An introduction to the varieties of drama produced in the British Isles up to the inception of permanent theatres in late 16th-century London.

Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

ENG. 316.3 — 1/2(3L)  
Middle English Literature of Defiance and Dissent  
In England, the late Middle Ages (1100-1500) were a time of social and political upheaval as well as literary innovation. This course examines Middle English literary texts that reflected and participated in historical and intellectual change and debate.

Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

ENG. 319.3 — 1/2(3L)  
Renaissance Literature I  
The Sixteenth Century  
Sixteenth-century English literature absorbed and contributed to the European Renaissance, led at Henry VIII’s court by the Thomas More circle, while popular culture developed new expressions of older traditions. These rich courtly and popular traditions unite in the achievements of the Elizabethan younger generation, especially the Sidneys, Spenser, and Shakespeare. Omitting full-length drama and epic treated elsewhere, this course highlights other major genres of prose and poetry in English from 1485 to 1603.

Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

Note: Students with credit for ENG. 320 may not take this course for credit. This course was formerly labeled ENG. 320.

ENG. 322.3 — 1/2(3L)  
Renaissance Literature II  
The Seventeenth Century  
Seventeenth-century literature reflects a nation emerging into modernity through a revolution in politics and science and a reshaping of social bonds and relationships. Excluding full-length drama and epic, this course focuses on both sacred and secular poetry by such writers as John Donne, George Herbert, Aemelia Lanyer, and Ben Jonson, and prose by such writers as Francis Bacon and Thomas Browne.

Prerequisite(s) or Corequisite(s): 6 credit units of 200-level ENG.  
Note: Students with credit for ENG. 325 may not take this course for credit.

ENG. 324.3 — 1/2(3L)  
Renaissance Drama  
A study of English drama, 1580-1640, including such playwrights as Marlowe, Kyd, Shakespeare, Jonson, Dekker, Middleton, and Ford. The course will investigate the philosophies, techniques, power, and popularity associated with Tudor, Stuart, and Caroline plays.

Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

ENG. 326.3 — 1/2(3L)  
Renaissance Epic  
This course explores two of English literature’s grandest, longest, and most demanding poems, Edmund Spenser’s Faerie Queene and John Milton’s Paradise Lost. It investigates Spenser’s and Milton’s transformation of classical epic and medieval romance conventions in the context of sixteenth- and seventeenth-century English culture, politics and religion.

Prerequisite(s): 6 credit units of 100-level English.  
Note: Area 2: Renaissance. Students with credit for ENG. 325 or ENG. 323 may not take this course for credit.
ENG. 327.3 — 1/2(3L)
English Drama. 1660 to 1737
A study of the drama of the Restoration and the 18th Century, emphasizing the comedy of manners, but also dealing with dramatic genres particular to the period.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

ENG. 330.3 — 1/2(3L)
British and Irish Literature. 1900 to 1950
A study of poetry, drama, and prose in relation to the historical and political contexts of Britain and Ireland in the first half of the 20th century. Authors may include Sitwell, Sassoon, Yeats, Auden, Shaw, Synge, Joyce, Forster, Lawrence, Woolf, Sayers, Waugh, Orwell.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

ENG. 331.3 — 1/2(3L)
Literature of the Romantic Period
A study of British literature from 1780 to 1830, examining the nature of Romanticism and the useful ness of the term "Romantic," and emphasizing the works of such writers as William Wordsworth, Mary Shelley, and John Keats.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

ENG. 333.3 — 1/2(3L)
Prose and Poetry of Victorian Period
A study of the period 1830-1890, with emphasis on such prose writers as Carlyle, J. S. Mill, Newman, Huxley, Arnold and Pater, and such poets as Tennyson, the Browning, Arnold, the Pre-Raphaelites, and Hopkins.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

ENG. 335.3 — 1/2(3L)
The Emergence of Aboriginal Literature in Canada
Examines the emergence of written literature among Aboriginal people in Canada from first contact to the 1970s. Attention will be paid to how and why Aboriginal people took up literacy and literature and to the distinctive forms of writing that emerged.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

ENG. 336.3 — 1/2(3L)
Restoration and 18th Century Literature to 1740
A study of English literature from 1660 to 1740, with emphasis upon major writers such as Gay, Dryden, Behn, Swift, Haywood, Wortley Montagu, and Pope.
Prerequisite(s) or Co-requisite(s): 6 credit units of 200-level English.
Note: Students with credit for ENG. 328 may not take this course for credit.

ENG. 337.3 — 1/2(3L)
18th Century Literature after. 1740
A study of English literature after 1740, with emphasis upon major writers such as Gray, Fielding, Johnson, Boswell, Sterne, Burney, and Burke.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.
Note: Students with credit for ENG. 328 may not take this course for credit.

ENG. 338.3 — 1/2(3L)
Contemporary North American Aboriginal Literatures
A study of Aboriginal literature from 1968 to the present, exploring the explosion of Aboriginal writing in the United States and in Canada during that period. Drawing on a range of genres, we will investigate the causes of this literary "renaissance" and the literary forms that have emerged from it.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

ENG. 341.3 — 1/2(3L)
The British Novel. 1850 to 1900
A study of the development of the British novel, beginning with the mature work of Charles Dickens and George Eliot, and culminating in the late century work of authors such as Meredith, Hardy, Stevenson, and Wilde.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.
Note: Students with credit for ENG. 374 may not take this course for credit.

ENG. 343.3 — 1/2(3L)
American Literature to 1865
A survey of American literature from the 17th century to the end of the Civil War, with particular emphasis on 19th-century writers.
Prerequisite(s) or Corequisite(s): 6 credit units, 200-level English.
Note: Students with credit for ENG. 354.6 may not take this course for credit.

ENG. 344.3 — 1/3(3L)
American Literature. 1865 to 1914
A survey of American literature and literary movements from the end of the Civil War to the outbreak of WWI.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.
Note: Students with credit for ENG. 355.6 may not take this course for credit.

ENG. 345.3 — 1/2(3L)
American Literature. 1914 to 1960
A survey of American literature and literary movements from WWI to the rise of the civil rights movement, including, at the discretion of the instructor, a consideration of the contribution of the American cinema to literary tradition.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.
Note: Students with credit for ENG. 356.6 may not take this course for credit.

ENG. 346.3 — 1/2(3L)
American Literature Since. 1960
A survey of American literature and literary movements from WWII to the present, including, at the discretion of the instructor, a consideration of the contribution of the American cinema to literary tradition.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.
Note: Students with credit for ENG. 357.6 may not take this course for credit.

ENG. 347.3 — 1/2(3L)
Modern Drama. 1870 to 1950
A study of modern dramatic works and movements from 1870 to 1950, primarily British and American. Among the dramatists whose work may be examined are Wilde, Ibsen, Shaw, Synge, O’Neill, and Glaspell.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.
Note: Students with credit for ENG. 358.6 may not take this course for credit.

ENG. 349.3 — 1/2(3L)
Contemporary Drama. 1950 to Present
A study of dramatic works and movements since 1950, primarily British and American. Among the playwrights whose work may be examined are Beckett, Pinter, Williams, Stoppard, and Churchill.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

ENG. 353.3 — 1/2(3L)
Canadian Drama
The development of Canadian drama in English, with emphasis on the period since 1960.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

ENG. 359.3 — 1/2(3L)
Western Canadian Literature
A study of literature in English, especially fiction, poetry, and drama, produced on the Canadian prairies.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

ENG. 360.3 — 1/2(3L)
British and Irish Literature Since. 1950
A study of poetry, drama, and prose in relation to the shifting political and cultural landscapes of Britain and Ireland since 1950. Authors may include Larkin, Smith, Heaney, Beckett, Frield, Kureishi, Selvon, Kelman, Carter.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

ENG. 362.3 — 1/2(3L)
The British Novel. 1800 to 1850
A study of the development of the British novel, beginning with Jane Austen and Sir Walter Scott, and ending with the early work of Dickens, Gaskell, and the Brontes.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.
Note: Students with credit for ENG. 374 may not take this course for credit.

ENG. 363.3 — 1/2(3L)
Approaches to 20th and 21st Century Fiction
This course examines major works of 20th-century and 21st-century fiction, including short fiction, across national boundaries. Students will explore literary genres and modes such as realism, modernism, postmodernism, magic realism, and metafiction. Authors may include Conrad, Joyce, Woolf, Faulkner, Morrison, Naipaul, Rushdie, Atwood, King, Munro, Carter and McEwan.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.
ENG. 365.6 — 1and2(2L)
Creative Writing
Intended for students who are seriously interested in the practice of imaginative writing (fiction, poetry, etc.). Course work will include an assignment of writing each week. Enrolment will be limited.
Prerequisite(s): 6 credit units of 100-level English.

ENG. 366.3 — 1/2(3L)
Advanced Creative Writing Fiction
Intended for students who have acquired some practice and skill in the writing of prose.
Permission of the instructor required.
Note: Evidence of practice and skill in the writing of creative prose as determined by the instructor. A special application, available from St. Thomas More College, 146, is required for this course.

ENG. 368.3 — 1/2(3L)
Approaches to 20th and 21st Century Poetry
A study of poetry and poems from the beginning of the 20th century to the present. The course examines the tension between established forms of poetry and the efforts of modern poets to “make it new” (Pound), to reinvent poetry. In poetry since the Second World War, we will examine the enduring influence of modernism as well as anti- and post-modern strategies, forms, and styles. 20th- and 21st-century cultural and historical contexts will be crucial throughout. Poets studied may include Yeats, Pound, H.D., Williams, Moore, Eliot, Stevens, Auden, Ginsberg, Plath, Heaney, Walcott, Atwood, Brand, Halfe, and Wah.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

ENG. 373.3 — 1/2(3L)
English Fiction to 1800
A study of various types of prose fiction from early romances, travel tales, rogue biographies, and so on, to Defoe and the rise and development of the novel in England. Particular emphasis will be given to the major novels and novelists of the 18th century.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.

ENG. 382.3 — 1/2(3L)
Canadian Fiction from 1960 to the Present
A study of contemporary Canadian fiction in English, and some non-fictional prose, from 1960 to the present.
Prerequisite(s) or Corequisite(s): 6 credit units of 200-level English.
Note: Students with credit for ENG 352 may not take this course for credit.

ENG. 383.3 — 1/2(3L)
Rereading Colonialism
An introduction to reading and research in literature and its colonialist contexts.
Prerequisite(s) or Corequisite(s): 6 credit units, 200-level English.
Note: Students with credit for ENG 283 may not take this course for credit.

ENG. 389.3 — 1/2(3L)
Structures of English
A survey of theoretical approaches to English grammar and rhetoric, with an emphasis on English in literary contexts.
Prerequisite(s): 6 credit units of 200-level English, or LING. 111, or a senior course in a language.

ENG. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ENG. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ENG. 402.3 — 1/2(3S)
Topics in Anglo Saxon and Medieval Literature
Permission of the department required.
Restriction(s): Admission to an honours program or permission of the department.
Note: Students may take this course more than once for credit; provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ENG. 404.3 — 1/2(3S)
Topics in 16th Century Literature in English
Permission of the department required.
Restriction(s): Admission to an honours program or permission of the department.
Note: Students may take this course more than once for credit; provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ENG. 406.3 — 1/2(3S)
Topics in 17th Century Literature in English
Permission of the department required.
Restriction(s): Admission to an honours program or permission of the department.
Note: Students may take this course more than once for credit; provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ENG. 410.3 — 1/2(3S)
Topics in 18th Century British Literature
Permission of the department required.
Restriction(s): Admission to an honours program or permission of the department.
Note: Students may take this course more than once for credit; provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ENG. 414.3 — 1/2(3S)
Topics in 19th Century British Literature
Permission of the department required.
Restriction(s): Admission to an honours program or permission of the department.
Note: Students may take this course more than once for credit; provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ENG. 416.3 — 1/2(3S)
Topics in 19th Century American Literature
Permission of the department required.
Prerequisite(s): Admission to an honours program or permission of the department.
Note: Students may take this course more than once for credit; provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ENG. 418.3 — 1/2(3S)
Topics in 19th Century Canadian Literature
Permission of the department required.
Restriction(s): Admission to an honours program or permission of the department.
Note: Students may take this course more than once for credit; provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ENG. 420.3 — 1/2(3S)
Medieval Genres
Permission of the department required.
Restriction(s): Course only open to students in an Honours program.
Note: Students may take this course more than once for credit; provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ENG. 444.3 — 1/2(3S)
Topics in Commonwealth and Post Colonial Literature
Permission of the department required.
Restriction(s): Admission to an honours program or permission of the department.
Note: Students may take this course more than once for credit; provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ENG. 446.3 — 1/2(3S)
Topics in Genres and Contexts of Modern Literature
Permission of the department required.
Restriction(s): Admission to an honours program or permission of the department.
Note: Students may take this course more than once for credit; provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ENG. 462.3 — 1/2(3S)
Topics in 20th Century British Literature
Permission of the department required.
Restriction(s): Admission to an honours program or permission of the department.
Note: Students may take this course more than once for credit; provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ENG. 464.3 — 1/2(3S)
Topics in 20th Century American Literature
Permission of the department required.
Restriction(s): Admission to an honours program or permission of the department.
Note: Students may take this course more than once for credit; provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.
ENG. 466.3 — 1/2(3S)
Topics in 20th Century Canadian Literature
Permission of the department required.
Restriction(s): Admission to an honours program or permission of the department.
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ENG. 468.3 — 1/2(3S)
Topics in 20th Century Irish Literature
Permission of the department required.
Restriction(s): Admission to an honours program or permission of the department.
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ENG. 484.3 — 1/2(3S)
Topics in Women's Literature
Permission of the department required.
Restriction(s): Admission to an honours program or permission of the department.
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ENG. 488.3 — 1/2(3S)
Topics in Genres and Contexts of Literature
Permission of the department required.
Prerequisite(s): Admission to an honours program or permission of the department.
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ENG. 494.3 — 1/2(3S)
Topics in Language and Linguistics
Permission of the department required.
Prerequisite(s): Admission to an honours program or permission of the department.
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

ENG. 496.3 — 1/2(3P)
Career Internship
Practicum in publishing, journalism and business writing.
Permission of the department required.
Restriction(s): Admission to an honours program or permission of the department.

ENG. 497.0
Honours Colloquium
Oral presentation of scholarly paper at a conference of Honours students. The paper is normally based on a paper already prepared, or in preparation, for a 300 or 400-level course.
Permission of the department required.
Prerequisite(s): Admission to the Honours program in English.

ENG. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
Permission of the department required.
Prerequisite(s): 6 credit units. 100-level English.

ENG. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
Permission of the department required.
Prerequisite(s): 6 credit units. 100-level English.

ENT — ENTREPRENEURSHIP

ENT. 210.3 — 1/2(3L)
Marketing for Entrepreneurial Ventures
Introduces students to the role of marketing in entrepreneurial endeavors and is intended for students pursuing a degree in colleges other than the Edwards School of Business. This course will familiarize students with the marketing environment, the marketing mix, and other basic concepts of marketing. Students will be required to understand the marketing plan and how it is integrated with other components of the business plan. Students will also be confronted with various situations and asked to arrive at decisions about the marketing position.
Prerequisite(s): 10 credit units of university study.
Note: This course may not be used for credit towards a B.Comm. degree. Students can receive credit for only one of ENT. 210.3 or COMM. 204.3.

ENT. 220.3 — 1/2(3L)
Human Resource Management for Entrepreneurial Organizations
A survey of human resource management intended for students pursuing a degree in colleges other than the Edwards School of Business. Topics covered include the legal environment of employment, recruitment, selection, managing workforce diversity, compensation, and employee discipline.
Prerequisite(s): 10 credit units of university study.
Note: This course may not be used for credit towards a B.Comm. degree. Students can receive credit for only one of COMM. 211.3, COMM. 386.3, or ENT. 220.3.

ENT. 230.3 — 1/2(3L)
Introduction to Accounting for Entrepreneurs
Is designed for students pursuing a degree in colleges other than the Edwards School of Business. The objectives of the course are to introduce students to a basic understanding of external financial statements, and what the statements are communicating. The elements of financial statements will be reviewed, as well as the constraints imposed on the accumulation and reporting of financial information. The use and interpretation of accounting information for investment, lending, and management decision making will also be emphasized. Both operational and capital budgets will be covered.
Prerequisite(s): 10 credit units of university study.
Note: This course may not be used for credit towards a B.Comm. degree. Students can receive credit for only one of COMM. 201.3 or ENT. 230.3.

ENT. 300.3 — 1(3L)
Introduction to Entrepreneurial Finance
Is designed for students pursuing a degree in colleges other than the Edwards School of Business. This course outlines how entrepreneurs could raise money and build an understanding of the financial issues that face entrepreneurs and financiers in that process. After providing the basics of financial statements, cash flow, time value of money, and financial projections of new businesses, we analyze the basic features of various financing arrangements for entrepreneurs such as bank financing, venture capital financing, angel financing, and funding from corporate investors.
Prerequisite(s): ENT. 230.3
Note: This course may not be used for credit towards a B.Comm. degree. Students may receive credit for only one of COMM. 368.3, COMM. 203.3, or ENT. 300.3.

ENT. 310.3 — 2(3L)
Entrepreneurship and Small Business Management
Is designed for students pursuing a degree in colleges other than the Edwards School of Business. This course assists students in developing and understanding the skills and tools required in preparing and presenting a complete and professional business plan, with a focus on small and medium sized business. Students are required to prepare and present an actual business plan as the main project in the course. This serves as a capstone course for the Entrepreneurship Minor in the College of Arts and Science.
Prerequisite(s): BPBE. 230.3, ENT. 210.3, ENT. 220.3, ENT. 230.3
Prerequisite(s) or Corequisite(s): ENT. 300.3
Note: This course may not be used for credit towards a B.Comm. degree. Students can receive credit for only one of COMM. 447.3, BPBE. 495.3, or ENT. 310.3

ENVE — ENVIRONMENTAL ENGINEERING

ENVE. 201.3 — 1(3L-2P-1T)
Principles of Environmental Engineering
Population, economic growth, industrialization, urbanization and energy-use, as causes of environmental pollution. Mass and energy balance for environmental engineering systems under steady state and unsteady state conditions. Contaminant partitioning and transport in air, water and solids. Application of environmental principles (technical and non-technical) to: water resource management, water and wastewater treatment, air pollution control, solid waste management, environmental impact assessment, and environmental ethics. Thermal pollution, noise pollution, greenhouse effect, acid precipitation, ozone depletion, air toxics, and ground-level ozone and fine particulates (photochemical smog). Sustainable development and life cycle analysis. Review of the principles of environmental quality objectives, standards and guidelines.
Prerequisite(s) or Corequisite(s): EN First Year Common Core and (BIOL. 120 and CHEM. 115) or (BIOL. 120 and GEOL. 121) or (CHEM. 115 and GEOL. 121) or EN Two Year Common Core
Note: Students with credit for ENVE. 300 will not receive credit for this course.
ENVE. 495.6 — 1and2(6P)  
Capstone Design Project  
A final design course in which advanced principles of design are learned by application to a suitable environmental engineering project. Projects normally involve interaction with industrial sponsors who act as clients. The course requires that students work in groups. Group interaction and performance is monitored throughout. Guest lectures from various industrial and regulatory representatives will be provided to enhance the students' design experience.  
Prerequisite(s): ENVE. 201 and RCM. 300 and GE 348.  
Prerequisite(s) or Corequisite(s): CE 420.

ENVS — ENVIRONMENT AND SUSTAINABILITY  
College of School of Environ and Sustain  
ENVS. 201.3 — 1/2(3L)  
Foundations of Sustainability  
The intention of this course is to provide foundational knowledge about sustainability science and concepts while also exposing students to the key foci areas they can pursue with the certificate. A final class group project will emphasize collaborative interaction based on sustainability themes.  
Prerequisite(s): Completion of 30 credit units at the University of Saskatchewan.

ENVS. 401.3 — 1/2(3L)  
Sustainability in Action  
This course combines seminars and project-based activities to examine local and global sustainability issues, integrating perspectives and knowledge from both the social and natural sciences. Students will work in interdisciplinary, collaborative groups to address sustainability challenges.  
Prerequisite(s): ENVS. 201 and permission of the instructors. This course is intended for senior undergraduate students.

EP — ENGINEERING PHYSICS  
College of Arts and Science  
EP 214.3 — 2(3L-2P)  
Analog Signals and Systems  
Introduces the mathematical techniques for determining the behavior of analog systems. Topics include complex numbers and functions, first and second order differential equations for modeling electrical and mechanical systems, the Laplace transform, solutions for initial conditions, solutions for a step input, general transient response, the frequency response, Bode plots, s-plane analysis and stability, one and two pole filters, the Fourier transform.  
Prerequisite(s): EE 202.  
Prerequisite(s) or Corequisite(s): MATH. 224 or MATH. 226 or MATH. 238.  
Note: Students who have credit for EE 214 may not take this course for credit.

EP 228.3 — 2(3L-4P)  
Computer Tools for Engineering Physics  
The emphasis is to investigate the practical engineering and scientific applications of mathematical techniques that were introduced in other classes. Goal is realized through the design and development of software systems to solve problems related to: electric circuit analysis; numerical differentiation, integration and interpolation of real world measurements; modelling of physical systems and Fourier decomposition. In the laboratory students write their own software to solve problems that are introduced in the formal lectures.  
Prerequisite(s): CMPT. 111 or CMPT. 116 and (GE 125 or PHYS. 117 or PHYS. 128).  
Prerequisite(s) or Corequisite(s): MATH. 224 or MATH. 226 or MATH. 238.

EP 253.1 — 1(0.4L-0.6P)  
Modern Physics Laboratory I  
A laboratory course which explores the foundations of quantum physics through laboratory experiments. The experimental observations provide evidence for the quantization of energy levels and wave-particle duality. Students will also learn how to measure the charge of an electron. There will be five experiments and students will need 1.5 hours per experiment. For each experiment there will also be a 1 hour lecture.  
Formerly: PHYS. 253.  
Prerequisite(s) or Corequisite(s): PHYS. 252.  
Note: Students with credit for PHYS. 251 or PHYS. 253 may not take this course for credit.

EP 313.3 — 1(3L-3P)  
Advanced Analog Electronics and Instrumentation  
Topics include frequency response and the role of feedback in electronic circuits, differential and multistage MOS and BJT amplifiers, real operational amplifier characteristics, instrumentation amplifiers, active filters, oscillators, waveform generation circuits and power supplies. Transducers, noise and noise reductions techniques, and measurement theory and standards are also covered, along with analog and digital interfacing circuits.  
Prerequisite(s): EP 214, EE 221 and EE 232.  
Note: Students with credit for EE 323 will not receive credit for this course. First offered in 2013-2014.

EP 317.3 — 2(3L-4P)  
Applied Physics of Materials  
Prerequisite(s): PHYS. 381 or PHYS. 383.  
Prerequisite(s) or Corequisite(s): PHYS. 371.

EP 320.3 — 2(3L-4P)  
Discrete Linear Systems and Applied Information Theory  
An introduction to discrete linear systems and applied information theory with strong emphasis on both analytic and computer based solutions to practical physical problems in systems engineering and data analysis. In the laboratory portion of this class the students write their own software to solve problems that are introduced in the formal lectures. These problems include: discrete solutions to LCR circuits; discrete filtering of measurements collected in real experiments; the frequency responses of any linear system; and amplitude modulation of signals.  
Prerequisite(s): EE 202 or EP 229 and EP 214 and EP 228 and MATH. 224.

EP 321.3 — 2(3L-4P)  
Electronics II  
Introduces digital electronics and completes some analogue electronic topics not covered in EP 311. Analogue topics include transducers, feedback systems, modulators, frequency converters, amplifier configurations and design. The majority of the course covers digital electronics, including logic operation and implementation (AND, OR, NOT), binary numbers, Boolean algebra, memory elements, ROM, RAM, logic circuits (adders, counter, etc.), A/D and D/A converters, and simple microprocessors. Circuit design principles are emphasised and a major design project is undertaken.  
Prerequisite(s): EP 311.

EP 325.3 — 2(3L-3P)  
Optical Systems Design  
This class provides the foundation of geometrical optics for the understanding of complex optics in optical instruments. Topics include image formation, curved optical surfaces, thin and thick lenses, cardinal points and Gaussian optics, apertures, paraxial ray tracing, matrix methods, Fermat's principle and third-order aberrations. Classical instrumentation design is studied including Newtonian and Cassegrain telescopes, astronomical cameras and compound systems. The class concludes with an introduction to ray tracing methods with software packages and techniques for design with realistic computationally difficult problems.  
Prerequisite(s): EE 202 or PHYS. 232.  
Note: Students with credit for EP 225 will not receive credit for this course. First offered in 2013-2014.

EP 353.2 — 1(0.8L-1.2P)  
Modern Physics Laboratory II  
This laboratory course focuses on experiments to observe and measure radioactivity. Students will learn to work with Geiger-Müller counters, Gamma spectrometers and Beta spectrometers. They will also measure properties of radioactive elements and beams. There will be five experiments and students will need 3 hours per experiment. For each experiment there will also be a 2 hour lecture.  
Formerly: PHYS. 353.  
Prerequisite(s) or Corequisite(s): PHYS. 352 or PHYS. 383.  
Note: Students with credit for PHYS. 381 or PHYS. 353 may not take this course for credit. To facilitate registration, students must register for the prerequisite course prior to registering for EP 353, even if the two courses will be taken in the same term.
EP 354.2 — 2(0.8L-1.2P)
Modern Physics Laboratory III
Students learn in this laboratory course to observe and measure nuclear and electron magnetic resonances. Further experiments demonstrate quantum behavior in solids, e.g. semiconductivity or magnetism. There will be five experiments and students will need 3 hours per experiment. For each experiment there will also be a 2 hour lecture.
Formerly: PHYS. 354
Prerequisite(s) or Corequisite(s): PHYS. 383
Note: Students with credit for PHYS. 381 or PHYS. 354 may not take this course for credit. To facilitate registration, students must register for the prerequisite course prior to registering for EP 354, even if the two courses will be taken in the same term.

EP 370.3 — 2(3L-3P alt weeks)
Heat Kinetic Theory and Thermodynamics
Prerequisite(s): PHYS. 252.
Prerequisite(s) or Corequisite(s): MATH. 224 or MATH. 226 or MATH. 238.
Note: Students with credit for EP 271 will not receive credit for this course. This course was labeled EP 271 until 2014.

EP 413.3 — 1(3L)
Instrumentation and Design
A course in electronic instrumentation and in design of measuring equipment. Emphasis is placed on digital techniques for the measurement of physical parameters.
Prerequisite(s): EP 313

EP 414.3 — 1(4P)
Instrumentation Laboratory
A number of laboratory exercises based on an embedded real-time operating system are carried out. The aim of the laboratory is to introduce the student to the practical problems and challenges associated with microprocessor based instrumentation design.
Prerequisite(s): EP 321.
Corequisite(s): EP 413.

EP 417.3 — 1(3L)
Advanced Materials Science with Applications
This course provides students with a fundamental understanding of physical properties of solid state materials and their device applications. Topics include semiconductors, quantum effects in transistors, magnetic materials and their applications, surface kinetics, thin films and interfaces, and thin film fabrication.
Prerequisite(s): EP 317, PHYS. 356 and PHYS. 383.
Note: First offered in 2014-2015.

EP 421.3 — 1(3L-4P alt weeks)
Advanced Optics
Prerequisite(s): EP 325 and PHYS. 356.

EP 428.3 — 1/2(3L)
Computational Engineering Physics
This course introduces students to practical engineering physics problems that cannot be solved analytically and the numerical approaches and computational techniques used to estimate their solutions. Problems will typically be taken from mechanics, thermodynamics, electricity and magnetism, and solid state with examples such as n-body orbits, fields in complicated boundaries, electronic structures of atoms, thermal profile of a nuclear waste rod, and non-linear chaotic systems. The computational techniques introduced to solve these problems include Runge-Kutta methods, spectral analysis, relaxation and finite element methods, and Monte Carlo simulations. A brief introduction to the issues of using high performance computing and parallel computing techniques is also included.
Prerequisite(s): EP 228, PHYS. 223, PHYS. 356, and PHYS. 383.

EP 431.3 — 2(3L)
Optical Systems and Materials II
Diffraction of light - Fraunhofer and Fresnel. Anisotropic effects on the polarization of electromagnetic waves, particularly by reflection and refraction, by birefringent materials (prisms, Fresnel rhombs), and by electro-optic and magneto-optic systems; application of these effects to modulation of light. Circular birefringence as the cause of Faraday rotation and optical activity. Dielectric waveguides and fiber optics. Light-emitting diodes. Fundamentals of stimulated emission and lasers; types of lasers. Optical amplifiers, optical detectors, and optical communication systems.
Prerequisite(s): EP 421.
Note: Students with credit for EE 472 may not take this course for credit.

EP 440.3 — 1(3L)
Advanced Applied Electromagnetism
Applied boundary value problems: basic theory, analytical and numerical methods, applications to high-voltage insulator and bushing design, magnetic pole-piece design. Theory of transmission lines, Smith chart. Launching and propagation of free and guided waves: antennas, waveguides, cutoff frequency, TE, TM, TEM modes, cavity resonators, directional couplers.
Prerequisite(s): PHYS. 356 and MATH. 331.
Note: Students with credit for EP 463 may not take this course for credit.

EP 495.6 — 1and2(1.5L-3P)
Capstone Design Project
This is a year-long design project incorporating all the steps and procedures used by professional engineers.
Prerequisite(s): EP 317.
Prerequisite(s) or Corequisite(s): EP 413 and EP 421.

EP 498.3 — 1/2(3L-1.5P)
Special Topics
Offered occasionally to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

EPPIP — ENGINEERING PROFESSIONAL INTERNSHIP PROGRAM

EPIP . 401.0
Internship Placement I
The Engineering Student Centre, College of Engineering will register Internship students in this 0-credit unit course for the first 4-month installment of the 8 to 16 month internship placement. This course is graded on a Pass/Fail basis.
Permission of the College required.
Prerequisite(s) or Corequisite(s): EN Two Year Common Core and 30 credit units from EN Senior Courses.
Note: Acceptance for EPIP courses is conditional on students having a sessional weighted average of 65% or better in the last session completed before placement.

EPIP . 402.0
Internship Placement II
The Engineering Student Centre, College of Engineering will register Internship students in this 0-credit unit course for the second 4-month installment of the 8 to 16 month internship placement. This course is graded on a Pass/Fail basis.
Permission of the College required.
Prerequisite(s): EPIP 401.

EPIP . 403.0
Internship Placement III
The Engineering Student Centre, College of Engineering will register Internship students in this 0-credit unit course for the third 4-month installment of the 12 to 16 month internship placement. This course is graded on a Pass/Fail basis.
Permission of the College required.
Prerequisite(s): EPIP 402.
EPSE. 404.0  
Internship Placement IV  
The Engineering Student Centre, College of Engineering will register Internship students in this 0-credit unit course for the fourth 4-month installment of the 16 month internship placement. This course is graded on a Pass/Fail basis.  
Permission of the College required.  
Prerequisite(s): EPIP. 403.

EPSE — EDUCATIONAL PSYCHOLOGY AND SPECIAL EDUCATION

College of Education

EPSE. 258.3 — 1/2(3L)  
Learners and Learning  
Assists students to develop an understanding of the characteristics of learners and the learning process in childhood and adolescence, and provides a foundation for meeting the learning needs of students through a variety of teaching-learning models and instructional strategies.  
Note: Students may not receive credit for both this course and EDUC. 302.

EPSE. 337.3 — 1/2(3L-1.5S-1.5P)  
Self Discipline Developing Responsible Learners  
Teacher candidates will examine their beliefs about education, learning, their own behaviour, and that of students in their care. A variety of philosophical perspectives will be studied and students will be encouraged to develop their own unique and personal orientation for guiding the learning process and the development of students’ self-discipline in a supportive classroom environment.  
Formerly: EPDSY. 437.  
Prerequisite(s) or Corequisite(s): EPSE. 258 or EDUC. 302.  
Note: ECCR. 332 is an equivalent course.

EPSE. 390.3 — 1/2(3L)  
Exceptional Learners  
Introduces students to the concept of exceptionality as it reflects the special needs of individuals for whom they will be responsible in their classrooms, schools, and communities. The philosophy of inclusion will be emphasized. Students will learn how to identify and provide appropriate learning opportunities for children with special needs and ensure that they receive additional services to which they are entitled by the Saskatchewan Education Act and current Regulations. Students will become sensitive to cultural differences, the need to work with families and the importance of early intervention to prevent or ameliorate disability.  
Formerly: EDEXC. 390.  
Prerequisite(s) or Corequisite(s): EPSE. 258, EDUC. 302 or departmental approval.

EPSE. 414.3 — 1and2(3L)  
Exceptional Learners Classroom Implications  
Emphasizes strategies and techniques useful in accommodating children and youth with special learning needs in the regular classroom. Students will learn how to maximize potential for individualization through procedures such as adapting lesson plans, devising alternative evaluation procedures and modifying teaching techniques and materials.  
Formerly: EDEXC. 414.  
Prerequisite(s) or Corequisite(s): EPSE. 390.

EPSE. 416.3 — 1/2(3L)  
Comprehensive Guidance and Counselling  
Introduction to comprehensive guidance and counselling in school, community, and health settings. Communication skills for helping professionals are also introduced and practiced. Examines the roles, functions, and ethical practices of personnel involved in guidance counselling and career education. This is a prerequisite class for the graduate program in school and counselling psychology in the Department of Educational Psychology and Special Education.  
Formerly: EPSY. 411 and. 425.  
Prerequisite(s): EPSE. 258, EPSE. 390, or EDUC. 302 or departmental approval.

EPSE. 417.3 — 1/2(3L)  
Introduction to Counselling Psychology  
Introduces students to foundational theories and practices of individual and group counselling. Key theories are surveyed in terms of their major concepts, therapeutic process and practical applications in school, community and health contexts. This is a prerequisite class for the graduate program in school and counselling psychology in the Department of Educational Psychology and Special Education.  
Formerly: EDPSY. 412.  
Prerequisite(s): EPSE. 258, EPSE. 390, or EDUC. 302 or departmental approval.  
Note: Students may not receive credit for both this course and PSY. 257 in a B.Ed. program.

EPSE. 441.3 — 1/2(3L)  
Introductory Statistics in Education  
Provides the student with an overview of descriptive statistics and basic psychometric concepts, with specific attention to problems of measurement and research in education and counselling. The emphasis is on application rather than derivation. No specific mathematical background is required.  
Formerly: EPSY. 441.  
Prerequisite(s): EPSE. 258, 337, 390, or EDUC. 302, or departmental approval.  
Note: Especially recommended for students needing to fulfill the statistics requirement for admission to M.Ed. programs. Students with credit for COMM. 104, GE 210, GEOG 301, PLSC. 314, PLSC. 214, PSY 233, STAT. 242, 244, 245, or 246 may not take this course for credit. Students who wish to use this course toward an Arts and Science credit should first refer to Statistics Course Regulations in the Arts and Science section of the Calendar.

EPSE. 448.3 — 1/2(3L)  
Assessing Learning in Classroom  
Provides training in the skills involved in assessing student achievement. Students will learn how to construct various measuring devices such as paper and pencil tests, performance tests, assignments, portfolios, and observation schedules. Students will also learn how to summarize, interpret and report assessment results.  
Formerly: EDPSY. 448.  
Prerequisite(s): EPSE. 258, 337, 390, or EDUC. 302 or departmental approval.

EPSE. 498.3 — 1/2(3S)  
Special Topics in Educational Psychology and Special Education  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.  
Note: Students may receive credit for only one of EXPR. 498 or 402.

EPSE. 500.3 — 1/2(3S)  
History and Philosophy of Special Education  
Provides an understanding of foundational beliefs and practices that underpin modern special education. Models, theories, and philosophies that provide the basis for special education are examined. Includes an historical profile of special education legal mandates and service provision within Saskatchewan, across Canada, and internationally. Social, cultural, and familial contexts of exceptionality are examined.  
Prerequisite(s): EPSE. 390 and 414.

EPSE. 510.3 — 1/2(3S)  
Supporting Students with Language and Communication Needs in Classroom  
Language and communication development and disorders will be studied with emphasis on the impact they have on students' academic, social, emotional and cognitive development. The teacher's role, including classroom identification and assistance for students having language and communication disorders, will be addressed. Classroom and instruction modifications will be presented.  
Prerequisite(s): EPSE. 390 and 414.

EPSE. 520.3 — 1/2(3S)  
Supporting Students with Learning Disabilities in Classroom  
Designed to facilitate a broad understanding of issues in LD as well as research-based knowledge about several important elements in the field. Course topics will include definitional issues in LD, a language-oriented view to reading disability, memory processing problems, reading, writing, and arithmetic instruction, metacognition, social issues, inclusion, and assessment issues of LD.  
Prerequisite(s): EPSE. 390 and 414.

EPSE. 530.3 — 1/2(3S)  
Supporting Students with Behavioral and Social Needs in Classroom  
The goal of this course is to provide the student with the best effective practices for assessment and educational intervention for children and youth that have behavioural and social problems. While relevant theory and research will be reviewed, major emphasis will be placed on exploring practical strategies for improving behaviour in the school setting.  
Prerequisite(s): EPSE. 390 and 414.
*ETAD. 404.3 — 1/2(2L-1P)*  
**Designing E-learning Environments for Education**

Through discussions, presentations, resources and project work, this course examines foundations, research, development, implementation, and evaluation of e-learning within a variety of possible educational contexts. Exploration and application of knowledge is emphasized via discussions, presentations, resources and project work. This course is offered as a fully on-line course using the BlackBoard LMS. Please refer to the College of Education website for further information.

**Note:** Students with credit for ECMM. 404 may not take this course for credit.

*ETAD. 460.3 — 1/2(3L)*  
**Introduction to Educational Communications and Technology**

Surveys the field of educational communications and technology. Topics include resource-based learning, media literacy, media utilization, distance education and instructional design. Educators learn to use media and resources to construct exciting and productive learning environments.

**Note:** Students with credit for ECMM. 460 may not take this course for credit.

*ETAD. 470.3 — 1/2(2L-1P)*  
**Design and Use of Online Learning Resources**

Internet is a system that links together most of the current on-line networks around the world. Explores the informational and interpersonal resources available on the Internet network and focuses on ways that teachers can integrate these resources into classroom instruction.

**Note:** Students with credit for ECMM. 470 may not take this course for credit.

*ETAD. 474.3 — 1/2(3L)*  
**Mass Communication and Media Literacy Studies for Educators**

Explores media literacy, the language and literature of mass communication, examines how mass media influence learning, and discusses significant social, legal and educational issues such as copyright, bias and visual literacy.

**Note:** Students with credit for ECMM. 474 may not take this course for credit.

*ETAD. 476.3 — 1/2(2L-1P)*  
**Video Production for Education**

Explores the technique of instructional television production on location and in the studio. Production experience includes single camera field production, full scale multi-camera studio production, audio mixing, graphics creation and video editing, scripting, directing, producing, editing and using television for traditional and distance education instructional formats.

**Note:** Students with credit for ECMM. 476 may not take this course for credit.
ETAD. 478.3 — 1/2(2L-1P)
Still Photography in Education
Introduces the basics of communication through still photographic and digital imagery. The student will learn to use a conventional camera, computer scanner and digital camera. Skills include film processing, print making, digitization and manipulation of still photographic and computer images for planning and developing instructional and training resources.
Note: Students with credit for ECMM. 478 may not take this course for credit.

ETAD. 498.3 — 1/2(3P)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

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**EVSC — ENVIRONMENTAL SCIENCE**

College of Agriculture and Bioresources

**EVSC. 110.3 — 1(3L-2T)**
Renewable Resources and Environment
Introduces students to renewable resources and their management. Emphasis will be on human use of surface water, groundwater, land and plant resources. The concepts of sustainable use and ecological goods and services will be explored for each resource. The role of each resource as an alternative energy source and the interaction between human use of the resource and global change will also be addressed. Critical assumptions that underlie human use of resources will be discussed in weekly tutorial sessions.

**EVSC. 203.3 — 1(3L-3P)**
Sampling and Laboratory Analysis
An introduction to the principles and practice of sampling and analysis of soils and related environmental materials. This course involves hands-on exercises on field soil and sediment sampling, sample handling, basic laboratory techniques and safety, selected laboratory analyses relevant to environmental science, and basic statistical analysis of data. For this course there will be costs in addition to tuition fees.
Formerly: EVSC. 303.
Note: Students with credit for EVSC. 303 may not take this course for credit. There are additional non-refundable costs in addition to tuition fees.

**EVSC. 210.3 — 2(3L-3P)**
Environmental Physics
Essential physical concepts and processes (transport and storage of matter and energy) in the environment are introduced through applications and case-studies. Case studies include water cycles, natural and human-induced climate change, and the impact of human activity (industrial and agricultural) on the environment. Practicums are in the form of tutorials. Students will develop the essential ability to solve practical environmental problems through this course.

**EVSC. 220.3 — 1(3L)**
Environmental Soil Science
Focuses on soils as an integrator of a broad range of environmental processes and as a critical component in human-induced environmental change. Major topics include the influence of the environment on soil formation and the physical, chemical, and microbial/biochemical soil processes of relevance to environmental science.
Prerequisite(s): AGRC. 111 or 3 credit units GEOG or GEOL.
Note: Students may receive credit for only one of EVSC. 220 or SLSC. 240.

**EVSC. 298.3**
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

**EVSC. 371.3 — 2(1.5L-3P)**
Environmental Data Analysis
Environmental management involves a range of data analysis and interpretation skills. Lectures and practical experiences in this course will give students experience in the use of soil and related natural resource information; in statistical and graphical summaries of field and laboratory data; and in interpolation of point data using geostatistical techniques and related spatial statistics.
Prerequisite(s): EVSC. 210, EVSC. 203, PLSC. 214, and one of MATH. 104 or MATH. 110, or permission of the instructor.
Note: Students with credit for EVSC. 471 may not take this course for credit.

**EVSC. 380.3 — 1(1.5L)**
Grassland Soils and Vegetation
A five-day field course, plus tutorials early in the term, to study the landscape, soils and vegetation of the prairie ecozone. Emphasis will be on the environmental factors controlling plant distribution, classification and sampling of soil profiles, and characterizing vegetation and its relationships to soils and landscapes. Basic field skills will be taught, including soil and vegetation sampling, field measurements, and global positioning systems (GPS).
Prerequisite(s): PLSC. 213, SLSC. 240 or EVSC. 220 or permission of the instructor.
Note: SLSC. 232 is recommended. This one-week field course is held the week preceding the start of Fall Term One. There are additional non-refundable costs in addition to tuition fees.

**EVSC. 398.3**
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

**EVSC. 420.3 — 1(3L)**
Environmental Fate and Transport of Toxic Substances
In this lecture/practicum based course, students will learn how to construct a multi-media environmental model using freely available software. Students will be exposed to the fundamental theory of environmental fate modeling with a focus on how contaminant movement and transformation in the atmosphere, hydrosphere, biosphere and geosphere are incorporated into long term environmental fate models. The course is located in a computer lab and the emphasis is on practical construction, implementation and interpretation of fugacity based environmental fate models. Each lecture period consists of a brief theoretical overview followed by application and implementation of the equations into the students fate model.
Prerequisite(s): MATH. 104, 110 or 125, PHYS. 115 or EVSC. 210; successful completion of 60 credit units of university level courses.

**EVSC. 421.3 — 1(3L)**
Contaminated Site Management and Remediation
This course will focus on how contaminated sites are managed and remediated for new land uses. Students will learn the theory of how sites are investigated and characterized, how toxicological information is used to estimate the risk to humans and ecosystems, how threats to groundwater are assessed and finally, methods by which these risks and threats are mitigated through remediation approaches. This course will provide students with the skill sets necessary to assess, manage and reduce human and ecological risk at a contaminated site.
Prerequisite(s): EVSC. 210 or 3 credit units 100-level PHYS, STAT. 245 or PLSC. 214, and one of EVSC. 220, SLSC. 240 or RRM. 215.
Prerequisite(s) or Corequisite(s): One of TOX. 321, GEOG. 386, BLE. 481, SLSC. 313 or SLSC. 322.
Note: Fourth-year students in Environmental Engineering or Toxicology will be given a prerequisite waiver by the college.

**EVSC. 430.3 — 2(3L)**
Agroforestry for Environmental Management
An introduction to agroforestry systems and their benefits to sustainable environmental management. Growth factors such as soil type, water, light, nutrient availability and pest management are discussed for an array of agroforestry systems in both tropical and temperate settings. Case studies from around the world are used to demonstrate that agroforestry systems can successfully raise trees and crops for commercial harvesting while conserving land and biodiversity.
Prerequisite(s): One of BIOL. 253, BIOL. 228, PLSC. 213 or GEOG. 280 and one of EVSC. 220, SLSC. 240 or BLE. 212 or permission of the instructor.
FABS — FOOD AND BIOPRODUCT SCIENCES

College of Agriculture and Bioscience

FABS. 210.3 — 2(3L)
Dimensions of Food Science
Provides a comprehensive introduction to the principles and practice of food science in contemporary society. Relationships between foods and bioproducts, chemistry, commodities, composition, fermentation, formulation, preservation, processing and interrelationships between foods and biotechnology, functionality governance, nutraceuticals, and safety are covered in the course.

Prerequisite(s): CHEM. 112
Note(s): Offered annually. NUTR. 120 is recommended. Students with credit for FABS. 210 will not receive credit for FABS. 210.

FABS. 211.3 — 1(3L)
Introductory Bioprocess Science
Provides a general overview of the current science of bioproducts, i.e. industrial products made from renewable biosources. The course focuses on the structure, properties and processing of bioproducts arising from oil-bearing, starchy and fibrous, and proteinaceous organic materials, as well as the issues related to the bioprocess industry.

Prerequisite(s): CHEM. 112 or permission of the instructor
Note: Offered annually.

FABS. 212.3 — 1(3L)
Agrifood and Resources Microbiology
An introduction to the general biology of microorganisms with emphasis on those of agrifood, economic and environmental importance. Microbial morphology, metabolism, growth and genetics; infectious disease and immunity; environmental microbiology and waste water treatment; agricultural microbiology; food and industrial microbiology. Laboratory practice in basic microbiological techniques and their application to the study of microbial activities.

Prerequisite(s): 3 credit units of Biology and 3 credit units Chemistry or permission of the instructor
Note(s): Offered annually. Students with credit for FAMS. 212, MCM. 214, or BMSC. 210 will not receive credit for FABS. 212.

FABS. 298.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

FABS. 323.3 — 2(3L)
Food Additives and Toxicants
Introduction to the types of food additives currently used in the food industry and the function(s) of these chemical compounds. The safety of food additives will be addressed as related to their toxicological information. The overarching question on the need for food additives and their safety will be presented. In addition, a selection of naturally occurring toxicants in foods will be examined and discussed.

Note: Offered in alternate years. Students with credit for FAMS. 323 will not receive credit for FABS. 323.

FABS. 325.3 — 2(3L)
Food Microbiology and Safety
Detailed examination of microorganisms and their relationship to the food supply and public safety. Theory of how intrinsic and extrinsic factors, which govern microbial proliferation in foods, affect food spoilage, food preservation and disease. Laboratories will emphasize methods and techniques for isolating, enumerating, and identifying important food-borne microbes.

Prerequisite(s): FABS. 210 or BMSC. 210
Note: Offered in even-numbered years. Students with credit for FAMS. 425 will not receive credit for FABS. 325.

FABS. 334.3 — 1(3L)
Industrial Microbiology
A study of the microbial cultures and bioprocess technologies for bioproduct synthesis and transformation by diversity of industrial microorganisms, traditional and biotechnological strain improvements, fermentation systems, immobilized cell reactors, downstream processing, product recovery, development and safety.

Prerequisite(s): FABS. 210 or BMSC. 210
Note: Offered in alternate years. Students with credit for FAMS. 434 will not receive credit for FABS. 334.

FABS. 345.3 — 2(3L)
Unit Operations in Food Processing
The fundamental principles of the common unit operations of food processing and preservation are discussed with emphasis on freezing, drying, evaporation and thermal processing operations. The operating principles of equipment utilized in these operations will be examined and selected processes of unit operations studied in detail.

Note: Offered in alternate years. Students with credit for FAMS. 345 will not receive credit for FABS. 345.

FABS. 360.3 — 1(3L)
Water Microbiology and Safety
An introduction to the principles, vocabulary and concepts associated with the provision of safe drinking water. Examination of the relationship between microbial health threats and water resources and governance, quality assessment, treatment, risk assessment and decision-making, security and global issues. Lectures will be complemented by in-class discussion and student presentations.

Prerequisite(s): FABS. 210 or BMSC. 210 or permission of instructor
Note: Offered in alternate years. Students with credit for FAMS. 360 will not receive credit for FABS. 360.
FABS. 362.3 — 2(3L)
Functional Foods and Nutraceuticals
Explores aspects of nutraceuticals and functional foods derived from plant, animal and microbial origins. Global regulatory issues including efficacy and safety, health claims, value-added food production and the marketing challenges will be presented.
Prerequisite(s): Successful completion of 60 credit units of university-level courses
Note: Offered in alternate years. Students with credit for FAMS. 362 will not receive credit for FABS. 362.

FABS. 366.3 — 2(3L-2P)
Physicochemical Properties of Food Macromolecules
Provides insight into the basic structure-function relationships of lipids, proteins and polysaccharides in complex systems. The physicochemical, i.e. functional, properties of food and bioproducts will be emphasized.
Prerequisite(s): FABS. 315 (formerly FAMS. 415) or permission of the instructor

FABS. 371.3 — 2(3L)
Food Biotechnology
Presents principles, concepts, and application of methods and process design of biotechnology related to foods and ingredients for product quality and yield. New food development from plants, animals, microorganisms and related issues of governance, regulation, safety, health, consumer and market challenges will be presented.
Prerequisite(s): Successful completion of 60 credit units of university-level courses
Note(s): Offered in alternate years. Students with credit for FAMS. 371 will not receive credit for FABS. 371.

FABS. 398.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

FABS. 401.3 — 1(3L)
Dairy Science and Technology
Examines the chemistry and processing of dairy products. Lectures will cover the fundamental aspects of milk with respect to chemistry, biochemistry, nutrition and engineering, as well as its application in a wide variety of dairy products.
Prerequisite(s): BMSC. 200 and FABS. 210 or permission of the instructor.
Note: Offered in alternate years.

FABS. 411.3 — 2(3L)
Lipid Science and Technology
Provides a comprehensive overview of lipid science and technology. Topics include lipid type, sources, structure, properties and food and non-food usage; lipid metabolism and biotechnology; as well as lipid bioproducts and industrial processing technologies.
Prerequisite(s): CHEM. 112 or BMSC. 200 or permission of the instructor.
Note: Offered in alternate years beginning 2011. Students with credit for FAMS. 411 will not receive credit for FABS. 411.

FABS. 417.3 — 2(3L-4P)
Food and Bioprocesses Analysis
Modern analytical techniques/instruments and their application to food analysis are presented and discussed. Basic analytical chemical principles and methodology are covered with specific emphasis on their use in answering food analysis questions. Major topics include, proximate analysis, spectroscopy, high performance liquid and gas chromatography, and mass spectroscopy. The laboratory section consists of ten or eleven practical sessions that support the theoretical information presented in lectures.
Prerequisite(s): BMSC. 200
Note: Offered in alternate years. Students with credit for FABS. 417 will not receive credit for FABS. 417.

FABS. 430.3 — 2(3L-1.5P)
Environmental Microbiology
Includes fundamentals of microbial ecology and explains basic concepts of microbial diversity and function within the environment. Covers principal biological properties and interactions of prokaryotic and eukaryotic microorganisms and highlights their practical value to the environment, agriculture, soil, plants, invertebrates, public health, industry and biotechnology.
Prerequisite(s): FABS. 212.3 or PLSC. 213.3; or permission of the instructor.
Note: Offered in alternate years. Students with credit for FABS. 430 will not receive credit for FABS. 430.

FABS. 432.3 — 2(3L-1.5P)
Microbial Bioprocesses in Agriculture
The world’s food, environmental and energy concerns require innovative bioprocesses as natural and environmentally friendly solutions to reduce the usage of chemical pesticides and fertilizers, while enhancing crop yields and biomass production for biofuels. This course provides an overview of recent advances and discoveries in the area of microbial bioprocesses such as inulinolysis, biotechnology and formulation, genomics and proteomics, and their application to sustainable and organic agriculture systems.
Prerequisite(s): One of FABS. 212, MCIM. 214, BMSC. 210, or PLSC. 222; or permission of the instructor.
Note: Offered in alternate years.

FABS. 436.3 — 1(3L)
Biofuel Production
Students are provided with comprehensive theoretical and practical knowledge of the multi-disciplinary production steps leading to fuel and industrial alcohol. One four hour field trip to an industry location. Excursion fees may apply.
Prerequisite(s): FABS. 212 or BMSC. 210 or permission of the instructor.
Note: Offered in alternate years. Students with credit for FABS. 436 will not receive credit for FABS. 436.

FABS. 450.3 — 1(3L)
Anaerobic and Rumen Microbiology
A detailed examination of the rumen microbial ecosystem and other anaerobic environments. Factors which govern microbial proliferation, metabolism of plant structural and storage carbohydrates and fermentation will be discussed in the context of host ruminant nutrition.
Prerequisite(s): FABS. 212 or BMSC. 210; BMSC. 230.
Note: Offered in alternate years. Students with credit for FABS. 450 will not receive credit for FABS. 450.

FABS. 452.3 — 2(3L)
Quality Assurance and HACCP
Principles of quality assurance as applied to the food industry. Theory and in-class workshops examine food regulations, analytical methods, statistical quality control, sanitation, as well as implementing and auditing the Hazard Analysis Critical Control Point (HACCP) as well as quality assurance systems.
Note: Offered in alternate years. Students with credit for FAMS. 452 will not receive credit for FABS. 452.

FABS. 457.3 — 1(3L-3P)
Meat Science and Technology
Fundamentals of Meat Science, including meat quality, chemistry, conversion and processing of muscle to meat and product storage will be presented. An overview of technologies used for further processing and value - addition of meats will also be discussed.
Note: Offered in alternate years. Students with credit for FABS. 457 will not receive credit for FABS. 457.

FABS. 460.3 — 2(3L)
Protein Science and Technology
Provides an advanced understanding of structure-dynamic-function relationships of proteins from both plant and animal sources. The emphasis will be on protein structure, protein interactions, methodologies for assessing protein functionality, protein purification and the use of proteins in novel food and bioproducts.
Prerequisite(s): FABS. 315 (formerly FAMS. 415) or permission of the instructor.
Note: Offered in alternate years.

FABS. 474.3 — 2(3L-3P)
Food Enzymology
Examines the principles of enzyme applications in foods, food processing and food analysis. Lectures and laboratories will present the fundamentals of enzymes from biochemical, chemical, biological and engineering aspects as well as their practical applications in food science.
Prerequisite(s): BMSC. 200 and either FABS. 212 or BMSC. 210.
Note: Offered in alternate years. Students with credit for FAMS. 474 will not receive credit for FABS. 474.

FABS. 486.3 — 1(3L-3P)
Sensory Evaluation of Food
Provides an introduction to the principles and procedures for sensory evaluation of foods through lectures and hands-on practice. Appropriate uses of specific tests will be discussed, along with data analysis and interpretation and factors that influence sensory responses. Students will also have the opportunity to carry out a small sensory evaluation trial by evaluating products for an industry client.
Prerequisite(s): FABS. 210; PLSC. 214 or STAT. 245; or permission of the instructor.
Note: Offered in alternate years.

FABS. 490.0 — 1and2(1S)
Honours Seminar
Students in the Honours Arts and Science Food Science program are required to present one departmental seminar and attend all seminars.
Note: Students with credit for FAMS. 490.0 will not receive credit for FABS. 490.0.
FABS. 492.3 — 1and2
Literature Thesis
This is a technical writing and communication course in which the student will investigate a problem/topic in the food and bioproduct area. An extensive literature review will be made utilizing electronic and library resources and an undergraduate level dissertation will be prepared on a topic. A summation of the dissertation will be presented at the departmental seminar series. Technical writing skills and seminar preparation will be addressed in a series of lectures at the beginning of the term.
Prerequisite(s): Successful completion of 90 credit units towards the B.S.A. in the FABS major.
Note: Students with credit for FAMS. 492 will not receive credit for FABS. 492.

FABS. 493.3 — 2(3L-3P)
Product Development
Provides an understanding of the processes involved with developing products for food and non-food applications, stemming from the idea/concept stage, to prototype development and testing consumer acceptability. Emphasis will be placed on a team approach for effectively planning and executing the development of a new product for the marketplace.
Prerequisite(s): FABS. 210 and FABS. 212; or permission of the department.
Note: Students with credit for FAMS. 493 will not receive credit for FABS. 493.

FABS. 494.6 — 1and2
Research Thesis
The course is restricted to students with a minimum cumulative 70% average as of January of year three. Firstly, a student develops a small research project in consultation with a faculty member at the department. Then, the student undertakes lab experiments to investigate the project. Finally, the student prepares a thesis based on the research results and delivers the presentation at the departmental seminar series. Students considering graduate studies are encouraged to take this course.
Prerequisite(s): Successful completion of 90 credit units towards the B.S.A. in the FABS major and permission of the department head.
Note: Students with credit for FAMS. 494 will not receive credit for FABS. 494.

FABS. 498.3 — 1and2
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

FIN — FINANCE

College of Arts and Science

FIN. 103.3 — 1/2(3L-1T)
Beginning French I
An introduction to the basic grammatical concepts of French. Instruction will be based on the communicative approach.
Prerequisite(s): Successful completion of 90 credit units towards the B.S.A. in the FABS major.
Note: Students with credit for French 20 (Grade 11 French) or French 30 (Grade 12 French) cannot take this course for credit. FIN. 103 does not count towards a major in French. Non-French/Modern Languages majors can use FIN. 103 towards the humanities or languages requirements.

FIN. 106.3 — 1/2(3L-1T)
Beginning French II
A continuation of the basic grammatical concepts of French. The communicative approach will be used with greater emphasis on reading and writing.
Prerequisite(s): French 20 or FIN. 103.
Note: Students who have completed French 30 cannot take this course for credit. FIN. 106 does not count towards a major in French. Non-French/Modern Languages majors can use FIN. 106 towards the humanities or languages requirements.

FIN. 122.3 — 1/2(3L-1T)
Intermediate French I
For students who have an adequate mastery of the basic grammatical concepts of French. Practice in aural comprehension, speaking and writing, and an introduction to reading. The course meets three hours a week, and students also attend a laboratory/conversation tutorial for an additional hour per week.
Prerequisite(s): French 30 (Grade 12 Core French) or FIN. 106.
Note: Students with French 30 or FIN. 106 must register in FIN. 122. Students having graduated from Grade 12 in an Immersion program, as well as students with an additional background in French beyond the Grade 12 level, will not be allowed to register in FIN. 122 for credit.

FIN. 125.3 — 1/2(3L-1T)
Intermediate French II
A continuation of the language study done in FIN. 122, with more emphasis on reading. Students will attend a laboratory/conversation tutorial one hour a week in addition to three hours of classes.
Prerequisite(s): FIN. 122.
Note: Students having graduated from Grade 12 in an Immersion program will not be registered in FIN. 125 for credit. Students with an additional background in French beyond the Grade 12 level should consult the Department before registering.

FIN. 128.3 — 1/2(3L-1T)
Intermediate French for Bilingual and Immersion Students
Designed to help students with a well-developed pre-university training in Oral French, and develop their overall, but especially written, performance, through grammar review, precis of short documentary videos, and critique of a choice of articles.
Prerequisite(s): École fransaskoise Grade 12, designated (or immersion) school Grade 12, out-of-province equivalent Grade 12. If it has been more than five years since graduation from these programs, students may take 122 and 125.
Note: Students with credit for FIN. 122 (or 121), or 125 may not take this course for credit.

FIN. 212.3 — 1/2(3L-1T)
Advanced French Expression I
A language course that builds on skills acquired in FIN. 122, 125 or equivalent. Some oral work, but emphasis is placed on the practical application of grammar through reading and writing. A contemporary register of language, vocabulary and style is stressed through the study of magazines, journals and newspapers.
Prerequisite(s): FIN. 125.

FIN. 214.3 — (1L)
Beginner French English Translation
Covers the rudiments of French reading comprehension as an introduction to translation from French into English. This course is aimed at students who wish to prepare themselves for advanced French literature courses, students whose programmes require proof of a language credit in the form of a translation, and is a prerequisite for French. 314.3.
Prerequisite(s): FIN. 125 or FIN. 128.

FIN. 216.3 — 1/2(3L)
Literature and Spirituality The French Catholic Novel in English
A study of selected works of three major Catholic novelists of 20th century France, such as Georges Bernanos, Francois Mauriac, and Julien Green. The course is intended for students in various fields of study (literature, philosophy, religious studies etc.) with an interest in religious and spiritual themes and their literary expression. The texts and lectures will be in English. The assignments and exams will be written in English.
Prerequisite(s): 24 credit units including 6 credit units in French or English.
Note: Students may receive credit for only one of FIN. 423 and FIN. 216.

FIN. 218.3 — 1/2(3L)
Advanced French Expression II
Completes the grammar review started in FIN. 128 and FIN. 212, and enhances writing skills through intensive vocabulary exercises, precis of and commentary on longer documentary videos and a critique of a Quebecois novel.
Prerequisite(s): FIN. 200.

FIN. 220.3 — 1/2(3L)
Masterpieces of French Literature
An introduction to literary studies in French. The course will combine two elements: how to approach a French literary text, and a general introduction to French literature. It will study a selected number of French authors from the different genres and the various periods of French literature.
Prerequisite(s): FIN. 125 or FIN. 128.
FREN. 225.2 — 1/2(3L)
Paris on Film
This course will explore the role of France as the birthplace of cinema. Over the past century its capital has been not only the subject but also the star of many of the films that ushered in the major aesthetic movements of our time: from modernity through surrealism, cinéma vérité to the new wave. This course is offered in Spring and Summer Session, with two weeks of classes in Saskatoon and two weeks of study in Paris. The classes will provide students with the vocabulary and skills to “read” a film, while contextualizing clips from representative films from the last century of French cinema. In Paris, students will make site visits to la Cinémathèque française, and will access research materials at the Forum des Images at the Georges Pompidou Centre.
Prerequisite(s): FREN. 125 or FREN. 128 or permission of the instructor.

FREN. 230.3 — 1/2(3L)
Introduction to French Canadian Literature
An introduction to the literature of 20th-century French Canada. A study of the main literary genres; short story, novel, plays, poetry and poetic prose; in their relationship to everyday life.
Prerequisite(s): FREN. 125 or FREN. 128.

FREN. 235.2 — 1/2(3L)
Theatre in Paris
This course examines French theatre. It is offered in Spring and Summer Session, with two weeks of classes in Saskatoon and two weeks of study in Paris. The classes will provide a general, century-by-century introduction to the evolution of theatre (theatrical life and aesthetics) through the analysis of excerpts from the major works of the French repertoire. In Paris, two plays will be studied, chosen from among the offerings at François’s two major theatres: La Comédie-Française (1680) and l’Odéon (1782). An exclusive backstage tour of the theatres, and a discussion of their histories, will also be included. Students will also be privileged to spend an afternoon at Le Conservatoire National Supérieur de Paris, François’s premiere drama school, to witness some of their workshops. This class will also include lectures and discussions with some of François’s most famous stage directors and theatre specialists.
Prerequisite(s): FREN. 125 or FREN. 128 or permission of the instructor.

FREN. 251.3 — 1/2(3S)
French Civilization from the Middle Ages through the 19th Century
This course is designed to study French civilization from the Middle Ages through the 19th Century. The historical, political, social and artistic evolution of France will be brought to light through the study of different texts such as historical testimonies, novels, or comics. The first part will be devoted to the Medieval and Early Modern period in France, particularly the reigns of Clovis, Charlemagne, François I and Louis XIV, the Sun King. We will then study the changes associated with the French Revolution and Napoleon’s coup d’État. Finally, we will focus on Modernity, particularly the era of prosperity and the institutions developed during the 3rd Republic. Important elements of French culture will also be examined such as the construction of certain monuments (Versailles, the castles of the Loire Valley), fashion or cuisine. This course is taught in French.
Prerequisite(s): FREN. 125 or FREN. 128 or permission of the department.

FREN. 252.3 — 1/2(3L)
Culture and Society in France
A study of the cultural evolution in France (history, politics, religion, education, language, song, cinema, culinary arts, etc.) with emphasis on contemporary society.
Prerequisite(s): FREN. 125 or 128 or equivalent.

FREN. 258.3 — 1/2(3L)
French for Business
An intermediate course in business French, introducing topics such as big and small business, banks, international business as well as material on resumes, letters and job interviews and basic information on computers and the Internet, focusing on both Canada and France.
Prerequisite(s): FREN. 125 or FREN. 128.

FREN. 272.3 — 1/2(3L)
Quebec Society and Culture
A study of the evolution of Quebec society (history, politics, religion, education, language, song, women’s and native rights, etc.) with emphasis on contemporary society.
Prerequisite(s): FREN. 125 or FREN. 128.

FREN. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

FREN. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

FREN. 304.3 — 1/2(3L-1P)
French Phonetics Theory and Practice
Conducted entirely in French, this course deals with the theory and practice of standard European and Canadian French pronunciation, corrective phonetics, phonetic transcription and the phenomena of elision, liaison, enchainment and syllabification.
Prerequisite(s): FREN. 218.

FREN. 312.3 — 1/2(3L)
Perfecting French Style and Expression
A study of French grammar at the advanced level based on grammatical analysis.
Prerequisite(s): FREN. 218.

FREN. 314.3 — 1/2(3L)
Advanced French English Translation
With an emphasis on Translation Studies, this course will explore themes in modern Translation Theory and their practical application in the translation of texts which challenge or defy traditional translation approaches, such as poetry, theatre, subtitles, and song.
Prerequisite(s): FREN 214.3.
Note: A grade of 70% or above is desirable.

FREN. 317.3 — 1/2(3L)
French Literature of 17th Century
Representative authors, works, and literary movements will be studied.
Prerequisite(s): FREN. 220 or 230.

FREN. 318.3 — 1/2(3L)
French Literature of 18th Century
A study of the writers of 18th-century France who were most influential in the development of the philosophes movement, with particular emphasis on Montesquieu, Voltaire, Diderot and Rousseau.
Prerequisite(s): FREN. 220 or 230.

FREN. 319.3 — 1/2(3L)
French Literature of 19th Century
Representative authors, works, and literary movements will be studied.
Prerequisite(s): FREN. 220 or 230.

FREN. 320.3 — 1/2(3L)
French Literature of 20th Century
Beginning with Proust, the course will cover major writers and literary movements in the novel, the theatre and poetry, but will concentrate on the novel at the beginning of the century, the literature of the absurd, and the nouveau-roman.
Prerequisite(s): FREN. 220 or 230.

FREN. 334.3 — 1/2(3L)
Poetry of Quebec
A study of the development of poetry in Quebec: forms and main themes.
Prerequisite(s): FREN. 220 or 230.

FREN. 338.3 — 1/2(3S)
Selected Topics in French Literature
Designed to examine literary works written in the French language from different perspectives, and will include interdisciplinary approaches to literary creations from different centuries. Through this comparative analysis, the aesthetic, poetic, pragmatic and rhetorical concerns particular to each century will be brought to the fore. The analysis will centre around either a theme (such as “Images and Fascination”) or a genre (such as theatre or the novel). This course is taught in French.
Prerequisite(s): FREN. 220 or FREN. 230 or permission of the department.
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

FREN. 343.3 — 1/2(3L)
Novel in Quebec
Studies the development of the novel in Quebec with emphasis on contemporary works.
Prerequisite(s): FREN. 220 or 230.

FREN. 345.3 — 1/2(3L)
Theatre in Quebec
Studies the development of theatre in French Canada with emphasis on the contemporary period.
Prerequisite(s): FREN. 220 or 230.
FREN. 350.3 — 1/2(3L)
Francophone Literature of Canadian West
A study of the Francophone literature of the Canadian West from 1870 to today. Covers major writers in the novel, poetry and theatre. Students will be made aware of the representative authors and their works produced in French on the Canadian prairies.
Prerequisite(s): FREN. 220 or 230.

FREN. 360.3 — 1/2(3L-1S)
Francophone Literature and Film in the Maghreb
Will examine the evolution of Francophone literature and film in North Africa from the colonial era to the present, and focus on its marginal status vis-a-vis both the metropole and the indigenous culture of the Maghreb.
Prerequisite(s): FREN. 220 or 230.

FREN. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

FREN. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

FREN. 400.0 — 2-Jan
Stay in French Speaking Milieu
Students will participate in a French-speaking milieu. All students graduating with an Honours degree in French are required to have completed a stay in a French-speaking milieu. Students must contact the Department for further information regarding this requirement.
Permission of the department of Languages and Linguistics required.
Restriction(s): Admission to the honours program in French.
Note: Students will be provided with additional information once accepted into the French Honours program. Upon evaluation and successful completion of this stay, the student will be assigned a grade of a Pass to indicate completion of this Honours requirement.

FREN. 417
Topics in Seventeenth Century French Literature
One of the following topics will be studied: the theatre of Cornielle and Racine, the novel (from LeT to Lafayette), or secondary genres (fables, sermons, maxims, portraits, correspondence).
Prerequisite(s): FREN. 220 or 230.

FREN. 418.3 — 1/2(3L)
Topics in 18th Century French Literature
One of the following special topics will be studied: the novel and the theatre or the Encyclopedia.
Prerequisite(s): FREN. 220 or 230.

FREN. 419.3 — 1/2(3L)
Topics in 19th Century French Literature
One of the following topics will be studied: French symbolist poetry (Baudelaire, Verlaine, Rimbaud and Mallarme); “VICTOR HUGO CEST INCONNU”; the “arriviste” in Stendhal’s, Balzac’s and Maupassant’s novels; the superfluous man in the 19th-century French novel (Constant, Adolphe, Chateaubriand, Rene, Flaubert, L’Education sentimentale).
Prerequisite(s): FREN. 220 or 230.

FREN. 420.3 — 1/2(3L)
Topics in 20th Century French Literature
One of the following topics will be studied: The Nouveau-roman; Dada and Surrealism in French literature; the literature of the absurd.
Prerequisite(s): FREN. 220 or 230.

FREN. 423.3 — 1/2(3L)
Literature and Spirituality Catholic Novel in France
A study of the three major “Catholic” novelists of 20th-century France: Francois Mauriac, Julien Green, and Georges Bernanos. Emphasis will be placed upon their religious and spiritual preoccupations.
Prerequisite(s): FREN. 220 or 230.

FREN. 438.3 — 1/2(1S)
Special Studies in French
Independent study, under the direction of a faculty member, of a topic in French or French Canadian literature or civilization or linguistics that is not covered in any of the existing courses in the department.
Prerequisite(s): FREN. 218 and 6 senior credit units in French literature and/or civilization and/or linguistics from the following courses: FREN. 220, 230, 252, 272, 304.
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

FREN. 443.3 — 1/2(3L)
Topics in French Canadian Novel
A special topic in the French Canadian novel will be studied, such as one of the women writers, the social novel or the nouveau-roman.
Prerequisite(s): FREN. 220 or 230.

FREN. 445
Topics in Quebec Drama
Prerequisite(s): FREN. 220 or 230.

FREN. 460.3 — 1(3S)
French Orientalism
This course examines how French literature, beginning with Montesquieu’s Persian Letters, constructed an imaginative Orient. The focus is on the mission civilatrice or the invention of a highly civilized Europeanness through a positive comparison to a supposedly backward and static Orient, and on the imperialistic assumptions underlying Western attitudes toward the East, including their racial, cultural, and sexual dimension. The course shows how the different accounts of the Orient reveal the tendency to essentialize a certain homogeneity of the stereotypical Oriental or Muslim, i.e., along with the European imperialist enterprise, the Orient emerged as an intellectual construction that was the opposite of the West. We read a selection of canonical French literary texts (by Montesquieu, Hugo, Balzac, Flaubert, Gide, and others) from the seventeenth to the twentieth century, which are supplemented by film and other media and by excerpts from travel literature, personal diaries, historical chronicles, and scholarly treatises.
Prerequisite(s): FREN. 220 or FREN. 230.

FREN. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

FREN. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GE — GENERAL ENGINEERING

GE 101.1 — 1(1L)
Introduction to the Engineering Profession
An introduction to the engineering profession: study skills and time management, engineering disciplines, experiential learning through internships, the engineer’s role in public health and safety, sustainability, academic and professional ethics, engineering and society, and communication skills.

GE 111.3 — 1(3L-3P)
Engineering Problem Solving
Prerequisite(s) or Corequisite(s): GE 101.

GE 121.3 — 2(3L-3P)
Engineering Design
Prerequisite(s): GE 101 and GE 111 (taken).
GE 124.3 — 1(3L-1P-2T)
Engineering Mechanics I
Introduction to statics. This course provides a basic introduction to forces as vectors, force equilibrium of particles, and force and moment equilibrium of rigid bodies. Problems involving friction and the analyses of simple trusses, frames and machines are also introduced. A series of problem laboratories and practical laboratories are designed to help the student apply the principles of statics to practical problems.
Prerequisite(s): MATH. 123.

GE 125.3 — 2(3L-1P-2T)
Engineering Mechanics II
A continuation of Engineering Mechanics I. The equilibrium of bodies under distributed loads is presented as an introduction to centroids, centers of mass, and area moments of inertia. Particle dynamics is the subject of the majority of the course starting with the principles of particle translation under constant and non-constant acceleration. The kinetics of particles during translation, including force-acceleration, work-energy, and impulse-momentum are also applied to practical engineering applications. A series of problem laboratories and practical laboratories provide practical problems to assist in the assimilation of the principles covered.
Prerequisite(s): GE 124 (taken) and MATH. 123 (taken).
Prerequisite(s) or Corequisite(s): MATH. 124.

GE 210.3 — 1(3L-1.5P)
Probability and Statistics
Introduces the student to the concepts of descriptive statistics, probability, continuous and discrete probability distributions, hypothesis testing, and empirical models and regression. Examples are from various fields of engineering.
Prerequisite(s): MATH. 124 (taken).
Note: Students with credit for PLSC. 314 or PLSC. 214 or STAT. 245 or CHE. 311 may not take this course for credit.

GE 213.3 — 1/2(3L-1.5P)
Mechanics of Materials
Building upon the concepts introduced in the courses in statics and dynamics and the properties of engineering materials, this course extends equilibrium analysis to deformable bodies. Emphasis is placed on understanding and applying the three fundamental concepts of solid mechanics - equilibrium, constitutive relationships, and geometry of deformation (compatibility). The fundamentals are introduced and reinforced in the context of specific behaviors, including axial tension and compression, pure bending, bending in combination with shear, and torsion of circular shafts. Transformation of stress in two dimensions is introduced.
Prerequisite(s): GE 125 (taken).

GE 226.3 — 2(3L-1.5P)
Mechanics III
Studies the mechanics (kinematics and kinetics) of plane motion. Velocity and acceleration for translational and rotational motion are treated. The force-acceleration, impulse-momentum, and work-energy methods for systems undergoing two-dimensional dynamics are discussed in detail.
Prerequisite(s): GE 125 and MATH. 223 (taken).

GE 298.3 — 1/2(3L)
Special Topics
Offered occasionally to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GE 348.3 — 1/2(3L-1.5P)
Engineering Economics
An introduction to engineering economics and decision analysis. Topics include: fundamental economic concepts, cost concepts, time value of money operations, comparison of alternatives, depreciation and income tax, economic analysis of projects in the public and private sectors; break-even analysis, sensitivity and risk analysis, decision models.
Prerequisite(s) or Corequisite(s): EN Two Year Common Core.

GE 430.0 — 1(3L)
Engineering Entrepreneurship Capstone
Deals with all aspects of a successful entrepreneurship enterprise. The course content includes lectures, case studies, seminars and field trips. Students give oral and written presentations at the end of each case study. Lecture material covers topics such as finances, accounting, planning and management. Course material is augmented through seminars given by business people and specialists, based on their own experiences.
Prerequisite(s): COMM. 349 and 9 credit units from COMM. 200-399.
Corequisite(s): COMM. 357 and COMM. 447.
Note: Students must be accepted into the Engineering Entrepreneurship Option.

GE 449.3 — 1/2(3L)
Engineering in Society
Designed to create an awareness of the diverse and often-contradictory impacts of science and technology on society. The consequences of current technological changes and those of the recent past are explored from a professional ethics point of view to illustrate the complexities of technological-societal interrelationships.
Prerequisite(s): 45 credit units from EN Senior Courses.
Prerequisite(s) or Corequisite(s): EN Three Year Common Core.

GE 498.3 — 1/2(3L-1.5P)
Special Topics
Offered occasionally to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

Fundamentals of structural geology, applied geomorphology, site investigation technology, geophysics and airphoto interpretation.
Prerequisite(s) or Corequisite(s): GEOL. 121.

GEOE. 315.3 — 2(3L-3P alt weeks)
Rock Mechanics
Physical properties of rock. Rock stress-deformation behaviour and failure. Laboratory and in situ testing.
Prerequisite(s): (IGE 213 and GEOE. 218) or (PHYS. 125 and GEOE. 258).

GEOE. 377.3 — 1(1.5T)
Introduction to Mining and Mineral Processing Engineering
Provides the student with a basic understanding of mining engineering and the mining industry. The mining component of the course will introduce the drill and blast cycle, mining methods, and the economic evaluation of mineral properties. The mineral process-engineering component will introduce mineral separation processes including gravity, electrostatic and flotation separation.
Prerequisite(s): GE 213 or corequisite of GEOE. 465

GEOE. 378.3 — 3(P-2 weeks)
Engineering Geological Mapping
Introduction to field methods in geological engineering: mapping, discontinuity surveys, analysis and design. A two-week field camp normally in April/May or August immediately preceding the first term in the final year of the GEOE program.
Prerequisite(s): GEOE. 245 and GEOE. 258 and GEOE. 315.

GEOE. 380.3 — 1/2(3L-1.5P)
Mine Ventilation
This is an underground mine ventilation design course in which the theory of mine ventilation and air conditioning are presented and applied to various mine designs. Topics covered include: Saskatchewan regulations and engineering design criteria, measuring and modeling air flow in ventilation networks, calculation of head losses, ventilation system design, natural ventilation, selection of mine ventilation fans, occupational health hazards of mine gases and dusts, air heating and cooling, and aspects of the economics of mine ventilation.
Prerequisite(s): CE 225 or ME 215 (or equivalent), GEOE. 377

GEOE. 412.3 — 1(3L-3P alt weeks)
Reservoir Mechanics
Fluid flow in hydrocarbon reservoirs; material balance equations; oil and gas well testing; waterflooding and EOR methods; fractional and segregated flow of immiscible fluids.
Prerequisite(s) or Corequisite(s): (CE 328 or CHE. 324 or ME 335) and GEOE. 245.

GEOE. 414.3 — 1(3L-3P alt weeks)
Rock Mechanics Design
Applications of rock mechanics to design in civil and mining engineering.
Prerequisite(s): GEOE. 315.
Note: GEOE. 378 is recommended.
GEOE. 466.3 — 2(3L-3P alt weeks)
Petroleum Geomechanics
Geomechanical, geotechnical and petrophysical problems of interest to the petroleum industry: petroleum well drilling, borehole breakouts, wellbore stability, hydraulic fracturing, subsidence and compaction due to oil and gas withdrawal.
Prerequisite(s): GEOE. 108 or 121 and 42 credit units from EN Senior Courses.
Prerequisite(s) or Corequisite(s): 39 credit units from EN Three Year Common Core.

GEOE. 475.3 — 1(3L-1.5T)
Advanced Hydrogeology
Contaminant transport; regional groundwater flow; petroleum geohydrology; fluid migration in basins; surface-water groundwater interaction; introduction to groundwater modelling.
Prerequisite(s) or Corequisite(s): GE. 324 or ME 335 or CHEM. 112 and MATH. 110 and 30 credit units from GEOE. 200-499.

GEOE. 495.6 — 1and2(6P)
Capstone Design Project
A final design course in which advanced principles of design are learned by application to a suitable geological engineering project. The course, which builds upon the foundation established in CE 295, focuses on approaches to be taken in defining complex problems (including the outlining of project objectives and scope), acquisition of suitable data resources, generation of alternative solutions, methods for selecting design alternatives and project implementation. Design philosophy and methods are discussed and explored in the context of the particular assignment given for the current year.
The course requires that the students work in groups to achieve the desired outcome. Group interaction and performance is monitored throughout. Guest lectures from various industrial and other representatives will be provided to enhance the student’s design experience.
Prerequisite(s): CE 295.
Prerequisite(s) or Corequisite(s): CE 420 and 12 credit units from GEOE. 300-499.

GEOE. 498.3 — 1/2(3L-1.5P)
Special Topics
Offered occasionally to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GEO — GEOGRAPHY
College of Arts and Science

GEOG. 120.3 — 1/2(3L-2P)
Introduction to Global Environmental Systems
An introduction to the principles, processes and interactions in the earth’s physical environment with a particular emphasis on the flow of energy and matter within global environmental systems. Topics include global radiation and energy balances; atmospheric and oceanic processes, the hydrological cycle, earth surface processes and biogeochemical cycling. Case studies are introduced to illustrate the interaction between human activity and the natural environment.
Note: A background in high school sciences at the 30-level is recommended. GEOG. 120 is acceptable under requirement one of program type C.

GEOG. 125.3 — 1/2(3L)
Environmental Science and Society
Studies the Earth’s life-support systems and explores the consequences of human activity. Key themes include examining global ecosystem processes, human interconnections, as well as applications of information from the Earth Sciences.
Note: A background in high school sciences at the 30-level is recommended. Students who have taken GEOG. 125 for credit and would like to enter the geography program are required to take GEOG. 120 and 130. GEOG. 125 is a required cognate course in the B.A.andSc. program in Environment and Society. Non-Geography majors may use GEOG. 125 to satisfy the science requirement in program types A, B, and D.

GEOG. 130.3 — 1/2(3L)
Space Place and Society An Introduction to Human Geography
Exposes students to human geography using a thematic approach. It is designed to stimulate a geographical imagination among students who are interested in understanding “how the world turns” by focusing on how nature, culture, and human actions shape places, regions, and the relationships and interactions among them.
Note: Students with credit for GEOG. 113 or 114 may not take this course for credit.

GEOG. 202.3 — 2-Jan
Regional Geography of Canada
Presents an analysis of the evolution of Canada and describes the physical, historical, economic and cultural bases of the various regions of Canada.
Prerequisite(s): 24 credit units of university course work.
Note: This course is offered online through the Centre for Continuing and Distance Education only.

GEOG. 204.3 — 2-Jan
Geography of the Prairie Region
Presents an analysis of the physical, historical, economic and social geography of the three Prairie Provinces. The processes of settlement, resource development, and urban growth will be examined.
Prerequisite(s): 24 credit units of university course work.
Note: This course is offered online through the Centre for Continuing and Distance Education only.

GEOG. 208.3 — 2-Jan
World Regional Development
The regions of the world face a series of development problems. These problems are examined in terms of development theory and their spatial consequences. The implications for global, national and regional planning are discussed.
Prerequisite(s): 24 credit units of university course work.
Note: Students with credit for GEOG. 281 may not take this course for credit.

GEOG. 225.3 — 1/2(3L-2P)
Hydrology of Canada
The geographic distribution of hydrologic processes in Canada is examined. The types of processes and their rates of operation are related to regional physical environments.
Prerequisite(s): 3 credit units of Science courses and 21 credit units of additional University course work.
Note: GEOG. 120 is recommended.

GEOG. 233.3 — 1(3L)
Introduction to Weather and Climate
An examination of the elements of weather and climate including the composition and thermal structure of the atmosphere; radiation and energy balances; global circulation; air masses; fronts and atmospheric disturbances; and climates of the world.
Prerequisite(s): 3 credit units of Science courses and 21 credit units of additional University course work.
Note: GEOG. 120 is recommended.

GEOG. 235.3 — 1(3L-2P)
Process Geomorphology
The description and objective classification of landforms and the principles and processes involved in their origin and distribution. The role of weathering, mass movement, fluvial, glacial, aeolian and coastal processes in shaping Canadian landscapes will be emphasized in this course.
Prerequisite(s): GEOG. 120 or GEOG. 121 or permission of the instructor.

GEOG. 240.3 — 1/2(3L)
Sustainable Cities and Regions
Uses the pillars of sustainable development-economic, social/cultural, environmental - as an organizing framework for the study of cities and regions in which they are embedded. Historical and contemporary thought in the fields of urban/ economic, social/cultural, and environmental geography form the substance of this course.
Prerequisite(s): 24 credit units of university course work.
Note: GEOG. 130 is recommended. Students with credit for GEOG. 249 may not take this course for credit.

GEOG. 271.3 — 1/2(3L)
Regional Biogeography
A regional treatment of world plant communities emphasizing vegetation types, environmental parameters, faunal assemblages, and modification by human activities.
Prerequisite(s): 3 credit units of Science courses and 21 credit units of additional University course work.
Note: GEOG. 120 is recommended.

GEOG. 272.0
Work Experience I
A 4-month cooperative work term for Co-operative education students.
Prerequisite(s): Completion of minimum 54 and maximum 84 credit units of course work.
Note: See also specific eligibility criteria for the Geography program in the Arts and Science Program sections of the Course and Program Catalogue.
GEOG. 273.3 — 1(3L)
Principles of Biogeography
Focuses on the geography of plants including the environmental control of plant distributions; the collection, analysis and presentation of vegetation data; and the functional and historical aspects of plant communities.

Prerequisite(s): GEOG. 271 or permission of the instructor.
Note: Students with credit for GEOG. 270 may not take this course for credit.

GEOG. 280.3 — 1/2(3L)
Environmental Geography
An introduction to the geographic perspectives on resources and the environment. This course introduces environmental geography as an integrative science to explore the relationships between human and physical systems.

Prerequisite(s): 3 credit units of GEOG courses and 21 credit units of additional University course work.
Note: Geography majors are encouraged to take GEOG. 120 and 130 before registering in this course.
GEOG. 280 satisfies the science requirement for Program Types A, B and D.

GEOG. 290.3 — 1(1L-4P-1T)
Field Methods and Laboratory Analysis
An introduction to the principles and practice of navigation, topographic surveying, image analysis, and the sampling and analysis of sediments, water, and plant communities relevant to environmental science. There will be costs related to the field and laboratory exercises in addition to tuition fees for this course.

Prerequisite(s): 3 credit units of Science courses and 21 credit units of additional University course work.
Note: GEOG. 120 is recommended.

GEOG. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GEOG. 299.6 — 1nd2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

GEOG. 302.3 — 1(3L-2P)
Quantitative Methods in Geography
Content will focus on the use of statistics in geographical research and on their use in a spatial context in human and physical geography. Topics are covered in spatial and multivariate statistics. Weekly take-home labs and course content emphasize geographical subjects.

Prerequisite(s): STAT. 244 or STAT. 245.
Note: Students with credit for GEOG. 303 may not take this course for credit.

GEOG. 320.3 — 1/2(3L-3P)
Cartography
History of map making, map projections; relief representation, graphics and statistical mapping, drafting, map design and map reproduction, analysis of map series and sources.

Prerequisite(s): GEOG. 222, or 99 credit units of University course work; or permission of the instructor.

GEOG. 322.3 — 1/2(3L-2P)
Introduction to Geographic Information Systems
Introduces students to the use of computer-based Geographic Information Systems for the management and analysis of spatial data for map production. Topics include vector and raster data structures, spatial data acquisition, geo-referencing, spatial interpolation, overlay analysis, and modelling. Students obtain practical experience with Geographical Information Systems through a series of exercises.

Prerequisite(s): GEOG. 222, or 99 credit units of University course work; or permission of the instructor.
Note: Students with credit for GEOG. 412 may not take this course for credit. GEOG. 412 has not been offered for more than ten years as of 2012.

GEOG. 323.3 — 1/2(3L-2P)
Remote Sensing
Advanced lectures, seminars and laboratories for those specializing in resource and environmental studies. It includes inductive and deductive evaluation of air photo patterns and the interpretation of multi-spectral imagery and remote sensing imagery.

Prerequisite(s): GEOG. 222, or 99 credit units of University course work; or permission of the instructor.

GEOG. 325.3 — 1/2(3L)
Principles of Fluvial Systems
Processes responsible for the spatial variability of available water resources are introduced and investigated analytically. Topics covered will provide an explanation of the pattern of precipitation, evaporation, infiltration, snowmelt and stream flow.

Prerequisite(s): GEOG. 225, or 12 credit units in GEOL.

GEOG. 328.3 — 2(3L)
Groundwater Hydrology
Groundwater is the largest source of readily accessible freshwater. This course provides a rigorous understanding of subsurface hydrological processes and covers fundamentals of subsurface flow and transport, emphasizing the role of groundwater and soil water in the hydrological cycle, and groundwater-surface water interactions.

Prerequisite(s): GEOG. 225, or 12 credit units in GEOL.

GEOG. 335.3 — 1/2(3L-2P)
Glacial Geomorphology
Examines the role of continental and alpine glaciation in shaping Canadian landscapes throughout the Quaternary period. Topics include glaciology and glacier flow, glacial processes and landforms, Milankovitch cycles and Quaternary ice sheet dynamics in North America, and glacio-eustasy and glacio-isostasy.

Prerequisite(s): GEOG. 235, or 12 credit units in GEOL, GEOE, EVSC, or SLSC.
Note: Students with credit for GEOG. 312 may not take this course for credit.
GEOG. 312 has not been offered for more than ten years as of 2012.

GEOG. 340.3
European Heritage of our Built Environment
A field study on urban design and city-form in Central Europe, providing a historical review of architectural styles preserved at Prague and elsewhere in Bohemia. Gothic and Baroque styles are emphasized, particularly as they relate to street and square design.

Prerequisite(s): PLAN. 342 or 346 or 12 credit units of Social Science and/or Humanities.
Note: This course is offered as a study-abroad opportunity only.

GEOG. 351.3 — 1/2(3L)
Northern Environments
A multidisciplinary study of the biophysical environments of the circumpolar North. Examines the processes operating at the Earth’s surface and within the atmosphere and hydrosphere and their role in structuring northern ecosystems. Writing exercises and/or research projects will permit students with background preparation in the humanities, social sciences and the sciences to assess the impact of human activity on northern environments.

Prerequisite(s): 6 credit units in science; or permission of the instructor.
Note: GEOG. 120 or NIRTH. 101 recommended.

GEOG. 364.3 — 1/2(3L)
Geography of Environment and Health
Explores the ways in which human-environment interactions impact on human health and disease. The goal of this course is to help students understand and assess the nature and variation across space of major environmental risks to health, and to learn how such risks may be prevented or managed.
Formerly: GEOG. 314.
Prerequisite(s): GEOG. 130 and 280.
Note: Students with credit for GEOG 314 may not take this course for credit.

GEOG. 372.0
Work Experience II
A 4-month cooperative work term for Co-operative education students in Geography programs.

Prerequisite(s): GEOG. 272.

GEOG. 373.0
Work Experience III
A 4-month cooperative work term for Co-operative education students in Geography programs.

Prerequisite(s): GEOG. 372.

GEOG. 379.3
Washington Center Topics in Geography
Covers topics in Geography, offered by the Washington Center, Washington D.C. Topics approved by the Department of Geography and Planning will vary from year to year.

Prerequisite(s): 60 credit units of university level study including 6 credit units senior GEOG.
Note: Registration in this course is restricted to students selected for the Washington Center Term Abroad program.
GEOG. 381.3 — 2-Jan
Geography of Northern Development
Explores the question of development in northern Canada. The framework for this geographical analysis is provided by the Core/Hinterland Theory. Within this theoretical framework, major resource development will be examined and the regional impact analyzed. Special attention will be placed upon resource development conflicts.
Prerequisite(s): GEOG. 280, or permission of the instructor.
Note: This course is offered online through the Centre for Continuing and Distance Education only.

GEOG. 385.3 — 1/2(3L)
Analysis of Environmental Management and Policy Making
An examination of various approaches to environmental management. Emphasis is placed on environmental policy making and management strategies pertinent in a western context. Analytical frameworks used to understand how policies are developed and implemented are also introduced.
Prerequisite(s): GEOG. 280 or permission of the instructor.

GEOG. 386.3 — 1/2(3L)
Environmental Impact Assessment
A practical and theoretical introduction to environmental and socioeconomic impact assessment. Emphasis is placed on the principles and characteristics of impact assessment as set out under Canadian and Saskatchewan guidelines and legislation, and on the lessons learned from selected case studies.
Prerequisite(s): GEOG. 280 or permission of the instructor.

GEOG. 390.3 — 1(L-P)
Field Methods in Physical Geography
Introduces a variety of field and laboratory approaches, methodologies and techniques that find frequent application in physical geography. Field projects will be undertaken to collect data for analysis, evaluation and presentation.

Permission of the department required.
Prerequisite(s): GEOG. 120 and 6 credit units at the 200-level in physical geography. GEOG. 280 may be used as one of the prerequisites for this course.
Note: This one-week field camp is required for all Honours students, and recommended for all Four-years Majors, in physical geography. It is held in the first week of the Fall term. Permission of the instructor is required before May 31. Application forms are available from the Department in March. A preliminary meeting is held in March. There are costs in addition to tuition fees. Details available from the Department.

GEOG. 392.3 — 1/2(3S)
Early History of Geographic Thought
A lecture/seminar on the origins of geographic thought, from early Antiquity to the onset of the Renaissance. Relationship between myths of the environment and chalcolithic manufacture of first tools is reviewed, leading to discussion on notions of the Earth and the universe, from Mesopotamia to classical Greece. Origins of geography and planning in the classical world are examined in regard to land ownership and land use in Ancient cities, against the belief in Four Elements of the universe. Grid pattern of land division as a tool of environmental observation leading to Ptolemy’s “Geographica” are juxtaposed with subsequent medieval withdrawal in rigorous thought as well as with scientific approaches to the environment emerging during the same period. Impact of the Age of Discovery along with New World explorations upon Thomas More’s “Utopia,” and the founding of Renaissance New Towns leading to Rene Descartes’“Discourse on the Method” are outlined.
Formerly: GEOG. 495.
Prerequisite(s): 24 credit units in geography.
Note: Students with credit for GEOG. 405 or GEOG. 495 may not take this course for credit.

GEOG. 395.3 — 2(3L)
Selected Topics in Central American Geography
Part of the Antigua, Guatemala term abroad program. Specific course topics will change on each occasion it is offered, but will typically involve studies of selected themes in the cultural/social, or environmental, or economic geography of Guatemala and other Central American regions.
Prerequisite(s): 6 credit units GEOG, including at least 3 credit units at the senior level.

GEOG. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GEOG. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GEOG. 423.3 — 1/2(2L-15-2P)
Advanced Remote Sensing
Deals with advanced remote sensing techniques including satellite imagery calibration, spectral data transformation and land use cover classification, and detection of environmental change. The course consists of three interrelated components: lectures, laboratory exercises and group projects.
Prerequisite(s): GEOG. 323.

GEOG. 427.3 — 1/3L-2T)
Advanced Hydrology
Examines the physical principles governing hydrological processes. Topics covered include precipitation, interception, snow accumulation, snowmelt, evaporation, infiltration, groundwater movement, flood and drought frequency analysis and stream flow. Lectures and tutorials with hydrology instrumentation will be supplemented by problem solving assignments and an essay.
Prerequisite(s): One of MATH. 110 or MATH. 112 or MATH. 125 or MATH. 123; one of PHYS. 115 or GE 124; GEOG. 225.

GEOG. 464.3 — 2(3L)
Geography of Health
Provides students with an introduction to health geography, examining the development of the subdiscipline and its potential contributions as an approach for health-related research. It considers the ecological relationship between humans and disease, as well as the spatial patterns of health and health care. Additionally, lectures and readings will explore the use of geographic techniques and tools, including cartography, GIS and remote sensing, in health studies. In addition to the lectures and in-class discussions, a variety of supplemental readings will be assigned.
Prerequisite(s): 6 credit units of GEOG courses with at least 3 credit units at the 300-level.

GEOG. 472.0
Work Experience IV
A 4-month cooperative work term for Co-operative education students in Geography.
Prerequisite(s): GEOG. 373.

GEOG. 473.0
Work Experience V
A 4-month cooperative work term for Co-operative education students in Geography.
Prerequisite(s): GEOG. 472.

GEOG. 490.3 — 1/2(2L-2T)
Selected Topics in Physical Geography
Students will work on theoretical or practical research projects under the supervision of a faculty member. An outline of the project must be submitted to the course coordinator in the term preceding registration and be approved before Departmental permission will be granted. An oral presentation and written report submitted at the end of the project will be evaluated by a faculty committee.

Permission of the department required.
Prerequisite(s): One of GEOG. 325, GEOG. 328, GEOG. 335, GEOG. 337, GEOG. 427 or GEOG. 435, and GEOG. 390.
Prerequisite(s) or Corequisite(s): GEOG. 302.

GEOG. 491.3 — 1/2(3L)
Research Topics in Human Geography
Students will work on theoretical or practical research projects under the supervision of a faculty member. An outline of the project must be submitted to the course coordinator in the term preceding registration and be approved before Departmental permission will be granted. An oral presentation and written report submitted at the end of the project will be evaluated by a faculty committee.

Permission of the department required.
Prerequisite(s): One of GEOG. 340, GEOG. 241, GEOG. 364, GEOG. 379; GEOG. 381, GEOG. 385, GEOG. 386, GEOG. 464, GEOG. 486, PLAN. 329, PLAN. 341, PLAN. 343, PLAN. 346, PLAN. 350, PLAN. 441, PLAN. 445, PLAN. 446, and GEOG. 391 or RUP. 390.
Prerequisite(s) or Corequisite(s): GEOG. 302.

GEOG. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GEOG. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
GEOL — GEOLOGY

College of Arts and Science

GEOL. 108.3 — 1/2(3L)
The Earth and How It Works
Exploration of the global and local-scale physical processes that have shaped our planet. Strong emphasis is on interrelationships of geological processes and humans. Topics for discussion include volcanoes, earthquakes, pollution, and the origin and exploitation of energy, mineral and water resources.

Note: May be used toward the Natural Science requirement for Programs Type A, B, and D (B.A. programs). Students with credit for GEOL. 103, 105, 110, or 121 may not take this course for credit.

GEOL. 109.3 — 2(3L)
The Earth and Life through Time
A consideration of the evolution of our earth, from its origin to the present. Emphasis is placed on the evolution of life, and on the interpretation of the rock and fossil record. Special consideration is given to major events in the history of our planet and of animals and plants.

Note: May be used toward the Natural Science requirement for Programs Type A, B, and D (B.A. programs). Students with credit for GEOL. 103, 105, 110, or 122 may not take this course for credit.

GEOL. 121.3 — 1/2(3L‑3P)
Earth Processes
Follows the same lectures as GEOL. 108. The laboratory component satisfies the requirements of students in Program Type C (B.Sc. programs). Students in the College of Education who wish to take a course in Earth Science and require a laboratory component are advised to take this course.

Note: Students with credit for GEOG. 112 or 120 may take this course for credit.

GEOL. 122.3 — 2(3L‑3P)
Earth History
Follows the same lectures as GEOL. 109. The laboratory component satisfies the requirements of students in Program Type C (B.Sc. programs). Students in the College of Education who wish to take a course in Earth Science and require a laboratory component are advised to take this course.

Note: Students with credit for GEOG. 112 or 120 may take this course for credit.

GEOL. 206.3 — 1/2(3L)
Earth Systems
An introduction to Earth System Science, a concept that demonstrates the interrelationships between the Earth’s landmasses, atmosphere, oceans and biosphere, and the role of humans in their interaction. Topics discussed will include geochemical cycles and environmental change, both natural and anthropogenic.

Prerequisite(s): One course from GEOL. 121, 122, GEOG. 120 (formerly 111 or 112), BIOL. 108, 120, 121, ARCH. 112, CHEM. 112, or PHYS. 111 or 115, or permission of the department.

GEOL. 224.3 — 1(3L‑3P)
Mineralogy
Crystalline materials and their properties; crystal chemistry and chemical equilibria in natural systems; mineral properties and classification, and particularly rock-forming mineral groups; mineral genesis.

Prerequisite(s): GEOL. 121; and PHYS. 115 or PHYS. 155; and CHEM. 112 or CHEM. 114.

Note: Students with credit for GEOG. 112 or 120 may take this course with permission of the department. Students with credit for GEOL. 221 may not take this course for credit.

GEOL. 226.3 — 2(3L‑3P)
Introductory Petrology
Provides the basics of optical mineralogy, with specific reference to mineral assemblages in igneous and metamorphic rocks. The classification, field relationships, textures, geochemistry, and tectonic setting of igneous and metamorphic rocks will be introduced.

Prerequisite(s): GEOL. 224.

Note: Students with credit for GEOL. 225 may not take this course for credit.

GEOL. 229.3 — 2(3L)
Introductory Geochemistry
An overview of geochemical theory and problem-solving techniques used by Earth Scientists to elucidate Earth system processes. Topics of discussion will include the origin of elements, stable and radiogenic isotopes, geochronology, thermodynamics, trace element partitioning in mineral fluid systems, weathering and aqueous geochemistry.

Prerequisite(s): GEOL. 121 and CHEM. 112.

Prerequisite(s) or Corequisite(s): MATH. 110.

Note: Students with credit for GEOG. 120 or 112 may take this course with permission of the department. Students with credit for GEOL. 428 may not take this course for credit.

GEOL. 245.3 — 1(3L‑2P)
Introduction to Sedimentary Rocks
Provides a general introduction to sedimentary rocks, sedimentary processes, and the depositional environments in which these rocks form. Stratigraphic concepts are introduced with specific reference to the relationship between sedimentary rock units. Laboratories focus on the identification of sedimentary rocks and structures in hand specimen.

Prerequisite(s): GEOL. 121; and PHYS. 115 or PHYS. 155; and CHEM. 112 or CHEM. 114.

Note: Students with credit for GEOL. 120 or 112 may take this course with permission of the department. Students with credit for GEOL. 243 may not take this course for credit.

GEOL. 247.3 — 2(3L‑3P)
Palaeontology
Ancient life on earth will be explored via the principles and concepts of invertebrate paleontology, paleoecology, paleobiology and evolution. The basic morphology and systematics of the main fossil invertebrate groups will be covered in the laboratory sessions, when fossil specimens will be studied.

Prerequisite(s): GEOL. 122 and 245.

Note: Students with credit for GEOL. 246 and 332 may not take this course for credit.

GEOL. 258.3 — 1(3L‑3P)
Structural Geology
An introduction to the structural features of rocks; including discussions of their origin and use. The description of folds, faults, and joints are emphasized, along with outcrop relationships of intrusive bodies. Other topics will include tectonics, orogeny, stratigraphic facing, and non-orogenic process, such as salt doming and glacial thrusting. Laboratories will introduce mapping techniques and the analysis of geological maps.

Prerequisite(s): GEOL. 121; and PHYS. 115 or PHYS. 155; and CHEM. 112 or CHEM. 114.

Note: Students with credit for GEOG. 120 or 112 may take this course with permission of the department.

GEOL. 282.3 — 2(3L)
Earth Physics
Physical processes in the origin of the Earth and Moon, and in the subsequent development of internal structure. The generation of the geomagnetic field by dynamo action, and the use of magnetics and gravity in geophysics. Earthquakes and global seismology. The use of satellite data in geophysics.

Formerly: GEOL. 382

Prerequisite(s): MATH. 112 or 116 or 124; PHYS. 115 (PHYS. 111, 121) or GE 124; PHYS. 117 or 125 (PHYS. 111, 121, 128) or PHYS. 153 (EP 155).

GEOL. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

GEOL. 299.6 — 1 and 2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

GEOL. 308.3 — 1(P)
Geological Mapping I
A field course held at the Little Rocky Mountains, Montana. Emphasis will be placed on interpreting and mapping sedimentary rocks, although igneous rocks will also be studied.

Prerequisite(s): GEOL. 226, GEOL. 247, GEOL. 258 and permission of the department.

Note: There will be costs in addition to tuition fees.

GEOL. 324.3 — 1(3L‑3P)
Igneous Petrology
Mineralogy, phase relations, origin, and occurrence of igneous rocks. Geological processes that tend to produce and modify a magma, will be interpreted in the light of chemical equilibria and kinetics. The laboratory will involve the study of igneous rocks in thin section.

Prerequisite(s): GEOL. 226, GEOL. 229, and CHEM. 115.
GEOL. 325.3 — 1(3L-3P)  
**Metamorphic Petrology**  
The mineralogy, phase relations, possible equilibration temperatures and pressures, and occurrence of metamorphic rocks. Geological processes that tend to produce geothermal and geobarometric gradients and modify rocks will be interpreted using chemical equilibria and chemical-thermal kinetics. The laboratory will involve the study of metamorphic rocks in thin section.  
Prerequisite(s): GEOL. 226, GEOL. 229, CHEM. 115.

GEOL. 330.3 — 1/2(3L)  
**Climate History**  
Explores the record of climate variations preserved in recent earth materials, and the influence of these variations on contemporary societies. The focus will be on extreme periods, e.g., Pleistocene deglaciation, the Younger Dryas, 8.2ka event, Piorra Oscillation, Roman Warm Period, Dark Ages, Medieval Optimum, Little Ice Age, and 20th century warming.  
Prerequisite(s): GEOL. 206 or 229 or GEOL. 233 or permission of the department.  
Note: Students with credit for GEOL. 398 may not take this course for credit.

GEOL. 334.3 — 1(3L-3P)  
**Gravity Magnetics Electromagnetic and Radiation Methods**  
Basic theory of gravity, magnetic, electromagnetic and radiation methods and the application of these methods in exploration and environmental problems.  
Prerequisite(s): CPT. 116 or 111; MATH. 223 or 225 or 276; MATH. 224 or 226 or 238; (PHYS. 115 and PHYS. 117) or (PHYS. 115 and 125) or PHYS. 127 or PHYS. 155.  
Note: Students with credit for GEOE. 333 or 334 may not take this course for credit. These courses have not been offered for more than ten years as of 2012. *Geophysics students intending to take CPT. 116 must contact the geophysics program advisor before they will be allowed to register.

GEOL. 335.3 — 2(3L-3P)  
**Seismology and Ground Penetrating Radar Methods**  
Introduction to seismological and ground penetrating radar methods; their integration with other geophysical techniques. Application of geophysical measurements to geological engineering, groundwater, and prospecting problems.  
Prerequisite(s): CPT. 116 or 111; MATH. 223 or 225 or 276; MATH. 224 or 226 or 238; (PHYS. 115 and PHYS. 117) or (PHYS. 115 and 125) or PHYS. 127 or PHYS. 155.  
Note: Students with credit for GEOE. 333 or 335 may not take this course for credit. These courses have not been offered for more than ten years as of 2012. *Geophysics students intending to take CPT. 116 must contact the geophysics program advisor before they will be allowed to register.

GEOL. 343.3 — 1(3L-3P)  
**Sedimentary Environments**  
The history of the facies concept; sedimentary environments and facies; techniques of facies analysis; modern environments of deposition; interpretation of ancient sedimentary environments; sedimentary facies through geological time; sedimentary facies, sea level, and tectonics.  
Prerequisite(s): GEOL. 247.  
Prerequisite(s) or Corequisite(s): GEOL. 308.  
Note: This course may be taught as a field course, and thus will be costs additional to tuition fees.

GEOL. 358.3 — 2(3L-3P)  
**Structural Geology II**  
The geometry, character, and origin of folds, faults and rock cleavage: their inter-relationships and analysis. The analysis of complex geological maps. Ductile strain, strain analysis, deformation fabrics, ductile faulting, shear-sense indicators and the brittle/ductile transition will be discussed. The analysis of polyphase deformation, interference structures, and sequential deformation fabrics.  
Prerequisite(s): GEOL. 258.

GEOL. 384.3 — 2(3L-3P)  
**Introduction to Applied Geophysics**  
Principles and methods of geophysics; their use in the interpretation of crustal structures of both tectonic and stratigraphic origin; their role in locating probable centres of mineral concentration; their application to problems in engineering geology.  
Prerequisite(s): GEOL. 258; MATH. 110, and (MATH. 112 or 116); PHYS. 155 or (PHYS. 115 and PHYS. 117 or 125). (Students other than Geology majors who do not have all of the prerequisites may be accepted on written approval of the Geology Department).  
Note: Students with credit for GEOE. 333, 334 or 335 or GEOL. 334 or 335 may not take this course for credit.

GEOL. 398.3 — 1/2(3S)  
**Special Topics**  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GEOL. 399.6 — 1 and 2(3S)  
**Special Topics**  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GEOL. 406.3 — 1(3L)  
**Global Considerations in Geology**  
Origin of the universe and the solar system; the early earth and the origin and evolution of its core, mantle, crust, oceans, and atmosphere. The Archaean-Proterozoic contrasts; plate tectonics; geochemical cycles and budgets; climatic, atmospheric, hydroospheric and biospheric change; limits on resource exploitation; occurrence, distribution and retardation of radionuclides.  
Prerequisite(s): GEOL. 226, 229, 247, and 258.  
Note: Students with credit for GEOE. 409 may not take this course for credit.

GEOL. 408.3 — 1(P)  
**Geological Mapping II**  
Methods of geological mapping based on a field course in the Precambrian Shield which will examine deformed and metamorphosed volcanic, sedimentary, and intrusive rocks. Mapping results will be presented as a report and in oral presentation.  
Prerequisite(s): GEOL. 308 and one of GEOL. 324, 325 or 358.  
Note: There will be costs additional to tuition fees. Normally held in late August.

GEOL. 413.3 — 2(3L)  
**Aqueous Geochemistry**  
An overview of the controls on the quality of pristine and polluted subsurface waters. Topics will include sampling and analyses of water samples, biogeochemical processes controlling water quality and techniques to characterize and quantify the controlling processes.  
Prerequisite(s): GEOL. 229, CHEM. 115, and MATH. 110, or permission of the department.  
Note: GEOE. 475 is highly recommended. Students who completed GEOE. 498 may not take this course for credit.

GEOL. 429.3 — 2(3L)  
**Isotope Geochemistry**  
An overview of theory and applications of stable and radiogenic isotope geochemistry including the use of isotopes as geotracers, geochronometers and geothermometers.  
Prerequisite(s): GEOL. 224, 229.

GEOL. 446.3 — 1(3L-3P)  
**Advanced Sedimentology**  
Chemical, biochemical and physical processes in the formation of sedimentary rocks; origin, diagenesis and petrography of carbonates, evaporites and clastics. Major topics of current sedimentological interest may also be discussed.  
Prerequisite(s): GEOL. 224, 229 and 247.

GEOL. 447.3 — 1/2(3L-3P)  
**Ichnology Animal Substrate Interactions in the Stratigraphic Record**  
Ichnology is the study of biogenic structures and animal-substrate relations. Biogenic structures comprise burrows, trails, trackways and borings. They record the behavior of the trace-makers in response to the prevailing environmental conditions and therefore they supply valuable information in paleoecology, paleobiology, facies analysis, and sequence stratigraphy.  
Prerequisite(s): GEOL. 245 and GEOL. 247.

GEOL. 448.3 — 1/2(3L-3P)  
**Sequence Stratigraphy**  
Sequence stratigraphy is a new approach to understanding the stratigraphic record. It helps to integrate different datasets, including sedimentology, paleontology and the various fields involved in petroleum geology. It is particularly valuable as a tool in oil and gas exploration and production.  
Prerequisite(s): GEOL. 245 and GEOL. 247.

GEOL. 450.3 — 1(3L)  
**Limnogeology**  
An introduction to the geology of lake basins and lacustrine rocks, emphasizing paleoenvironmental analysis of lacustrine sediments and rocks from Precambrian to Recent.  
Prerequisite(s): GEOL. 247.  
Note: Students with credit for GEOE. 498 Special Topics Limnogeology may not take GEOL. 450 for credit. GEOL. 450 will be offered biennially.
GEOL. 451.3 — 2(3L)
Synchrotron X-ray Absorption Spectroscopy
X-ray absorption spectroscopy (XAS), a primary technique of the Canadian Light Source synchrotron, provides local molecular and electronic structure of specific chemical elements in any matrix. XAS can be applied with little pre-treatment of the sample and can be used to answer fundamental chemical questions about almost any sample or system, from soils and rocks to intact biological tissues to purified proteins or chemicals. The course will include a description of the physical principals underlying XAS, practical aspects of experimental technique, details of data analysis and some common pitfalls and difficulties. This course will equip students with a practical working knowledge of the technique and its capabilities, with examples drawn from the chemical, biomedical and environmental sciences.
Prerequisite(s): 15 credit units in Geology, Physics, or Chemistry.
Note: Students cannot receive credit for both GEOL. 451 and GEOL. 851.

GEOL. 463.3 — 2(3L-3P)
Petroleum Geology
The composition and physical properties of petroleum. Organic matter evolution, maturation, and migration of hydrocarbons from source rock to reservoir. Introduction to petroleum exploration, development and recovery methods, and the main types of reservoirs and traps.
Prerequisite(s): GEOL 224, 245, and GEOL 258.

GEOL. 465.3 — 2(3L-3P)
Mineral Deposits
Examines the geology and genesis of the principal types of magmatic and hydrothermal mineral deposits, with an emphasis on the deposits of the Canadian Shield. The criteria used for exploring for these deposits and the analytical techniques used to unravel their origin will be emphasized.
Prerequisite(s): GEOL 228, GEOL 245, and GEOL 258.

GEOL. 481.3 — 1(3L)
Elementary German I
The course in German designed for beginners. The grammar, pronunciation, and communicative competence of this course must be completed by a faculty committee.
Prerequisite(s): GEOL. 334 and. 335.
Note: Students with a background in German outside the University of Saskatchewan (in High School, at home, etc.) must complete a placement test in the Department of Languages and Linguistics if they wish to take this course for credit. Students with credit for German. 115 may not take this course for credit.

GEOL. 483.3 — 2(3L-3P)
Seismology
Theory of elasticity; energy sources; refraction and reflection methods; instrumentation and interpretation, including the fundamentals of digital processing.
Prerequisite(s): GEOL 334 and. 335.

GEOL. 485.6 — 1/2(P)
Geophysics Field Camp
Practical experience in conduct of geophysical surveys; operation of equipment, data manipulation, computer processing and interpretation, preparation of reports. Normally held in late August, two weeks prior to the beginning of on-campus classes.
Prerequisite(s): GEOL 334 and. 335.

GEOL. 487.3 — 1(P)
Geophysical Field Methods
A course in geophysical field methods for students who are not geophysics majors but who require some experience with field techniques. Gravity, magnetic, electro-magnetic and seismic surveys will be performed over appropriate targets. The course is normally conducted in the two weeks immediately preceding the fall regular session. Interested students should contact the department for further details.
Prerequisite(s): GEOL. 384 or (GEOL 334 and 335).
Note: Students with credit for GEOL. 485 or GEEG. 473 may not take this course for credit.

GEOL. 490.3 — 1/2(3P)
Geological Sciences Research
Students will work on theoretical or practical research projects under the guidance and supervision of a faculty member. An outline of the project must be submitted to the course co-ordinator in the term preceding registration and be approved before Departmental permission will be granted. An oral presentation and written report submitted at the end of the project will be evaluated by a faculty committee.
Permission of the department required.
Prerequisite(s): 6 credit units in geological sciences at the 300-level or above.

GEOL. 492.6 — 1and2(3P)
Geological Sciences Research
Students will work on theoretical or practical research projects under the guidance and supervision of a faculty member. An outline of the project must be submitted to the course co-ordinator in the term preceding registration and be approved before Departmental permission will be granted. An oral presentation and written report submitted at the end of the project will be evaluated by a faculty committee.
Permission of the department required.
Prerequisite(s): 6 credit units in geological sciences at the 300-level or above.

GEOL. 498.6 — 1and2(3S)
Geological Sciences Research
Students will work on theoretical or practical research projects under the guidance and supervision of a faculty member. An outline of the project must be submitted to the course co-ordinator in the term preceding registration and be approved before Departmental permission will be granted. An oral presentation and written report submitted at the end of the project will be evaluated by a faculty committee.
Permission of the department required.
Prerequisite(s): 6 credit units in geological sciences at the 300-level or above.

GEOM. 114.3 — 1/2(3L-1T)
Elementary German I
This beginner-level course will cover all four language skills (listening, speaking, reading and writing) in a communicative setting with emphasis on inter-cultural understanding. Basic grammar terminology and application will be introduced.
Formerly: GERM. 115.
Note: Students with a background in German, such as High School German, must complete a placement test in the Department of Languages and Linguistics if they wish to take this course for credit. Students with credit for German. 115 may not take this course for credit.

GEOM. 117.3 — 1/2(3L-1T)
Elementary German II
The subsequent course to GERM. 114, this advanced beginner-level course will continue to cover all four language skills (listening, speaking, reading and writing) in a communicative setting with emphasis on inter-cultural understanding.
Prerequisite(s): GERM. 114.
Note: Students with a background in German outside the University of Saskatchewan (in High School, at home, etc.) must complete a placement test in the Department of Languages and Linguistics if they wish to take this course for credit.

GEOM. 202.3 — 1/2(3L)
Intermediate German I Emphasis on Literature and Culture
A continuation of exposure to contemporary culture and everyday life, and an introduction to contemporary literature. Designed to strengthen communicative competency stressing oral expression. Recommended as a course to be taken concurrently with GERM. 214, 217, 314, and. 317.
Prerequisite(s): GERM. 117 or permission of the department.
Note: Students with a background in German outside the University of Saskatchewan (in High School, at home, etc.) must complete a placement test in the Department of Languages and Linguistics if they wish to take this course for credit. Students with credit for GERM. 200 may not take this course for credit.

GEOM. 204.3 — 1/2(3L)
Intermediate German II Emphasis on Literature and Culture
Further exposure to contemporary German culture, literature and everyday life. Designed to enhance communicative competency both orally and in writing. Recommended as a course to be taken concurrently with GERM. 214, 217, 314, and. 317.
Prerequisite(s): GERM. 117 or permission of the department.
Note: Students with a background in German outside the University of Saskatchewan (in High School, at home, etc.) must complete a placement test in the Department of Languages and Linguistics if they wish to take this course for credit. Students with credit for GERM. 200 may not take this course for credit.
GERM. 214.3 — 1/2(3L-1T)
Intermediate German I Communicative and Grammatical Skills
This intermediate-level course focuses on increased competency in oral and written communication and cultures. Students read and discuss a variety of texts, learn more about issues and problems of contemporary life in German-speaking countries and expand their knowledge and mastery of grammar.
Formerly: GERM. 215.
Prerequisite(s): GERM. 117, or permission of the department.
Note: Students with a background in German outside the University of Saskatchewan (in High School, at home, etc.) must complete a placement test in the Department of Languages and Linguistics if they wish to take this course for credit.

GERM. 217.3 — 1/2(3L-1T)
Intermediate German II Communicative and Grammatical Skills
The subsequent course to GERM. 214 concentrates on increased competency in oral and written communication. Students read and discuss a variety of texts, learn more about issues and problems of contemporary life in German-speaking countries and expand their knowledge and mastery of grammar.
Formerly: GERM. 215.
Prerequisite(s): GERM. 214.
Note: Native speakers of German are not allowed to register in this course. Students with credit for GERM. 215 may not take this course for credit.

GERM. 260.3 — 1/2(3L)
Nobel Prize Winning Authors of German Literature in Translation
A study of texts by authors who have won the Nobel Prize for Literature. May cover Heinrich Boll, Elias Canetti, Gunter Grass, Gerhart Hauptmann, Herman Hesse, Elfriede Jelinek, Thomas Mann, Herta Muller, Nelly Sachs, and others. The course focuses on the acquisition of skills essential for literature and cultural study: critical reading, scholarly research, textual analysis, and essay writing. Course is taught in English.
Prerequisite(s): GERM. 117 or permission of the instructor.
Note: Students may receive credit for only one of GERM. 260 and GERM. 360.

GERM. 266.3 — 3L
Holocaust in German Literature and Film
An investigation of twentieth-century German language literary and film responses to the Holocaust. Possible topics included: victims and oppressors; gender; stereotypes; resistance by individuals and groups; the role and appropriateness of literature as a medium to respond to the historical, cultural and psychological complexities of the Holocaust. Course language: English.
Prerequisite(s): A course in ENG or LIT, completion of 30 credit units at the university, or permission of the department.
Note: Students with credit for GERM. 366, may not take this course for credit.

GERM. 272.6
Intermediate German I in Socio Cultural Context
First course in the Intermediate Language Sequence of the Marburg Term-Abroad. Focuses on beginner intermediate proficiency in four skills (listening, speaking, reading, and writing), as well as intercultural competence. Students are tested into the appropriate level before or upon their arrival in Marburg, Germany.
Prerequisite(s): GERM. 272 or equivalent.

GERM. 273.6
Intermediate German II in Socio Cultural Context
Second course in the Intermediate Language Sequence of the Marburg Term-Abroad. Focuses on beginner intermediate proficiency in four skills (listening, speaking, reading, and writing), as well as intercultural competence. Students are tested into the appropriate level before or upon their arrival in Marburg, Germany.
Prerequisite(s): GERM. 272 or equivalent.

GERM. 274.6
Intermediate German III in Socio Cultural Context
Third course in the Intermediate Language Sequence of the Marburg Term-Abroad. Focuses on beginner intermediate proficiency in four skills (listening, speaking, reading, and writing), as well as intercultural competence. Students are tested into the appropriate level before or upon their arrival in Marburg, Germany.
Prerequisite(s): GERM. 273 or equivalent.

GERM. 275.6
Intermediate German IV in Socio Cultural Context
Fourth course in the Intermediate Language Sequence of the Marburg Term-Abroad. Focuses on beginner intermediate proficiency in four skills (listening, speaking, reading, and writing), as well as intercultural competence. Students are tested into the appropriate level before or upon their arrival in Marburg, Germany.
Prerequisite(s): GERM. 274 or equivalent.

GERM. 276.3
Intermediate German Literature in its Socio Cultural Context
Entry level literature course following the Intermediate Language Sequence in the Marburg Term-Abroad. Focuses on the acquisition of skills essential for literature and cultural study: Differentiated vocabulary development (such as irony, edification, scholarly vocabulary), research in target language, textual analysis based on socio-historical background information, and essay writing. The course is offered on location in Marburg, Germany.
Prerequisite(s): GERM. 273 or GERM. 274 or GERM. 275.

GERM. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GERM. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GERM. 302.3 — 1(3L)
Advanced German Popular Culture and Literature up to the Mid 20th Century
Advanced exposure to German popular culture and literature up to the mid-20th Century. Designed to enhance communicative competence both orally and in writing.
Prerequisite(s): GERM. 217.
Note(s): Recommended as a course to be taken concurrently with GERM. 314 or GERM. 317.

GERM. 304.3 — 1(3L)
Advanced German Popular Culture and Literature Mid to Late 20th Century and Beyond
Advanced exposure to German popular culture and literature from the mid-to-late-20th Century and beyond. Designed to enhance communicative competence both orally and in writing.
Prerequisite(s): GERM. 217.
Note(s): Recommended as a course to be taken concurrently with GERM. 314 or GERM. 317.

GERM. 314.3 — 1/2(3L-1T)
Advanced German I
This advanced-level course aims at developing post-intermediate proficiency in oral and written communication and culture. Grammar review and expansion, and a wider vocabulary will be studied, interlinked with literary texts reflecting German culture.
Prerequisite(s): GERM. 217 or permission of the department.
Note: Students with a background in German outside the University of Saskatchewan (in High School, at home, etc.) must complete a placement test in the Department of Languages and Linguistics if they wish to take this course for credit. Students with credit for GERM. 315 may not take this course for credit.

GERM. 317.3 — 1/2(3L-1T)
Advanced German II
The subsequent course to GERM. 314 concentrates on broadening vocabulary and usable complex grammar structures while reading literary texts reflecting German culture.
Prerequisite(s): GERM. 314 or permission of the department.
Note: Students with a background in German outside the University of Saskatchewan (in High School, at home, etc.) must complete a placement test in the Department of Languages and Linguistics if they wish to take this course for credit. Students with credit for GERM. 315 may not take this course for credit.

GERM. 360.3 — 1/2(3L-1T)
Nobel Prize Winning Authors of German Literature
A study of texts by authors who have won the Nobel Prize for Literature. May cover Heinrich Boll, Elias Canetti, Gunter Grass, Gerhart Hauptmann, Herman Hesse, Elfriede Jelinek, Thomas Mann, Herta Muller, Nelly Sachs, and others. The course focuses on the acquisition of skills essential for literature and cultural study: critical reading, scholarly research, textual analysis, and essay writing. Course languages are German and English.
Prerequisite(s): GERM. 317 or permission of the instructor.
Note: Students may receive credit for only one of GERM. 260 and 360.
GERM. 365.3 — 1/2(3L-15)
Women Writers in German Literature after 1945
Study and discussion of Austrian, German and Swiss texts by women, published after 1945, to expand students’ literary analytic abilities, cultural and socio-historical perspectives, critical thinking, communicative and writing abilities. Possible topics include: sexism, anti-Semitism, racism, generation conflicts, Germany’s Nazi past, the divided country, religion, the economy, environment, gender and identity. Course language: English; readings, seminars and student work in German.
Prerequisite(s): GERM. 317 or permission of the department.
Note: Students with credit for GERM. 265, may not take this course for credit.

GERM. 366.3 — 1/2(3L-15)
Holocaust in German Literature and Film
An investigation of twentieth-century German language literary and film responses to the Holocaust. Possible topics included: victims and oppressors; gender; stereotypes; resistance by individuals and groups; the role and appropriateness of literature as a medium to respond to the historical, cultural and psychological complexities of the Holocaust. Course language: English; readings, seminars and student work in German.
Prerequisite(s): GERM. 317 or permission of the department.
Note: Students with credit for GERM. 266, may not take this course for credit.

GERM. 398.3 — 1/2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GERM. 399.6 — 1and2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GERM. 498.3 — 1/2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GERM. 499.6 — 1and2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GRK — GREEK
College of Arts and Science

GRK. 112.3 — 1(5L)
Greek for Beginners I
An introduction to the fundamentals of ancient Attic Greek, in which the student learns the basic forms of nouns and verbs and rudimentary syntax.

GRK. 113.3 — 2(5L)
Greek for Beginners II
An introduction to the more advanced elements of accidence and syntax of ancient Attic Greek.
Prerequisite(s): GRK. 112.

GRK. 202.3 — 1(3L)
Intermediate Greek I
Grammar review and introduction to continuous prose texts. Prose composition.
Prerequisite(s): GRK. 113.
Note: The department recommends a minimum grade of 75 per cent in GRK. 113 for students enrolling in this course.

GRK. 203.3 — 2(3L)
Intermediate Greek II
Readings in continuous prose texts. Introduction to poetry and Greek metrics. Prose composition.
Prerequisite(s): GRK. 202.

GRK. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GRK. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GRK. 398.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GRK. 399.6 — 1and2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

HEB — HEBREW
College of Arts and Science

HEB. 114.3 — 1/2(3L)
Introduction to Hebrew I
This course offers students the opportunity to approach and explore the biblical texts in their original language. By learning how to read Hebrew prose and poetry and by acquiring the knowledge of the Hebrew grammar, we will be examining several important features of the biblical text, including select prophetic, historical and wisdom material. By the end of this course students will acquire the basic familiarity with the Hebrew language and grammar.
Note: Students with credit for HEB. 111.6 may not take HEB. 114 for credit.

HEB. 117.3 — 1/2(3L)
Introduction to Hebrew II
This course is a continuation of the “Introduction to Hebrew I”. It offers students further opportunity to explore the biblical texts in their original language. By learning how to read Hebrew prose and poetry and by acquiring the knowledge of the Hebrew grammar, we will be examining several important features of the biblical text, including select prophetic, historical and wisdom material. By the end of this course students will acquire the foundational principles of the Hebrew language and grammar.
Note: Students with credit for HEB. 111.6 may not take HEB. 117 for credit.

HEB. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

HEB. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

HEB. 398.3 — 1/2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

HEB. 399.6 — 1and2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

HEB. 498.3 — 1/2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

HEB. 499.6 — 1and2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

GERO — GERONTOLOGY

GERO. 301.3 — 1/2(2L-15)
Interprofessional Perspectives on Aging
An interprofessional overview of key issues related to aging, including health, social forces and legal considerations. Students will develop a broad understanding of the meaning, experience and context of aging to the individual community and society using diverse didactic and experiential approaches.
Prerequisite(s): 30 credit units or permission of the instructor.
**HED — HOME ECONOMICS**

**EDUCATION**

**HED. 111.3 — 1(3L)**

**Family Ecosystem**

An introduction to the study of families from a family ecosystem perspective. This explores personal and familial relationships, individual and collective relationships with the environment, decisions about developing and allocating resources, and the local, national and global impact of these decisions.

**HED. 142.3 — 2(3L)**

**Consumer**

An introduction to the study of individual and family consumer decision making. Involves a study of: advertising and other factors which influence consumer decision making; consumer rights and responsibilities; the reciprocal influence between the consumer and the marketplace; and the impact of consumerism locally, nationally, and globally.

**HED. 222.3 — 1(3L-3P)**

**Family Living Environments**

An introduction to family housing environments. Involves a study of: housing alternatives for Canadians; housing needs regarding basic shelter; safety; finances; handicaps; special needs; housing policies; aesthetics; culture; personal expression; and the relationship among housing, family, and the environment.

**HED. 223.3 — 2(3L-3P)**

**Contemporary Clothing and Textile Consumption**

An introduction to the consumption of clothing and textiles. Involves a study of common textiles and finishes used in apparel and the home, fibers, yarns, and fabric construction, performance and care, factors affecting selection including economic, socio-psychological, cultural, aesthetic, wardrobe planning, apparel construction and fit, special needs and marketplace options.

**HED. 232.3 — 1(3L)**

**Personal and Family Financial Management**

A study of the economic resources of individuals and families. Income, wealth, employee benefits, credit, mortgages, pensions and wills are examined along with issues related to financial security, income assistance and budgeting. Spending decisions of a family at the various stages of the family will also be examined.

**HED. 313.3 — 1(3L-3P)**

**Family and Technology**

A sociotechnology model is used to examine household use and impact of technology from past to present, the relationship among family, technology and society, current issues/concerns regarding technology and the family; and strategies to enable individuals and families make more informed decisions regarding household technologies.

**HED. 431.3 — 2(3L-3P)**

**Management of Family Time and Food Resources**

An exploration of the decisions that individuals and families make about developing and allocating time and food resources. Involves an understanding of concepts such as goals, resources, planning, decision-making, implementing; changing family resource management concerns over the life cycle; and specific management concerns for different family structures.

Prerequisite(s): HED. 111, 222, 223, and 232.

**HIST — HISTORY**

**College of Arts and Science**

**HIST. 110.3 — 1/2(3L-1T)**

**Landmarks of Ancient History**

Themes of Near Eastern history; Greek and Hellenistic experiments in politics and thought; Rome from city-state to world-state; Christianity in a pagan world.

Note: Students with credit for HIST. 114 or INTS. 101.12 may not take this course for credit.

Attention: A maximum of nine credit units of 100-level HIST may be taken for credit. Only six of these credit units may count toward a History major or minor. The remaining three credit units will count as a junior elective in Requirement 7.

**HIST. 111.3 — 1/2(3L-1T)**

**Landmarks of Medieval History**

The heirs of Rome; Charlemagne; Vikings, Magyars and the rise of feudalism; peasant life; Islam and the Crusades; the rise of France; the twelfth century renaissance; the Holy Roman Empire; the age of Pope Innocent III; medieval women; chivalry, castles and cathedrals; the late middle ages.

Note: Students with credit for HIST. 114 or INTS. 101.12 may not take this course for credit.

Attention: A maximum of nine credit units of 100-level HIST may be taken for credit. Only six of these credit units may count toward a History major or minor. The remaining three credit units will count as a junior elective in Requirement 7.

**HIST. 115.3 — 1/2(2L-1S)**

**History Matters Ideas and Culture**

Courses in this series examine how history has shaped and been shaped by human thought and culture. They might examine how the ideas of intellectuals, philosophers, writers, artists, or religious thinkers related to historical developments such as the spread of Christianity or Islam; the rise of modern secularism; or the various revolutionary movements of the modern world, whether political, economic, social, or artistic. They might examine elite, middle-brow, or popular culture for clues about how past societies responded to the realities of being human – birth, illness, death, the need to work, prepare food, raise children, establish communities, or make sense of one’s place in the universe.

Examples of courses: An Introduction to Modern European Thought and Culture; Religious Reformations of the 16th Century; A Global History of Food and Eating.

All courses emphasize how historians have understood the relationship between ideas, culture, and historical change.

Permission of the Department.

Attention: A maximum of nine credit units of 100-level HIST may be taken for credit. Only six of these credit units may count toward a History major or minor. The remaining three credit units will count as a junior elective in Requirement 7.

**HIST. 120.6 — 1and2(3L-1T)**

**History of Europe from Renaissance to Present**

A survey of significant forces in modern Europe from the 15th century; the shaping of the modern world; the concentration of political power and the expansion of Europe in the 17th and 18th centuries; the liberal experiment in the 19th century; the 20th-century dilemma.

Formerly: HIST. 112

Note: Students with credit for HIST. 121, HIST. 122, or INTS. 101.12 may not take this course for credit.

Attention: A maximum of nine credit units of 100-level HIST may be taken for credit. Only six of these credit units may count toward a History major or minor. The remaining three credit units will count as a junior elective in Requirement 7.

**HIST. 121.3 — 1/2(3L-1T)**

**Europe to Modern Age. 1348 to 1789**

The Black Death; Renaissance and Reformation; the wars of the seventeenth century; the rise of modern science; the agricultural revolution; the Enlightenment.

Note: Students with credit for HIST. 112, HIST. 120, or INTS. 101.12 may not take this course for credit.

Attention: A maximum of nine credit units of 100-level HIST may be taken for credit. Only six of these credit units may count toward a History major or minor. The remaining three credit units will count as a junior elective in Requirement 7.

**HIST. 122.3 — 1/2(3L-1T)**

**Europe in Age of Mass Culture. 1789 to Present**

Population growth; the age of political revolutions; Romantics and Liberals; nationalism and socialism; the industrial revolution; towards gender equality; the two World Wars and the Cold War; towards economic and political integration.

Note: Students with credit for HIST. 112, HIST. 120, or INTS. 101.12 may not take this course for credit.

Attention: A maximum of nine credit units of 100-level HIST may be taken for credit. Only six of these credit units may count toward a History major or minor. The remaining three credit units will count as a junior elective in Requirement 7.
HIST. 125.3 — 1/2(2L-1S)
History Matters Indigenous Colonial and Post colonial Histories
Courses in this series examine the peoples and processes shaping indigenous societies, their imperial rulers, and the postcolonial experience. Topics will range from local case studies of First Nations to broader histories of European imperial expansion and national independence movements. The problems of identity, power and policy are at the forefront of these investigations, emphasizing the ways that communities either accepted, resisted or transformed colonial agendas. Courses will also foreground variations among colonizing projects, and responses to them, in different eras. Examples of course foci include Britain and British Empires since Caesar, the Arab Spring, the scramble for Africa, aboriginal activism in Canada, USA, and Australia, a global history of slavery, perspectives on community and sovereignty in North America, and colonial Latin America. All courses will emphasize how historians have understood different practices of colonization and their relationship to political, economic and social change.

Permission of the Department.
Attention: A maximum of nine credit units of 100-level HIST may be taken for credit. Only six of these credit units may count toward a History major or minor. The remaining three credit units will count as a junior elective in Requirement 7.

HIST. 135.3 — 1/2(2L-1S)
History Matters Gender Sex and Society
Courses in this series examine how histories of gender, sex and society have interacted and evolved throughout time. We will explore how, in various societies, social, cultural, political, legal, and medical views of gender and sexuality have both regulated gender and sexual norms and acted as levers of change. Topics in this shell will include national and transnational histories of sexuality, gender and social change (in the Americas, Europe, Africa and Asia). Possible areas of exploration include: media and cultural depictions of masculinity and femininity; medical, legal, cultural, and theoretical discourses on gender and sexuality; race, class, ethnicity, and indigeneity; gendered performance and geographies of sexual possibilities; demographic continuities and change; artistic representations of sexuality and gender; and, finally, histories of the family, of labour, of migration, as well as of activism, resistance, and repression as they intersect with the history of gender and sexuality.

Permission of the Department.
Attention: A maximum of nine credit units of 100-level HIST may be taken for credit. Only six of these credit units may count toward a History major or minor. The remaining three credit units will count as a junior elective in Requirement 7.

HIST. 145.3 — 1/2(2L-1S)
History Matters War Violence and Politics
Courses in this series examine the history of war and violence, cutting across periods and historical specializations. Areas of exploration may include the factors that have shaped human conflict (social, cultural, political, and religious); specific cases, campaigns or systems of conflict (including interpersonal, intergroup, and international violence); wars hot and cold; historic forms of oppression and injustice, and their relationship to conflict; and the history of resistance to interpersonal, intergroup and systemic violence including the history of peace and reconciliation and non-violent movements.

Permission of the Department.
Attention: A maximum of nine credit units of 100-level HIST may be taken for credit. Only six of these credit units may count toward a History major or minor. The remaining three credit units will count as a junior elective in Requirement 7.

HIST. 151.3 — 1/2(3L-1T)
Canadian History from Pre Contact Period to 1867
A survey of the history of Canada from the pre-contact period until 1867, emphasizing social, cultural, economic, political, constitutional, and external policy developments.

Note: Students with credit for HIST. 150 and/or HIST. 206 or INTS. 101.12 or HIST. 255 may not take this course for credit.

Attention: A maximum of nine credit units of 100-level HIST may be taken for credit. Only six of these credit units may count toward a History major or minor. The remaining three credit units will count as a junior elective in Requirement 7.

HIST. 152.3 — 1/2(3L-1T)
Post Confederation Canada
A survey of the history of Canada since Confederation, emphasizing social, cultural, economic, political, constitutional, and external policy developments.

Note: Students with credit for HIST. 150 and/or HIST. 206 or INTS. 101.12 or HIST. 255 may not take this course for credit.

Attention: A maximum of nine credit units of 100-level HIST may be taken for credit. Only six of these credit units may count toward a History major or minor. The remaining three credit units will count as a junior elective in Requirement 7.

HIST. 155.3 — 1/2(2L-1S)
History Matters Science and Environment
Courses in this series examine the history and conceptualization of science, the cosmos, or the environment and their relationships to society and culture. The term science is understood broadly to include not only modern science but pre-modern and non-western approaches to understanding and manipulating the natural world. Historians focus on the human history of the environment, with a particular attention to the ever-changing relationship between societies and their ecosystems. Possible areas of exploration might include: the scientific revolution; North-American environmental history; global commodities, imperialism and the environment; and science, magic, and rationality. With reference to historical examples, these courses will seek to nuance concepts such as ésciencé, érationalityé, and énaturalityé and also to examine broad conventional historical narratives such as édisenchantmenté, ée Enlightenmenté, éindustrializationé or ée globalizationé.

Permission of the Department.
Attention: A maximum of nine credit units of 100-level HIST may be taken for credit. Only six of these credit units may count toward a History major or minor. The remaining three credit units will count as a junior elective in Requirement 7.

HIST. 165.3 — 1/2(2L-1S)
History Matters Health and Society
Courses in this series examine how historians have understood the complex relationship between health, society, and historical change. Health is used as a vehicle for understanding political, social and cultural change throughout history. Topics range from antiquity the birth of Galenic healing through western and non-western traditions that have guided our understandings of bodies, pain, gender, and power and into the modern era of health and medicine with the rise of professional medicine, ethics, experimentation and institutionalized healing. Health is widely defined to capture experiences that fall outside the traditional doctor-patient relationship, and to explore issues including: mental health; the politics of healthcare; health economies; the health professions; diseases power to shape human history. These courses rely on a variety of sources: food and nutrition, to medical treatises, patient narratives, activist and anti-medical establishment texts, artwork, and institutional reports, and a rich historical tradition of examining health and medicine and its influence on human history. Possible areas of exploration include: madness; the body; pain; health and disease.

Permission of the Department.
Attention: A maximum of nine credit units of 100-level HIST may be taken for credit. Only six of these credit units may count toward a History major or minor. The remaining three credit units will count as a junior elective in Requirement 7.
HIST. 170.6 — 1and2(3L-1T)
The Americas
A comparative exploration of the history of Canada, the United States, and Latin America from Pre-Columbian societies to the present, focusing on ethnic and class conflict, gender roles, slavery, the role of religion and the struggle for democracy.
Formerly: HIST. 113.
Note: Students with credit for INTS. 101.12 may not take this course for credit.
Attention: A maximum of nine credit units of 100-level HIST may be taken for credit. Only six of these credit units may count toward a History major or minor. The remaining three credit units will count as a junior elective in Requirement 7.

HIST. 175.3 — 1/2(2L-1S)
History Matters Identities and Communities in Transition
Courses in this series examine the complexity of identity and the ever-changing and complicated nature of community through an exploration of history. Identities are neverfixed and constructed in isolation; they are always both invented and the result of historical change. Communities are similarly complex: never autonomous, always shaped by history and the interplay between internal dynamics and relationships with forces outside of the community. All courses in this series are linked through their exploration of the history of identities and communities but they explore that history in different places and times. Some courses will take a micro-level view, exploring the history of identity in one particular location or community over time and relating those changes to broader perspectives; others will look at the way broad historical forces shaped identities. Possible areas of exploration may include: historical roots and myths surrounding e†rivialism in Africa and the contemporary impacts of this discourse; the spread nationalism in the 18th and 19th centuries and the rise of the modern nation-state; how such groups as Kurds have been able to maintain a distinct identity over time; Quebec’s status as a separate entity in Canada.
Permission of the Department.
Attention: A maximum of nine credit units of 100-level HIST may be taken for credit. Only six of these credit units may count toward a History major or minor. The remaining three credit units will count as a junior elective in Requirement 7.

HIST. 200.6 — 1and2(3L-1T)
History of Greece
Minoans and Mycenaeans; the Dark Age; political and intellectual experiments of the Archaic Age; Persian Wars; the rise and fall of the Athenian empire; Athenian democracy; Greek thought, featuring historiography; the trials of city states and the rise of Macedon; Alexander and the Hellenistic world; Greece and Rome.
Formerly: HIST. 203. HIST. 203 has not been offered for more than ten years as of 2012.
Prerequisites: 3 credit units HIST or CLAS at the 100 level, or INTS. 101, or 30 credit units of University.
Note: Pre-1815; Europe and Great Britain.

HIST. 202.3 — 1/2(3L)
Formation of Europe. 300 to 1000
A history of the West from the Christianization of the Roman Empire in the fourth century to the foundation of the Holy Roman Empire in the tenth century. Themes include: the survival of Romanitas, monasticism and the western Church, the barbarian kingdoms, the Carolingian Renaissance, and the rise of feudalism.
Prerequisites: 3 credit units HIST at the 100 level, or INTS. 101, or 30 credit units of University.
Note: Pre-1815; Europe and Great Britain.

HIST. 205.3 — 1/2(3L)
Europe and World in High Middle Ages. 1000 to 1300
Cluny and the Gregorian reform; the rise of feudal monarchy; Byzantium, Islam and the Crusades; twelfth century renaissance; universities and scholasticism; new forms of religious life; the peasantry; medieval women; the Holy Roman Empire and the Papacy; castles and cathedrals; feudal monarchies.
Prerequisites: 3 credit units HIST at the 100 level, or INTS. 101, or 30 credit units of University.
Note: Pre-1815; Europe and Great Britain. Students with credit for HIST. 212 may not take this course for credit.

HIST. 207.3 — 1/2(3L)
Greek Tragedy and the Culture of Fifth Century Athens
An examination of the dramatic, literary, social, and intellectual contexts that inform fifth-century Athenian tragedy.
Prerequisites: 3 credit units HIST, CLAS, or ENG, or INTS. 101, or 30 credit units of University.
Note: Pre-1815; Europe and Great Britain.

HIST. 212.2
France and the Papacy; castles and cathedrals; feudal monarchies.
Prerequisites: 3 credit units HIST at the 100 level, or INTS. 101, or 30 credit units of University.
Note: Pre-1815; Europe and Great Britain.

HIST. 209.3 — 1/2(3L)
The Roman Empire Politics Society and Culture Augustus to Constantine
This course examines Rome under the rule of emperors, its chronological frame extending from circa 27 BCE to the time of Constantine in the 4th c CE. The first part of the course focuses on the establishment monarchy it the rule of emperors- at Rome during the age of Augustus and the Julio-Claudiens, since many features of imperial rule were fixed in this time, such as the emperor’s relations with the senate, the role of the members of the imperial household in the management of power, the nature of imperial patronage, and the diffusion of the imperial image. We will then turn to examine the effects of empire on the ruled at Rome and in the provinces, focusing on issues such Roman military and administrative presence in the provinces, economic exploitation, and the diffusion of Roman style spectacles and religious cults.
Permission of the Department.
Prerequisites: 3 credit units HIST at the 100 level, or INTS. 101, or 30 credit units of University.
Note: Pre-1815; Europe and Great Britain. Students with credit for HIST. 201.6 may not take this course for credit.

HIST. 210.3 — 1/2(3L)
France’s Colonial Legacy The Rise and Fall of a Global Empire
This course is a sweeping study of the history of French colonialism from the first colonies in the Americas to decolonization in Africa and Southeast Asia. Spanning five centuries, this course provides an opportunity to examine how empire building changed over time, both for the colonizer and the colonized. France built an extensive empire in North America during the 17th and 18th centuries only to see most of it lost to their British imperial rival. And yet, by the mid-19th century France was rebuilding its empire, this time in Africa and Southeast Asia. Between its two overseas empires France left a remarkable legacy that can still be felt today in the 25 countries where French is an official language. The weekly lectures and readings explore a variety of historical themes to help understand the French colonial legacy, such as theories of imperialism, discovery, native-newcomer relations, empire and conquest, religion, slavery, women and gender, commerce and decolonization.
Prerequisites: 3 credit units HIST at the 100-level or INTS. 101, or 30 credit units of university courses.
Note: North America or Other Regions.

HIST. 212.2
History Society and Culture in Paris The City of Light
Students in this intensive and bilingual experiential-learning course learn about the history of Paris--and of France--by exploring some of the city’s most significant monuments, buildings, museums, gardens, and neighborhoods. Site visits include Notre Dame cathedral and the historic ile de la Cite where the city was born; the Palace of Versailles; the Place de la Bastille and its environs; the “Grands Boulevards” with their nineteenth-century shopping arcades, storied department stores, and nearby Opéra Garnier; Montmartre and the Sacré-Coeur basilica; as well as places linked to the German occupation during WW2, to Parisian intellectual and cultural life, and to the history of immigrant, working-class, and minority groups in the city or suburbs.
Prerequisites: FREN 125 or FREN 128 or 3 credit units 100-Level HIST or permission of the instructor.
Note: Europe and Great Britain.
HIST. 214.3 — 1/2(3L)

History in Film

A survey of various film portrayals of historical individuals and culture. Popular ideas about the past are largely a creation of fiction writers' and film directors' depictions of the past. This course focuses on historical figures and their representation in primary sources, literature, and film. In this context, students consider several broad themes, including historicity and authenticity, contemporary appropriations of past ideals or ideologies. Through the study of primary source texts and related films, the student will explore the many interpretations of past culture and the ways in which historical ideas, figures, and events have been used as commentaries on modern issues. May be taken more than once for credit if the subjects differ sufficiently. Consult with department for details.

Prerequisite(s): 3 credit units HIST at the. 100 level, or INTS. 101, or 30 credit units of University.

Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

HIST. 217.3 — 1/2(3L)

The Early Byzantine Empire circa. 285 to 565 CE from Constantine to Justinian

In this course meet the Late Roman Empire as it transitions from the Classical Era into Late Antiquity. We begin with the Reforms of Diocletian in response to the near fatal crises of the third century. We study the Roman Empires shift its center of balance from Italy and the West to the urbanized and Greek speaking East. With the conversion of Constantine and the coming of Imperial Christianity the basic structures of Byzantine civilization arise. The reign of Justinian and Theodora represent the acme of early Byzantium with the codification of the Roman Law, the building of Hagia Sophia and Justinian's gamble on the re-conquest of the lost provinces of the former western Roman Empire.

Permission of the Department.

Prerequisite(s): 3 credit units HIST at the. 100 level, or INTS. 101, or 30 credit units of university.

Note: Pre-1815, Other Regions. Students with credit for HIST. 215.6 may not take this course for credit.

HIST. 218.3 — 1/2(3L)

Byzantium and the World. 565 to 1453

Despite the collapse of the former western Roman Empire, the Eastern Roman (or Byzantine) Empire weathered fresh challenges presented by the rise of new peoples. These include the Slavs, Bulgars, Arabs united in Islam, Turks, and Normans as well as a resurgent Latin West under the leadership of the Pope. While medieval Byzantium begins to collapse under the pressure of its enemies, its vibrant culture, both in its religious expression as Orthodoxy and its secular expression as Hellenism, make the later Byzantine Empire a significant cultural and intellectual influence on the world from Orthodox Russia to the revival of Classical Studies in the Italian Renaissance.

Permission of the Department.

Prerequisite(s): 3 credit units HIST at the. 100 level, or INTS. 101, or 30 credit units of university.

Note: Pre-1815, Other Regions. Students with credit for HIST. 215.6 may not take this course for credit.

HIST. 220.6 — 1and2(3L)

Russian History from the 9th Century to Present

This course introduces the student to world of Western Europe in the fourteenth through the sixteenth centuries. It covers the major developments in the period: the Renaissance and Reformation, the development of centralized monarchies, and the start of the Scientific Revolution.

In addition, it examines topics such as magic and witchcraft and their relationship to these larger events or movements.

Permission of the Department.

Prerequisite(s): 3 credit units HIST at the. 100 level, or INTS. 101, or 30 credit units of University.

Note: Pre-1815, Europe and Great Britain. Students with credit for HIST. 225 may not take this course for credit.

HIST. 224.3 — 1/2(3L)

Early Modern Europe. 1555 to 1660

Europe from the Peace of Augsburg to the Restoration. Evolution and instability of political systems, socioeconomic structures, and religious and intellectual assumptions. The shaping of modern structures and institutions.

Permission of the Department.

Prerequisite(s): 3 credit units HIST at the. 100 level, or INTS. 101, or 30 credit units of University.

Note: Pre-1815, Europe and Great Britain. Students with credit for HIST. 226.6 may not take this course for credit.

HIST. 226.6 — 1and2(3L)

Europe in 19th Century. 1789 to 1914

The French Revolution and its global impact. The forces of nationalism, liberalism, democracy, industrialization, and socialism. Analysis of the European balance of power, the rise of nation-states, and the broadening of the base of government. Imperialism, the development of capital, and the background causes of World War.

Formerly: HIST. 218. HIST. 218 has not been offered for more than ten years as of 2012.

Prerequisite(s): 3 credit units HIST at the. 100 level, or INTS. 101, or 30 credit units of University.

Note: Post-1815, Europe and Great Britain.

HIST. 230.3 — 1/2(3L)

Christianity from Constantine to the Age of the Renaissance and the Reformation. 300 to 1650 CE

This course is designed to introduce students to the changing role of the Christian Churches in those centuries when Christianity became a world religion and the dominant cultural institution throughout Europe. While the course focuses mainly on Mediterranean and European society, the spread of Christianity in these times included most of the known world and began to include the 'new World.'

Prerequisite(s): 3 credit units. 100-level HIST or 30 credit units at university level

Note: Pre-1815. Students who have completed HIST. 285.6 may not take this course for credit.

HIST. 231.3 — 1/2(3L)

Christianity in Modern Times. 1650 to 2000

This course is designed to study the changing role of the Christian Churches in European society from 1700 to the present. It focuses on key turning points in the history of Christianity including the rise of Pietism and Methodism, the Enlightenment, the French and Industrial Revolutions, the Great Awakenings in America, Christian missions, and the movements and crises of the twentieth century. By studying the ways Christianity has adapted to social, economic and intellectual change in the past three hundred years, the course will provide a basis for a clearer appraisal of the role and problems of the churches in society today.

Prerequisite(s): 3 credit units. 100-level HIST or 30 credit units at university level.

Note: Students who have completed HIST. 285.6 may not take this course for credit.
HIST. 232.3 — 1/2(3L)
Europe's Long Eighteenth Century. 1660-1789
From European state-building to empire-building. Intellectual shifts, including the Scientific Revolution and the Enlightenment. Socio-economic changes, such as urbanization, agriculture and global trade. The growing demands for political equality and the start of the French Revolution.

Permission of the Department.
Prerequisite(s): 3 credit units HIST at the 100 level, or INTS. 101, or 30 credit units of University.
Note: Pre-1815; Europe and Great Britain. Students with credit for HIST. 226.6 may not take this course for credit.

HIST. 234.3 — 1/2(3L)
Europe from. 1870 to 1939 War Politics and Culture in Modern Mass Society
This course surveys major developments in European history between. 1870 and the outbreak of the Second World War. Topics covered include the geopolitical, intellectual, cultural, and other legacies of the late nineteenth century; the origins and outcomes of the First World War; the Russian Revolution and the rise of communism; artistic and cultural movements of the interwar years; the emergence and spread of fascism; the Great Depression; Nazi Germany; the Spanish Civil War; and the diplomatic crises of the late. 1930s.

Permission of the Department.
Prerequisite(s): 3 credit units HIST at the 100 level, or INTS. 101, or 30 credit units of university.
Note: Post-1815; Europe and Great Britain. Students with credit for HIST. 226.6 may not take this course for credit.

HIST. 235.3 — 1/2(3L)
Europe since. 1939 From the Second World War to the Creation of the European Union and Beyond
This course surveys major developments in European history since. 1939. Topics covered include the Second World War and the Holocaust; postwar reconstruction; the Cold War; Europe and the colonial world; stages in the formation of the European Union; the social movements of the. 1960s (the student and womens movements, environmentalism; the sexual revolution); the economic challenges of the. 1970s and 80s; the fall of communism in Eastern Europe; and the issues and challenges facing contemporary European society.

Permission of the Department.
Prerequisite(s): 3 credit units HIST at the 100 level, or INTS. 101, or 30 credit units of university.
Note: Post-1815; Europe and Great Britain. Students with credit for HIST. 226.6 may not take this course for credit.

HIST. 236.3 — 1/2(3L)
Italy in Age of Baroque. 1550 to 1789
A survey of Italian history in the early modern period, with emphasis on the states system and the foreign presence, economic developments, social foundations, religious reform, and the transition from the Renaissance to the Enlightenment.

Prerequisite(s): 3 credit units HIST at the 100-level, or INTS. 101, or 30 credit units of University.
Note: Pre-1815; Europe and Great Britain.

HIST. 240.3 — 1/2(3L)
More than Conquerors The British Peoples and Their World. 1450 to 1720
This course is intended as an introduction to the history of Britain and Ireland, the British Empire and the early modern period. Between the mid-fifteenth and late sixteenth centuries, the British kingdoms experienced transformations in culture, faith and politics that turned them into a more centralized and imperial polity; these transformations state and church also generated economic and political upheaval and religious division. The regime inherited in the early seventeenth century by the first Stuart kings of Britain and Ireland subsequently collapsed in the mid-century troubles, and was replaced by a more i onal state after the restoration of the monarchy. This state, itself reformed by a revolution in 1688, subsequently oversaw Britain's remarkable global territorial gains during the following two centuries. The course will attend largely to the major political, religious and economic transformations which were the hallmarks of Britain's experience of early modernity and the first British Empire.

Formerly: Half of HIST. 246.6
Prerequisite(s): 3 credit units HIST at the 100-level or INTS. 101 or 30 credit units of university course credit
Note: Pre-1815; Europe and Great Britain. Students with credit for HIST. 242 or HIST. 246 will not receive credit for this course.

HIST. 241.3 — 1/2(3L)
Angloglobalization Britain and its Empires. 1700 to 2000
The story of how Britain gained the world's biggest ever empire over the course of two and half centuries (Angloglobalization) and then lost almost all of it over two generations is a remarkable episode in human history, raising a host of complex and vital questions. What political, religious, military, economic, cultural, and intellectual developments propelled Great Britain's unlikely rise to global supremacy? What caused the fall of the first British Empire, the astonishing rise of its second Imperium, and the rapid break-up of that empire after. 1945? And what effect did it all have on inrdividuar in Britain and its Empire across three centuries? The story of Angloglobalization is also important today because Canada uses an operating system provided by Britain. To understand how Canada runs politically and even culturally involves grasping the origin of its 

Formerly: Half of HIST. 246.6
Prerequisite(s): 3 credit units HIST at the 100-level or INTS. 101 or 30 credit units of university course credit
Note: Europe and Great Britain. Students with credit for HIST. 243 or HIST. 246 will not receive credit for this course.

HIST. 245.6 — 1and2(3L)
African History An Introduction
Looks at Africa beyond the notion of the "dark continent" to discover an exciting and diverse history. Topics include: Out of Africa, Great Kingdoms of Mali, Ghana and Songhai; Arab and transatlantic Slavery, Shaka and pre-colonial state formation, colonialism, liberation, refugees, development, health and globalization.

Prerequisite(s): 3 credit units HIST at the 100-level, or INTS. 101, or 30 credit units of University.
Note: 3 credit units pre-1815 and 3 credit units post-1815; Other Regions.

HIST. 251.3 — 1/2(3L)
History of the Civil War in the United States
Examines the developments that led to the Civil War, the important campaigns and battles, the social, economic, and political developments on the home fronts and the reasons why the Confederacy lost and the Union won, and how the war affected American politics and society for generations afterward.

Prerequisite(s): 3 credit units HIST at the 100-level, or INTS. 101, or 30 credit units of University.
Note: Post-1815; North America.

HIST. 253.3 — 1/2(3L)
Bringing Up the Bodies in History
This course offers a smorgasbord of rich readings in (predominantly) Canadian body history. This area of study crosses many specialties within Canadian history, including but not limited to studies of women, gender, labour, the environment, sports, colonization and immigration. What unites this body of readings is that they begin with the premise that the body is a site of historical investigation and that bodies have histories. That is, as Mary Kosut and Lisa Jean Moore (Moore, Lisa Jean and Kosut, Mary. The Body Reader: Essential Social and Cultural Readings. (New York and London: New York University Press, 2010.): 1) assert, the body is the medium or raw material through which we navigate the world, but is also an entity that is invested with meanings. This course explores the historical meanings of the body/ies, its/their representations, and experiences as it/they reflect and help constitute the ordering of gender, sexual, class, racial relations in Canada at particular points in history.

Prerequisite(s): 3 credit units HIST at the 100 level, or INTS. 101, or 30 credit units of University.
Note: Post-1815; North America.

HIST. 255.3 — 1/2(3L)
Canadian History from the Pre Contact Period to 1867
This course is an introduction to the history of Canada up until Confederation in 1867. The bi-weekly lectures will examine major events, issues, and themes in pre-Confederation history, with a specific focus on key historical debates and our understandings of Canada's colonial past. A few of the topics for this course include native-newcomer relations, European empires and conquest, colonial cultures, and rebellion and nationhood.

Permission of the Department.
Prerequisite(s): 3 credit units HIST at the 100 level, or INTS. 101, or 30 credit units of University.
Note: Pre-1815; North America. Students who have received credit for HIST. 151.3 may not take HIST. 255.3 for credit.

HIST. 256.3 — 1/2(3L)
Post Confederation Canada. 1867 to the Present
This course is an introductory Canadian history lecture course that covers Canadian history from. 1867, the year of Confederation, to the present day. It combines political, social, cultural and gender history approaches to the study of Canada's past. This course surveys the development of the Canadian nation-state and its people. Topics include: First Nations people; federal politics; society and gender; war; activism; regional politics and economy and Canadian culture.

Permission of the Department.
Prerequisite(s): 3 credit units HIST at the 100 level, or INTS. 101, or 30 credit units of University.
Note: Post-1815; North America. Students with credit in HIST. 152.3 may not take this class for credit.
HIST. 257.3 — 1/2(3L)
The Canadian Prairie to 1905
A study of Rupert's Land and the North-West to the early 20th century, including early contact between European and Aboriginal societies, the development, expansion, and decline of the fur trade, early western communities, environmental changes, Canadian expansionism and national development policies, regional responses, and developments leading to provincehood.
Prerequisite(s): 3 credit units HIST at the 100-level, or INTS 101, or 30 credit units of University.
Note: North America. Students with credit for HIST 209 may not take this course for credit. HIST 209 has not been offered for more than ten years as of 2012.

HIST. 258.3 — 1/2(3L)
The Canadian Prairies since 1905
An examination of the three prairie provinces, including the impact of the two World Wars and the Depression, protest movements and parties, urban growth and the modernization of rural life, environmental disasters and new resource developments, Aboriginal renewal, and western alienation.
Prerequisite(s): 3 credit units HIST at the 100-level, or INTS 101, or 30 credit units of University.
Note: Post-1915. North America. Students with credit for HIST 209 may not take this course for credit. HIST 209 has not been offered for more than ten years as of 2012.

HIST. 259.3 — 1/2(3L)
Canadian Women from Pre Contact Period to 1918
Examines the history of Canadian women from the pre-contact period until the end of World War I, emphasizing the complexities of women's experiences and the interplay of such factors as gender, class, race and ethnicity. Employs chronological and thematic approaches while also making reference to historical debates and historiographical developments.
Prerequisite(s): 3 credit units HIST at the 100-level, or INTS 101, or 30 credit units of University.
Note: North America.

HIST. 260.3 — 1/2(3L)
Canadian Women History from 1919 to Present
Examines the history of Canadian women from the pre-contact period until the end of World War I, emphasizing the complexities of women's experiences and the interplay of such factors as gender, class, race and ethnicity. Employs chronological and thematic approaches while also making reference to historical debates and historiographical developments.
Prerequisite(s): 3 credit units HIST at the 100-level, or INTS 101, or 30 credit units of University.
Note: Post-1815; North America.

HIST. 263.6 — 1and2(3L)
The Canadian North
A survey of the history of northern Canada (north of 60): the northern environment and Aboriginal peoples; the search for the North-West passage; whaling and the fur trade; Klondike Gold Rush and northern sovereignty; police, missionaries and the Hudson's Bay Company; Diefenbaker's northern vision and the Cold War; northern pipelines, territorial self-government and native land claims.
Formerly: HIST 222. HIST 222 has not been offered for more than ten years as of 2012.
Prerequisite(s): 3 credit units HIST at the 100-level, or INTS 101, or 30 credit units of University.
Note: North America.

HIST. 264.3 — 1/2(3L)
Native Newcomer Relations in Canada to 1880
A survey of relations between indigenous peoples and immigrants to Canada from the creation of the modern Department of Indian Affairs to the present, emphasizing assimilative policies, political resistance and organization, land disputes, and Aboriginal involvement in constitutional discussions.
Prerequisite(s): 3 credit units HIST at the 100-level, or INTS 101, or 30 credit units of University.
Note: North America. Students with credit for HIST 223 may not take this course for credit. HIST 223 has not been offered for more than ten years as of 2012.

HIST. 265.3 — 1/2(3L)
Native Newcomer Relations in Canada. 1880 to Present
A survey of relations between Natives and newcomers to Canada from the creation of the modern Department of Indian Affairs to the present, emphasizing assimilative policies, political resistance and organization, land disputes, and Aboriginal involvement in constitutional discussions.
Prerequisite(s): 3 credit units HIST at the 100-level, or INTS 101, or 30 credit units of University.
Note: Post-1815; North America. Students with credit for HIST 223 may not take this course for credit.
HIST. 223 has not been offered for more than ten years as of 2012.

HIST. 266.3 — 1/2(3L)
History Wars Issues in Native Newcomer Relations
The relationships between indigenous people and newcomers remain contentious and misunderstood -- they are the fodder of history wars. This course explores the historical antecedents of these tensions in both Canada and the USA. Aboriginal identity, Native rights, spirituality, residential school abuse cases, fisheries, self-government, casinos, research ethics, oral history.
Prerequisite(s): 3 credit units HIST at the 100-level, or INTS 101, or 30 credit units of University.
Note: North America.

HIST. 271.6 — 1and2(3L)
Modern Latin American History
A survey of Latin American history, briefly discussing colonial society and the struggle for independence, but concentrating on the modern period. The course focuses on the conflict between the elite and folk/native cultures; the reasons for continued poverty and unrest, militarism, repression, dependency, revolution, and debt.
Formerly: HIST 233. HIST 233 has not been offered for more than ten years as of 2012.
Prerequisite(s): 3 credit units HIST at the 100-level, or INTS 101, or 30 credit units of University.
Note: Post-1815; Other Regions.

HIST. 274.3 — 1/2(3L)
A History of the United States to 1865
This lecture course examines many of the significant social, economic, environmental, political, diplomatic and military developments in American history, from the pre-colonial period to 1865. It focusses on several important historical topics including: Native American cultures; the European background of American settlement; the establishment of colonies and development of an American nationality; the American Revolution; the formation of the Union; and the struggle to maintain it leading up to the Civil War.
Prerequisite(s): 3 credit units HIST at the 100-level, or INTS 101, or 30 credit units of University.
Note: North America. Students with credit for HIST 270.6 may not take this course for credit.

HIST. 275.3 — 1/2(3L)
History of the United States after, 1865
This lecture course examines many of the significant social, economic, environmental, political, diplomatic and military developments in American history, from 1865 to the present. It focusses on several important historical topics including: Reconstruction; westward expansion; industrialization and urbanization; imperialism and the rise to global power; World War I, the Great Depression, and World War II; the Cold War Movement and the counterculture; the Cold War and its aftermath.
Prerequisite(s): 3 credit units HIST at the 100-level, or INTS 101, or 30 credit units of University.
Note: Post-1815; North America. Students with credit for HIST 270.6 may not take this course for credit.

HIST. 281.6 — 1and2(3L)
Military History
The evolution of modes of warfare from the Renaissance to the present. Military and naval strategy and tactics, civilian-military relations, weaponry, and military organization are included. Military history is interwoven with general history and particular attention is paid to the social and political aspects of militarism.
Prerequisite(s): 3 credit units HIST at the 100-level, or INTS 101, or 30 credit units of University.
Note: Europe and Great Britain.

HIST. 282.3 — 1/2(2L-15)
Behind the News
This course will explore the history and historical debates behind contemporary events on the news. Each course analyzes a specific set of linked contemporary events and provides students with lectures and reading to help them make sense of these events from a historical perspective. Through such an exploration each course offering encourages students to understand the various ways contemporary events can and should be understood.
Prerequisite(s): 3 credit units HIST at the 100-level or permission of the department
Note: Chronological and geographical designation will vary with instructor. See department for latest details. Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

HIST. 283.3 — 1/2(3L)
Society and Rise of Science from the Renaissance to Industrial Revolution
A study of the development of science in the context of social, political and intellectual change between the Renaissance and the end of the 18th century. Special attention will be paid to the Copernican Revolution, renaissance technology, the tension between science and religion, and the early Industrial Revolution.
Prerequisite(s): 3 credit units HIST at the 100-level, or 3 credit units of any natural science, or INTS 101, or 30 credit units of University.
Note: Pre-1815, Europe and Great Britain.
HIST. 284.3 — 1/2(3L)
Society and Rise of Science from the Industrial Revolution to 20th Century
A study of the development of science and its interaction with social, political and intellectual change from the Industrial Revolution to the present. The relationship between science and technology in the Industrial Revolution, the transition from alchemy to chemistry, the Darwinian achievement, and the impact of science on the modern world.
Prerequisite(s): 3 credit units HIST at the 100-level, or 3 credit units of any natural science, or INTS. 101, or 30 credit units of University.
Note: Europe and Great Britain.

HIST. 289.6 — 1and2(3L)
The Menace of Progress A History of Colonialism and the Failures of Development
Poverty, stagnant economies, environmental degradation! The images of the “south” are routinely depressing and alarming. This course examines the roots of these images and suggests how they reflect ideas of civilization and progress held by those who colonized, and those who subsequently imposed “development” on Latin America, Africa and Asia.
Formerly: HIST. 234. HIST. 234 has not been offered for more than ten years as of 2012.
Prerequisite(s): 3 credit units HIST at the 100-level, or INTS. 101, or 30 credit units of University.
Note: Other Regions.

HIST. 290.3 — 1/2(3L)
Topics in Environmental History
Explores various topics in environmental history. The focus of the course in any academic term will vary. Students may take more than one section of HIST. 290 for credit, provided the subject matter of each course taken differs substantially. Topics covered might be as broad as an environmental history of the world or as specific as nuclear testing and environmental destruction. Students are encouraged to check with the department for more information.
Prerequisite(s): 3 credit units HIST at the 100-level, or INTS. 101, or 30 credit units of University.
Note: Chronological and geographical designation will vary with instructor. See department for latest details. Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

HIST. 291.6 — 1and2(3L)
The World Wars
An in-depth examination of World Wars I and II. Topics will include the underlying causes of both wars, the combat history of both wars, the role both wars played in transforming the world’s societies and economic systems, and the fundamental realignment in global power brought about by the world wars.
Prerequisite(s): 3 credit units HIST at the 100-level, or INTS. 101, or 30 credit units of University.
Note: Post-1815; Europe and Great Britain.

HIST. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
Note: Chronological and geographical designation will vary with instructor. See department for current details.

HIST. 299.6 — 1and2(3L)
Topics in Early Modern History
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
Note: Chronological and geographical designation will vary with instructor. See department for current details.

HIST. 300.3 — 1/2(1.5L-1.5S)
Roman Senate from Tiberius to Nero
Ancient evidence and modern scholarship are used in a study of the Roman Senate and senatorial class from the death of Augustus to the fall of Nero (14-68 AD).
Prerequisite(s): 3 credit units HIST or CLAS at the 200-level.
Note: Pre-1815; Europe and Great Britain.

HIST. 302.3 — 1/2(1.5L-1.5S)
Life and Letters Roman Society and Culture through Epistolary Practice
Ancient letters and letter writers, for example, Cicero and/or Pliny the Younger, are starting points for study of the political, social, and cultural history of ancient Rome and its empire. Classes will be based on lecture and discussion of selected letters, and assigned books and articles.
Prerequisite(s): 3 credit units 200-level HIST or CLAS.
Note: Pre-1815; Europe and Great Britain.

HIST. 303.3 — 1/2(1.5L-1.5S)
Sex Gender and Sexuality in Africa
Recent scholarship on sex, gender and sexuality in Africa has focused on the relationship between a constructed African sexual deviance and the rising rates of HIV/AIDS on the continent. This course seeks to understand how the stereotypes of African sexuality, same-sex relationships and gender formation were formed. Through a wide range of scholarly literature, primary sources, biographies and visual texts we will then move beyond this narrow focus and use historical studies to deconstruct the dominant assumptions about gender and sexuality in African society.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Post-1815; Other Regions

HIST. 307.3 — 1/2(1.5L-1.5S)
Seminar in Ancient Medieval and Renaissance Biography
History viewed through documents related to a single individual. Students will work from various perspectives, including social, institutional, cultural, intellectual, and gender history. Possible individuals to be studied include Peter Abelard, Elizabeth I, Erasmus, and Joan of Arc.
Prerequisite(s): 3 credit units at the 200-level.
Note: Pre-1815; Europe and Great Britain.

HIST. 308.6 — SU(4L‑9S)
Rome Building and Living in the Ancient City
This 3-week intensive, lecture-seminar summer study abroad class takes place in Italy every two years and focuses on the study of the ancient city of Rome (8 century BCE to 4 century CE). Urban planning and development, architectural history, monuments and authority, aspects of life in the largest ancient metropolis, Christianity in urban space, are some of the subjects that we cover; first in the classroom, and then during site visits in the city of Rome. This course will benefit especially students who have taken classics, archaeology, CMRS, history or art and art history at the 100 and 200 levels, and who would like the opportunity to expand their knowledge of Rome, its urban culture and architectural history.
Formerly: HIST. 204
Prerequisite(s): 3 credit units HIST, CLAS, ARCH or ARTH, or 45 credit units at University and permission of the Instructor.
Note: Pre-1815; Europe and Great Britain. Students who have received credit for HIST. 204 will not receive credit for this course.

HIST. 309.3 — 1/2(1.5L-1.5S)
Crusades and Aftermath
Examines the socio-economic pressures and spiritual goals basic to the Crusades, military encounters, the organization of the Latin Kingdom of Jerusalem (1099-1291), and ensuing contacts between Christians and Muslims to the eighteenth century.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Pre-1815; Europe and Great Britain.

HIST. 310.3 — 1/2(1.5L-1.5S)
Beavers Booze and Bully Boys Fur Trade Wars in North America
This course is an introduction to the history of the fur trade in North America prior to the merger of the Hudson's Bay Company and the North West Company in 1821. The lectures, readings and discussions will examine the major events, issues, and themes surrounding the fur trade. For trade history intersects with numerous other histories, allowing for a wide assortment of topics including native-newcomer relations, commodities and historical economic conditions, the evolution of gender relations, imperial/colonial societies and conquest, labour, transportation, and changing concepts of modernity.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: North America; Pre-1815

HIST. 313.3 — 1/2(1.5L-1.5S)
Vengeance and Violence in Medieval Europe
Examines vengeance, violence and the development of legal systems in medieval European society. Emphasis will be placed on: relations between “social” or “private” vengeance and more “organized” forms of violence (punishment, warfare); responses to violent crime; effects of gender, class, ethnicity and religion on the issue of violence.
Prerequisite(s): 3 credit units at the 200-level.
Note: Pre-1815; Europe and Great Britain.
HIST. 330.3 — 1/2(1.5L‑1.5S)
Humanist Thought in Renaissance Italy. 1300 to 1527
A reading course in the development of renaissance Humanism from Petrarch to Machiavelli. Topics will include the cult of the classics, the Greek revival, new trends in education, civic humanism, and renaissance philosophy, history and political thought.
Formerly: HIST. 315. HIST. 315 has not been offered for more than ten years as of 2012.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Pre-1815; Europe and Great Britain.

HIST. 331.3 — 1/2(1.5L‑1.5S)
Magic Science and Religion before the Scientific Revolution
Medieval magic was founded upon conventional scientific and religious presuppositions. It was also unconventional and illicit. Examines magical literature and traditions from third- to sixteenth-century Europe, the place of magic in early European history, and reflects on the theoretical issues surrounding the classification of magic.
Formerly: HIST. 382. HIST. 382 has not been offered for more than ten years as of 2012.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Pre-1815; Europe and Great Britain.

HIST. 333.3 — 1/2(1.5L‑1.5S)
Defining Boundaries Natural and Supernatural Worlds in Early Modern Europe
Considers the shifting meanings of the natural and supernatural worlds in early modern Europe (ca. 1500-1800), a period that encompassed the Reformation, Scientific Revolution and Enlightenment. It explores the boundaries between human and animal, body and soul, life and death, science and religion, and reality and imagination.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Pre-1815; Europe and Great Britain.

HIST. 334.3 — 1/2(1.5L‑1.5S)
History of Medicine Bugs to Drugs. 1800 to the Present
This course examines the changing content, practice and organisation of medicine since. 1800. We will explore the social and cultural history of medicine alongside some of the technological, scientific and professional developments in the field.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Students with credit for HIST. 398: History of Medicine, 1800–Present may not take HIST. 334 for credit.
Post-1815.

HIST. 335.3 — 1/2(1.5L‑1.5S)
Spectacles of Death in the Roman World
Ridley Scott’s film Gladiator (2000) brought the bloodlust of the Roman arena to a 21st century audience. The film appears to confirm that the Romans, especially emperors and the plebeian masses, were a cruel and bloodthirsty lot. Trained killers-gladiators-slaughtered innocent victims, or savage lions mauled and devoured them, all for the pleasure of the Roman people. This course takes a critical look at the varied deadly activities (munera, venationes, damatio ad bestias), held in the Roman arena by examining ancient textual and visual sources, and modern scholarship. We will examine these spectacles in the broader context of Roman performance culture, religion and politics. Were these spectacles merely the product of a debased and declining culture? How has modern scholarship understood the apparent madness of the Roman arena?
Prerequisite(s): 3 credit units. 200-level HIST or CLAS
Note: Pre-1815; Europe and Great Britain.

HIST. 350.3 — 1/2(1.5L‑1.5S)
The War That Shaped a Continent the Seven Years War and the Conquest of Canada
The British conquest of 1759‑1763 assessed primarily in terms of its effect upon French Canadian society. Historical interpretations of this central event in Canadian history will form the core of study.
Formerly: HIST. 302.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Pre-1815; North America.

HIST. 352.3 — 1/2(1.5L‑1.5S)
History of the American West
The course will explore the multiple meanings of the American West through readings, discussion, presentations and film. We will examine the development of Indigenous cultures, European exploration, conquest and colonization, the fur trade, the development of agriculture, gold rushes, outlaws and violence and the role of government and politics in the environment of the Trans-Mississippi West. We will also investigate the role that race and ethnicity as well as gender and sexuality had in making the West what it is. Finally, we will investigate how these categories in particular have affected the way that the West has developed in the 20th and 21st centuries leading up to how historians and the public view the West through the lens of popular culture.
Prerequisite(s): 3 credit units. 200-level HIST.
Note: North America.

HIST. 353.3 — 1/2(1.5L‑1.5S)
Plests Plagues Pox and Politics A History of Health Care in Canada
This course explores the history of health care in Canada from the pre-contact period to the establishment of universal health insurance (Medicare). The focus of this course is on the politics of health care (who provides what care, to whom, and under what circumstances). This course will examine the provision of health care as it emerged from local forms of knowledge within various communities to professional knowledge delivered in private and public institutions. In addition, the course will examine the relationships among and between government, non-governmental and/or professional responses to infectious or acute diseases and their impact on various populations in Canada.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Post-1815; North America.

HIST. 361.3 — 1/2(1.5L‑1.5S)
Protest Movements in Canada. 1921 to 1945
An examination of political and socioeconomic protest in Canada between. 1921 and. 1945 with particular emphasis on the western Canadian experience. Studies protest movements and organizations, new political parties, and incidents of public unrest and violence.
Formerly: HIST. 308. HIST. 308 has not been offered for more than ten years as of 2012.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Post-1815; North America.

HIST. 362.3 — 1/2(1.5L‑1.5S)
Doing Canadian History
An examination of how Canadian history has been presented and interpreted outside the usual academic precincts. Examples include popular history, historic sites and parks, film/video, museums, political rhetoric, and architecture.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: North America.

HIST. 363.3 — 1/2(1.5L‑1.5S)
Canada in Age of Affluence Post. 1945
Canadians emerged from World War II confident, optimistic and well-positioned to play a leading role in world events. What happened? Seminar topics devoted to political, social, cultural and economic developments allow students to study the central dichotomy of modern Canadian life-angst in an era of affluence.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Post-1815; North America.

HIST. 364.3 — 1/2(1.5L‑1.5S)
Imagining American and Canadian Wests
Violence on the American frontier(s) did as much or more to create a distinctive American character as the peaceful settling of the Canadian west did to mold national identity in this country, or did it? This course explores the myths that continue to shape public consciousness as they distort history.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Post-1815; North America.

HIST. 365.3 — 1/2(1.5L‑1.5S)
Recipes for a Nation Food History in Canada
This course offers students the opportunity to engage with a newly emerging field of historical scholarship: food history. Food, its production, marketing, preparation and consumption is the product of particular societies and cultural practices and, ultimately, food has a history. Drawing upon the recent international and national literature this class offers a social and cultural history of Canada through food. Employing the traditional analytical categories of social history (race, gender, class and nation) provides us with the tools to understand the expansion of food products and commercialization; the growth of fast food empires; immigration and “ethnic” cuisine, the gendered dynamics of the kitchen, the farmyard and the grocery store; food safety and social justice; and now, most recently, our fascination with sustainability, organic foods and so-called ‘100 mile diets.’
Permission of the Department.
Prerequisite(s): 3 credit units. 200-level HIST
Note: North America. Students who took the earlier iteration of this class as a HIST. 398.3 (2011 and. 2012) may not take this course for credit.
HIST. 375.3 — 1/2(1.5L-1.5S)
USA Foreign Relations. 1890s to the Present
In the post 9/11 period, interest in the study of American foreign relations has continued to increase. This hybrid lecture/seminar course examines the history and historiography of U.S. foreign relations from the 1890s to the present. While the emphasis is on diplomatic history, the course also considers the political, economic, cultural, and social implications of American foreign policies in the United States and the wider world.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Post-1815; North America.

HIST. 379.3 — 1/2(1.5L-1.5S)
Slavery in the Americas
Examines the history of slavery in the Americas, comparing the experience in the United States, Brazil, and the Caribbean. Various themes will be examined; the reasons for slavery, the economics of the slave trade, the development of slave society, slave resistance and revolt, opposition to slavery, the abolition of slavery, and the aftermath of slavery.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Chronological and geographical designation will vary with instructor. See department for latest details. Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

HIST. 383.3 — 1/2(1.5L-1.5S)
Scientific Revolution from Newton to Darwin
The scientific and philosophical discovery of the laws of nature from the period of Newton to Darwin. Emphasis will be given to the status of science, the growth of experiment, the relationship between science and technology, and the decline of the mystical view of nature in the 18th and 19th centuries.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Europe and Great Britain.

HIST. 384.3 — 1/2(1.5L-1.5S)
Women and Gender in Early Modern Europe
The course investigates women’s lives in Europe from ca. 1500 to ca. 1800, and includes topics such as female life-cycle and sexuality, women’s economic and political roles, literary and artistic creations, piety and witchcraft, the development of notions of masculinity and femininity, and the relationship between gender and power.
Prerequisite: 3 credit units HIST at the 200-level.
Note: Pre-1815; Europe and Great Britain.

HIST. 385.3 — 1/2(1.5L-1.5S)
Selected Topics in Central American History
Examines selected themes in the history of Central America, concentrating on the 19th and 20th centuries.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Post-1815; Other Regions. Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

HIST. 386.3 — 1/2(1.5L-1.5S)
Intelligence and Espionage in the 20th Century
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Post-1815; Other Regions.

HIST. 388.3 — 1/2(1.5L-1.5S)
Mass Killing and Genocide in the Twentieth Century
An examination of major mass killings in the twentieth century. The course analyzes the definitions and theories of mass killings, including genocide and ethnic cleansing. It also discusses how the international community can best detect and prevent a mass killing using such tools as international law and humanitarian intervention.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Post-1815; Other Regions.

HIST. 392.3 — 1/2(1.5L-1.5S)
History of Sexuality in North America
How did this "private matter" become a subject of historical inquiry? How does the history of sexuality challenge our historical assumptions? Focusing primarily on nineteenth and twentieth century North America this class will explore the sexual regulation, repression and resistance at work within politics, the law, the medical profession, and society.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Post-1815; North America.

HIST. 393.3 — 1/2(1.5L-1.5S)
New Directions in Historical Research
Explore exciting research taught by faculty or a senior PhD candidate overseen by a faculty mentor. In lectures and seminars, students engage with ground-breaking topics and sources, and the process by which historians develop research and teaching strategies.
Permission of the department required.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Post-1815; Other Regions. Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

HIST. 397.3 — 1/2(1.5L-1.5S)
Approaches to History
How should (and how do) historians approach their scholarship, and how has this changed in recent generations? This course engages a range of methodological, philosophical, and historiographical readings drawn from a comprehensive survey of topical, thematic, and theoretical fields, collectively aimed at encouraging students to think about the process and methods of doing history.
Prerequisite(s): 3 credit units HIST at the 200-level.
Note: Students with credit for HIST. 398 Special Topics Approaches to History may not take this course for credit.
HIST. 397 is required for the Honours and Double Honours programs.

HIST. 398.3 — 1/2(1.5L-1.5S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
Note: Chronological and geographical designation will vary with instructor. See department for current details.
Permission of Department required.

HIST. 399.6 — 1and2(1.5L-1.5S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
Note: Chronological and geographical designation will vary with instructor. See department for current details.
Permission of the department required.

HIST. 402.3 — 1/2(3S)
Aspects of Late Antiquity
A study of the cultural and intellectual history of Late Antiquity based on the reading of primary sources in translation. Topics include church-state relations, the survival of the classical heritage, education, the early papacy, influential women, early monasticism and the fathers of the church.
Prerequisite(s): 6 credit units of senior-level HIST of which 3 credit units must be 300-level or permission of the department.
Note: Pre-1815; Europe and Great Britain.

HIST. 403.3 — 1/2(3S)
Topics in the History of Early Medieval England
The Anglo Saxon Renaissance
Designed to introduce honours history students (not necessarily specialists in the area) to the primary sources and historiography of the Anglo-Saxon Renaissance. Given the scarcity of contemporary documentary evidence for large portions of this period, it is important for students to become familiar with non-documentary primary sources. Such sources include those revealed by archaeology, numismatics, and art history. Scholars must learn to use these sources in their efforts to understand the existing documentary sources and place them in a wider historical context.
Prerequisite(s): 6 credit units of senior-level HIST of which 3 credit units must be 300-level or permission of the department.
Note: Pre-1815; Europe and Great Britain.
HIST. 410.3 — 1/2(3S)
France in the Americas. 1500 to 1803 In Search of Empire

This course examines the history of French colonialism in the Americas from the first explorers and settlements to the Louisiana Purchase of 1803. Weekly readings and seminar discussions explore a variety of historical themes designed to critically evaluate the French colonial experience and analyze the character of the French Empire in the Americas. Such themes include native-newcomer relations, empire and conquest, religion, slavery, women and gender, métissage, commerce, and the French in North America after the fall of New France. The French had a profound influence on the Americas, from the Maritimes to the Canadian Northwest, and as far south as New Orleans and the Caribbean. This class puts the Spanish, American, and British North American (Canadian) Empires into context, and sets a foundation for understanding the English/French divide in contemporary Canada and the rise of the MÉtis in Western Canada.

Prerequisite(s): 6 credit units of senior level HST of which 3 credit units must be 300-level; or permission of the department.
Note: North America; Pre-1815

HIST. 414.3 — 1/2(3S)
Masculinity in Middle Ages and Renaissance

Will examine the many recent historical studies on gender and masculinity including topics such as medical theory, class and work, sexuality, and crime. Students will be asked to employ historical sources to evaluate the value of this trend in scholarship as well as the associated theoretical perspectives.

Prerequisite(s): 6 credit units of senior-level HST of which 3 credit units must be 300-level or permission of the department.
Note: Pre-1815; Europe and Great Britain.

HIST. 421.3 — 1/2(3S)
Erasmus and Renaissance Humanism

Erasmus of Rotterdam was the world’s first best-selling author who lived amidst the transformations and upheaval of early modern Europe. Student seminar presentations will include: the origins of northern humanism; Erasmus and Thomas More; Erasmus and the classical heritage; Erasmus as satirist; education; biblical and patristic studies; spirituality; controversies with Catholic and Protestant critics; peace and toleration.

Permission of the department required.
Note: Pre-1815; Europe and Great Britain.

HIST. 424.3 — 1/2(3S)
Catholic Reform and Counter Reformation in Italy. 1540 to 1650

A seminar on Catholic Reform in Italy focusing on early projects for reform, the development of the Papacy, new religious orders, the Council of Trent and its implementation, the Roman Inquisition, and the Index of prohibited books.

Formerly: HIST 466. HIST 466 has not been offered for more than ten years as of 2012.
Prerequisite(s): 6 credit units of senior-level HST of which 3 credit units must be 300-level or permission of the department.
Note: Pre-1815; Europe and Great Britain.

HIST. 434.3 — 1/2(3S)
Fascism Gender and Sexuality

Explores how assumptions about gender and sexuality shaped fascist movements in Germany, Italy, and France. How did fascists define masculinity and femininity? How did those definitions shape fascist ideals and policies? How did sexuality and race intersect with the delineation of gender roles for men and women?

Prerequisite(s): 6 credit units of senior-level HST of which 3 credit units must be 300-level or permission of the department.
Note: Post-1815; Europe and Great Britain.

HIST. 444.3 — 1/2(3S)
Everyday Life and Popular Culture in Early Modern Britain

This course explores the key constitutive elements of local communities in Britain from 1500 to 1800 using the tools of social and cultural historians. We will focus on the structures encountered by ordinary British women and men, including their interactions with hierarchy, patriarchy, managing and provisioning households, the practices of governance, making and exchanging goods and services, the cycles of birth, marriage and death, worshipping and remembering. The aim of the course is to give students an appreciation of the material culture of early modern Britain.

Prerequisite(s): 6 credit units of senior level HST of which 3 credit units must be 300-level, or permission of the department.
Note: Pre-1815; Europe and Great Britain.

HIST. 445.3 — 1/2(3S)
British Cities Empire and Global Environmental Change

During the long nineteenth century, Britain emerged as a leading urban and industrial nation. Rapid urban development transformed local environments and the population suffered from the unhealthy living conditions brought by overcrowding and pollution. The cities, nonetheless, were phenomenal engines of wealth creation and helped increase Britain’s global influence. Continued industrial growth in Britain relied on overseas forests, farms, grasslands, plantations and mines to supply a growing assortment of raw materials, such as cotton, sugar, tallow, palm oil, guano, timber, wheat, tea, indigo and rubber. The vast expansion of Britainís economic influence also coincided with the expansion of its empire. This set off a new era of ecological imperialism, as the British botanists, industrialists and officials helped reorder nature, both in the empire and in economically dependent regions. This course will explore the interconnected histories of urban industrial development, imperialism and environmental change at the local, regional and global scale.

Prerequisite(s): 3 credit units HST at the 300-level.
Note: Post-1815; Europe and Great Britain.

HIST. 450.6 — 1and2(3S)
French Canada before. 1800

Discovery; relations with Indian Nations; building an Old Regime colony; war and conquest; revolution; a French society in a British empire. Students read and discuss major works and write a major research paper from primary sources. [French desirable but not essential.]
Formerly: HIST. 406. HIST. 406 has not been offered for more than ten years as of 2012.
Prerequisite(s): 6 credit units of senior-level HST of which 3 credit units must be 300-level or permission of the department.
Note: Pre-1815; North America.

HIST. 462.3 — 1/2(3S)
Orality Literacy Memory Tradition and History

People understand the past differently. Historical information is constituted and conveyed in culturally specific ways. This course examines the way that orality, literacy, memory and notions of tradition intersect in the construction and conveyance of historical knowledge between cultures and within particular cultures over time.

Prerequisite(s): 6 credit units of senior-level HST of which 3 credit units must be 300-level.
Note: Chronological and geographical designation will vary with instructor. Students with credit for HIST. 498 (Orality, Literacy, Memory, and History) may not take this course for credit.

HIST. 466.3 — 1/2(3S)
Canadas Great War

Examines how Canada responded to outbreak of war in 1914 and how its participation in the bloody conflict over the next four years fundamentally changed the country both on the home front and in its place on the world stage. One federal cabinet minister claimed that the war had so much to answer for: this seminar will enable students to understand and appreciate Canada’s first total war and how the country that enthusiastically joined the conflict in 1914 was not the same country in 1918.

Prerequisite(s): 6 credit units of senior-level HST of which 3 credit units must be 300-level or permission of the department.
Note: Post-1815; North America.

HIST. 471.6 — 1and2(3S)
United States in the Nuclear Age

Examines the development of U.S. Cold War policies, with special attention paid to the decisions regarding nuclear weapons. While emphasis is on political and diplomatic history, the course also studies the social, cultural and environmental implications of these policies in the United States and beyond.
Formerly: HIST. 431. HIST. 431 has not been offered for more than ten years as of 2012.
Prerequisite(s): 6 credit units of senior-level HST of which 3 credit units must be 300-level or permission of the department.
Note: Post-1815; North America.
HIST. 472.3 — 1/2(3S)
The States and the Middle East
This seminar course examines American foreign policies in the Middle East during and after the Cold War. More specifically, it focuses on U.S. relations with nations such as Saudi Arabia, Egypt, Israel, the Palestinian National Authority, Iraq, Iran and Afghanistan. While the emphasis is on the political, diplomatic, strategic and economic aspects of these relations, the course also studies the cultural dimensions of U.S. policies.
Prerequisite(s): 6 credit units of senior-level HIST of which 3 credit units must be 300-level or permission of the department.

HIST. 478.3 — 1/2(1.5L-1.5S)
United States and the Vietnam Wars
Examines key political, military, social, and cultural themes related to the American experience in Vietnam from World War Two to the fall of Saigon.
Formerly: HIST. 378
Prerequisite(s): 6 credit units of senior-level HIST of which 3 credit units must be 300-level or permission of the department.
Note: Post-1815; North America. Students with credit for HIST. 398 The United States and the Vietnam Wars or HIST. 378 may not take this course for credit.

HIST. 481.3 — 1/2(3S)
A History of Pain in Early Modern Europe
Recent scholarship has questioned the relationship between cultural perceptions and bodily experience. Using an interdisciplinary framework, this course explores the meanings and experience of pain in Europe (1600-1800), particularly the growing division between mind and body. We will read sufferers’ narratives alongside literature, philosophy, and surgico-medical treatises.
Prerequisite(s): 6 credit units of senior-level HIST of which 3 credit units must be 300-level or permission of the department.
Note: Pre-1815; Europe and Great Britain.

HIST. 482.3 — 1/2(3S)
History of Native Newcomer Relations in the United States
Will examine the history of Aboriginal peoples within the United States and will concentrate on the formation and political perspectives, principally in the English-speaking world. Charting a path from the rise of the asylum, to the dark chapter of the lobotomy, through Big Pharma and into Scientology, the History of Madness considers how we have historically found reason through insanity.
Prerequisite(s): 6 credit units of senior-level HIST of which 3 credit units must be 300-level or permission of the department.
Note: Post-1815

HIST. 488.3 — 1/2(3S)
Topics in History of Development
Research seminar on development requiring work with primary sources, in-depth discussion of themes and topics, and the preparation of major research papers.
Prerequisite(s): 6 credit units of senior-level HIST of which 3 credit units must be 300-level or permission of the department.
Note: Other Regions; temporal description will vary. Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

HIST. 492.6 Ethnobiography Fieldschool Community Based Experiential Learning
This unique community-based experiential fieldschool learning opportunity involves students and faculty spending four weeks living in an Aboriginal community. Initially students attend seminars led by faculty on ethnobiography theory and method, including critical responses to the field as it has been practiced. These include readings that focus on the regional ethnobiography as well as the broader thematic, theoretical, and historiographic literature. Finally, the students, under the guidance of faculty and Aboriginal mentors, engage in independent concentrated research projects that have been identified as important by the Aboriginal community.

Permission of the instructor required.
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different. Post-1815; North America

HIST. 494.0 Michael Swan Honours Colloquium
Oral presentation of a historical paper at a conference of Honours students. The presentation is normally based on a paper already prepared, or in preparation, for a third- or fourth-year seminar course.
Restriction(s): Admission to an honours program in history.
Note: HIST. 494 is required for all Honours and Double Honours programs.

HIST. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

Permission of the department required.

HLST — HEALTH STUDIES

College of Arts and Science

HLST. 110.3 — 1/2(3L)
Introduction to Health Studies
Health Studies is a broad and interdisciplinary subject area. This lecture-based course provides an overview of how health has been conceptualized and studied from a wide range of science, social science, and humanities disciplines. The course will examine ways in which the unique perspectives offered by specific academic traditions have been utilized to study and address both past and current health issues.

HLST. 210.3 — 1/2(3L)
Introduction to Quantitative and Qualitative Research Methods in Health Studies
This course introduces students to the research methods and approaches used to investigate health issues. The course will expand students' research skills across a broad range of approaches to studying health sciences; consequently, students will also develop and qualitative data analysis approaches. Finally, students will learn to be a critical consumer of health sciences research.
Prerequisite(s): HLST. 110; and PSY 233 (or equivalent); and permission of the Department.
Note: Registration in this course is restricted to students in the Bachelor of Arts and Science in Health Studies.
HNDI. 114.3 — 1/2(3L)
Introductory Hindi I
This course introduces Hindi to students with no prior knowledge of the language. Students will develop basic reading, writing, speaking and listening comprehension skills in the Hindi language. Students will learn the Devanagari script and the Hindi sound system through relevant, culturally situated materials. Course materials are enhanced and complemented by audio-visual and computer based activities. Students will be introduced to basic grammar and everyday vocabulary in Hindi. Equal emphasis will be given to reading, writing, listening and speaking comprehension. Useful phrases and common vocabulary words will be taught to the students against the background cultural information.

HNDI. 117.3 — 1/2(3L)
Introductory Hindi II
This course continues developing Hindi language skills at the introductory level. This course will foster linguistic knowledge, communication skills, and cultural awareness. The course will encompass increased grammatical concepts for effective writing and conversation. Equal emphasis will be given to reading, writing, speaking and listening.
Prerequisite(s): HNDI. 114

HORT — HORTICULTURE

College of Agriculture and Bioresources

HORT 13.6
Applied Botany
Basic plant anatomy at the cellular level and whole organ level is covered as well as the processes of photosynthesis and respiration. Thorough coverage is given to plant classification and naming, with botanical grammar being stressed. Plant hormones, pollination, fruit set and ripening are discussed. Basic propagation is addressed and comprehensive coverage is given to climatic factors of importance to prairie horticulture. The course concludes with a discussion of diseases of significance to prairie horticulture.

HORT 14.6
Integrated Plant Management
The course outlines the basics of identifying, monitoring, predicting, and managing the environment and pest problems affecting horticulture crop growth. Upon completion of this course, the student should be able to diagnose problems, provide solutions, and predict how the manipulation of growing conditions will impact other factors.
Note: It is strongly advised that students have completed Applied Botany and Soils for Horticulture prior to registering in this course.

HORT 15.3
Safe Work Pesticide Application
Learn about different aspects of attitudes on safety in the use of pesticides in the horticulture industry. Topics include: basic chemistry; legislation and regulations; labeling; toxicity; handling practices; environmental protection; pest management; application equipment; emergency response; and public relations. The course provides an opportunity to write the qualifying exams for the Manitoba Pesticide Applicator Certification in the landscape category according to the National Task Force Standards on Pesticide Education, Training and Certification. There is no final exam in this course.
Note: This course will be of particular interest to horticulturists who apply pesticides, but are not mandated to be certified or licensed.

HORT 17.3
Floral Design
The course covers the theory and practice of floral design. Topics covered include: floral crop origins and distribution; basic botany; nomenclature and terminology; care and handling of fresh cut flowers/foliage. The course provides basic understanding of the tools, supplies, and mechanics used in floral design. Floral design styles, elements and principles are discussed.

HORT 18.3
Field Production of Floral Crops
Learn the steps to plan and establish a production field for floral crops. Gain the knowledge required to make practical decisions about what to grow and how to establish, maintain and harvest selected floral crops.

HORT 19.3
Human Resource Management
You will be introduced to human resource theory and methods as they apply to hiring and managing staff effectively in a horticulture setting. Students learn to use their knowledge of situations involving human resource management issues to test their learning in this course. Students gain an understanding of the personnel planning process. Students learn leadership and communication techniques to motivate staff and resolve conflicts. Application of this knowledge in a horticulture setting is the focus of discussion.

HORT 20.3
Vegetable Production
This course covers vegetable production on the Canadian prairies in terms of soil, climate, equipment, cultural practices, management and marketing. A wide range of crops is reviewed from vegetable crops to vines. The course provides students with information necessary to establish a vegetable operation, advise others on vegetable production, or enhance their background for employment in the vegetable industry.
Note: It is strongly recommended that students complete Applied Botany and Soils for Horticulture prior to registering in this course.

HORT 23.3
Fruit Production
Course topics include: role of prairie climate in large-scale fruit production; plant breeding and cold hardiness; flowering and fruit development; fruit growth, thinning and maturity indices; harvesting techniques; and concepts of postharvest storage are briefly discussed. In addition, site selection, orchard establishment, planting, and frost protection are addressed. Pruning and grafting are also covered. Fruit crops include apples, plums, pears, strawberries, raspberries, currants and saskatoon berries.
Note: It is strongly recommended that students complete Applied Botany before registering for Fruit Production.

HORT 25.6
Greenhouse Crop Production
Learn several aspects of greenhouse production including an overview of the prairie greenhouse industry, production economics, chemical and biological pest control and the production of bedding plants, potted and flowering plants and vegetables.
HORT 26.3
Nursery Crop Production
The course covers the principles and practices of the production of trees, shrubs, and perennial plants. Production in both field as well as container is addressed in the commercial business environment. The historical evolution of the prairie industry is discussed as it relates to current crop management practices.

Note: It is strongly advised that students will have completed Applied Botany; Soils for Horticulture, Safe Work Pesticides, Integrated Plant Management, Woody Landscape Plants or have obtained consent from your home institute program director.

HORT 27.3
Woody Landscape Plants
This course covers the identification, classification, landscape characteristics, adaptations, cultural requirements, value and use of woody ornamental plants. Plants common in the prairie environment are addressed and include deciduous and evergreen trees, shrubs, vines and ground covers.

HORT 28.6
Propagation
Learn both theoretical and practical information for plant propagation in this hands-on course. Gain an understanding of the physiological and physical processes involved in propagation and the required skills to carry out various propagation techniques.

Note: It is strongly recommended to complete Applied Botany prior to taking this course.

HORT 29.3
Medicinal and Aromatic Plants
This is an introductory course to the production, processing and marketing of medicinal and aromatic plants on the Prairies. The course will provide students with useful information and skills that could be applied in establishing or conducting a herb production, processing, or marketing enterprise.

HORT 30.3
Arboriculture
This course outlines basic terminology used in arboriculture, the principles of installation, and care and maintenance of trees and shrubs in the landscape. It also provides “how to” information in these areas. Finally, the effect of the environment on growth and development of woody plants is addressed.

Note: It is recommended that students complete Applied Botany and Soils for Horticulture before registering in Arboriculture. It is also recommended to have prior or concurrent knowledge in Woody Landscape Plants and Safe Work Pesticide Application.

HORT 31.6
Turfgrass Production and Management
This course outlines the production and maintenance of turfgrasses to enable you to function within the landscaping and turf production industries. Topics include: an overview of the turfgrass industry; turfgrass physiology; plant morphology and species identification; native turfgrass; soils; turfgrass establishment, culture, management practices and problems; turfgrass pest control and integrated pest management.

HORT 33.3
Herbaceous Landscape Plants
This course covers the classification, characteristics, and cultural requirements for herbaceous plants. Herbaceous perennials, biennials, and annual flowers will all be covered in this course. The course will provide students with the correct botanical nomenclature, cultivars, varieties, and common names; physical requirements for each plant discussed; bed preparation and design considerations.

HORT 34.6
Indoor Landscaping
This course covers both the theory and practice of indoor landscaping. Topics include: an overview of the indoor landscaping industry; basic design concepts; people-plant relationships and the function of plants in the indoor environment. Plant culture, maintenance and integrated pest management are discussed. The course concludes with a section on indoor landscaping as a business: preparation of cost estimates, budgeting, advertising, etc. Students should be able to create, install and maintain a commercial indoor landscape on completion of this course.

Note: It is strongly advised that students will have completed Applied Botany and Soils for Horticulture prior to registering for Indoor Landscaping.

HORT 35.3
Greenhouse Structures and Environments
Learn the fundamentals of greenhouse construction and maintenance, as well as specialized features of greenhouse structures and environmental controls.

HORT 36.6
Landscape Design
Develop the skills you need to produce a simple residential landscape design for a client. This course covers the design process; identifying client needs; producing a series of preliminary site plans and a design program; using drafting equipment; and producing a basic landscape design in plan view.

HORT 37.3
Landscape Construction
This course is an introduction to the theory and application of landscape construction. You will learn about: interlocking paving stones; water features; retaining walls; low voltage lighting; wooden decks; and fences. Safety procedures are emphasized.

HORT 38.3
Postharvest Handling of Food Crops
The principles of postharvest handling, storage, and transportation of fruits, vegetables and herbs are covered in this course. Handling and storage practices to maintain quality of fruits, vegetables and herbs are addressed. Factors which influence quality such as timing of harvest, specific storage environments, causes of quality loss and transportation are discussed.

Note: Before enrolling in this course, the students should be familiar with botanical structures of fruits and vegetables. Applied Botany is recommended prior to taking this course.

HORT 41.3
Basics of Horticultural Marketing
This course introduces marketing basics to students who are interested in marketing within the horticulture industry. Students will gain an understanding of the fundamental marketing elements of the Canadian and Prairie horticultural industry, basic principles of marketing, principles of consumer behaviour, price-setting, and credit granting strategies, the elements of the sales process, the elements of distribution channels in domestic and global markets and the marketing Plan and its components.

HORT 42.2
Basics of Horticultural Business Management
This course introduces business management basics to students who are interested in operating a small business within the horticulture industry. Students gain an understanding of the characteristics of a small business and the principles of small business organizations; financial performance in a small business, small business budgeting and human resource management for the small business.

HRM — HUMAN RESOURCES MANAGEMENT

College of Edwards School of Business

HRM 400.6 — 1and2(3S)
Honours Seminar in Human Resource Management
Directed readings and individual research in the area of human resource management. The major course requirement involves the preparation of an honours research paper under the supervision of one or more faculty in the particular area of specialization. The resulting honours paper is normally presented at a department seminar. Permission of the department required.

HSC — HEALTH SCIENCES

HSC 120.3 — 1/2(3L‑1P)
Personal Health and Lifestyles
A multidisciplinary health course that introduces and addresses topics relevant to personal health and lifestyle choices. Presents health topics that are current, topical and relevant to all university students. Topics may include food, nutrition, exercise, fertility and contraception, environmental issues, stress and mental health, and consumerism and commercial thinking.

Note: Not for credit in the Colleges of Arts and Science, Kinesiology, or Pharmacy and Nutrition. Intended for students who wish to enter the College of Education Elementary/Middle Years Sequential programs, the direct entry TEP programs, and the Middle Years Home Economics program.
INCC — INTERDISC STUD CULTURE

College of Arts and Science

INCC. 110.1 Digital Literacy and Culture Designing for Print and Screen

Designing a document, whether for print or for display on a screen, means more than just making it look good: it is the designer’s job to make the document function better by capturing the viewer’s attention, highlighting important information, and removing any distractions, all with an eye towards more effectively communicating the document’s message. In this class we will discuss how graphic design principles can be used to improve visual communications, and we will learn to use industry-standard software for graphic design, Adobe Illustrator. After the initial introductory class, the course will be structured around students working through instructional videos on Lynda.com before class. Class time will be spent on discussion, expanding on the material presented in the videos, and applying the techniques.

Note: This course will be offered in a 4-week period.

INCC. 120.1 Creativity Spoken Word

This course will introduce first-year students to the art form of spoken word poetry. The course will provide a brief overview of the history of spoken word, focusing on seminal practitioners of spoken word such as Linton Kwesi Johnson, Lillian Allen, Shane Koyczan, and Eekwol. The course will explore spoken word as a form of political activism. Students will create and perform their own spoken word piece. Special attention will be given to local spoken word artists such as Charles Hamilton, Shana Stock, and Cody Dill etc. Documentary films may be shown in class and are listed in the Course Syllabus. The community will serve as the experiential learning site for this course, giving students access to diverse cultures and engaging in a creative environment. Community sites could include, but are not limited to, places such as schools, public libraries, the farmers’ market, The Core Neighbourhood Youth Co-Op, and Station 20 West. Specific sites will be coordinated with partnering organizations for each offering.

Permission of the Department is required.
Cultural Heritage Mapping

An experiential project-based course involving supervised community-based research. Working in close collaboration with community representatives, small interdisciplinary groups will research a community-defined cultural heritage spatial project. A lecture component will teach concepts of cultural heritage and cultural space theory. Heritage mapping methods including oral interviewing, archival research, and digital geodatabase construction are introduced. Student creative work in the form of maps, web displays, and artistic works will be presented to the community for public use. Registration by students from any discipline is encouraged.

Prerequisite(s): Successful completion of 24 credit units, submission of an application letter, and permission of the instructor. 
Note: Students will be required to complete 15 hours of self-directed fieldwork in addition to lecture/lab requirements.

Digital Storytelling and New Media Poetics

Digital stories are expressed through a variety of media, including visual, verbal, interactive, textual, and acoustic elements. This emerging genre employs many different techniques and platforms, including interactive programming, social computing, hypertexts, narrative games, screen casts, animations, slideshows, digital films, or any combination of a number of multimedia formats to tell stories. In this course you will create your own digital narrative or poetry. Digital Storytelling and New Media Poetics is offered in partnership with Sage Hill Writing Experience so that students benefit from learning alongside creative practitioners from an expert in multimedia design and storytelling. Instruction occurs within a deep-immersion and intense 10 days in the spring or summer.

Prerequisite(s): INCC. 210.3; or permission of the instructor.
Note: This may be offered off-campus, outside of Saskatoon. This is an intensive course: attendance is mandatory. There will be a program fee to cover costs of food and accommodation.

Special Topics

Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

Special Topics

Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

INTS — INTERDISCIPLINARY STUDIES

Learning to Learn Strategies for Academic Success

Students will attain a basic knowledge of cognition as it applies to learning. They will learn to apply their knowledge of strategies, skills, and attitude through active monitoring of their own lifestyle, decision-making, and self-regulation in an effort to improve upon their overall academic success and view of learning.

Prerequisite(s): Students must have completed fewer than 60 credit units.
Note: INTS 100 may be used as an elective only under Requirement 7 in the College of Arts and Science and may not be used towards any major requirements. Students who credit for PSY 101 will not receive credit for this course.

Examining the Western Humanities and Fine Arts in a Global Context

This intensive and interdisciplinary course explores and critiques the literary, philosophical, religious, artistic, scientific, and musical traditions of various Western cultures from ancient times to the present while situating these traditions in a global context. Topics include early cultures in Mesopotamia, Egypt, China, India, Greece, Rome, and what we now call the Americas; Medieval Europe and the world beyond; the Renaissance, Reformation, and early modern cross-cultural encounter and colonization; the scientific revolution, the Enlightenment, and other modern developments such as industrialization, romanticism, modernism, feminism, and decolonization. Faculty from multiple disciplines deliver the lectures and small seminars in this collaboratively taught course. Assignments emphasize critical thinking and writing. The course helps fulfill distribution requirements in the College of Arts and Science and satisfies all prerequisites for second-year courses in History and in Women’s and Gender Studies. It partially satisfies prerequisites for second-year courses in Philosophy and in Religion and Culture.

Restriction(s): Only open to students who have completed 18 credit units or less. 
Note: Students with credit for INTS. 101 may not take any 100-level CMRS or HIST course(s) for credit.

An Introduction to Ukrainian History and Culture

This course offers a multidisciplinary introduction to Ukraine, its history, culture, and peoples from historical, cultural, political and anthropological perspectives. Along with an overview of major developments in Ukrainian history, culture and nation building, the course also focuses on the outcomes and meanings of these developments to contemporary Ukrainians, their neighbors, and the Ukrainian diaspora. Topics include the rise and fall of Kyivan Rus and Galicia-Volhynia, the Polish and Lithuanian rule, the Cossack Era, the birth and decline of Hetmanate, the impact of Russian and Austrian Imperial rule on Ukraine, the growth of national consciousness in the 19th century, the first World War and the quest for independence, industrialization and collectivization in Soviet Ukraine in the 1920-30s, the famine of 1932-33, Stalinís repressions of 1930s, Western Ukraine between the Wars, Ukraine during the Second World War, Soviet Ukraine in the 1950-1980s, and independent Ukraine in a global context.

Prerequisite(s): 15 credit units of university studies.

Cultivating Humanity

This course will explore what it means to be human, and to become humane, by drawing from a variety of disciplines in the humanities and social sciences. It will provide an intellectual framework for understanding interconnections between the personal and the group on both a local and global level in relation to social, cultural, economic, and ecological issues. This course gives attention to an increasing awareness of the challenges associated with intercultural relations, fostering respect for diversity, and the dynamics of inclusion and exclusion.

Prerequisite(s): 18 credit units at university level or permission of the instructor.
Note: The course may be used toward the General or Electives Requirements in Arts and Science programs. Students with credit for INTS. 203.6 may not take this course for credit.
INTS. 299.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

INTS. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

INTS. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

INTS. 400.3 — 1/2(3S)
Critical Perspectives on Social Justice and the Common Good
This course is meant as a capstone for students completing a Minor in Critical Perspectives on Social Justice and the Common Good. Students will be engaged in a critical inquiry into current conditions of social life to inspire their participation in equitable and sustainable alternatives for our common social good. Core categories include cycles of exclusion, rural/urban justice, ecojustice and globalization.
Prerequisite(s): 36 credit units of completed university study including INTS. 203.3.

INTS. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

INTS. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

IPRM — INDIGENOUS PEOPLE RESOURCE MANAGEMENT

IPRM. 101.3
Introduction to Management Issues
Students will be exposed to concepts of leadership, managing democratically, and conflict management. Economic considerations will concentrate on teaching students how to manage and interpret financial information. Fundamentals learned in this class will allow land managers to work with business plans, and be able to assess financial potential for resource development projects.
Note: This course is blended face-to-face and web-based instruction. Students will attend face-to-face lectures on campus for two weeks with web-supported home study.

IPRM. 102.3
Economics and Planning I
Introduces students to basic biophysical and economic theory underlying natural resource management and legal rules enabling or constraining management decisions. Instruction will focus on case studies and will involve a field trip component. Economic and legal theory will be integrated with the study of physical, biological and ecological components of resources studied.
Note: This course will be blended face-to-face instruction with web supported home study. The face-to-face portion will be one week of full time study with readings and assignments conducted over the following home study period.

IPRM. 103.3
Environmental Studies II - Field Study
Introduces students to principles of sustainable development of land, water and forests. Students will become familiar with basic components of soil and be able to recognize factors affecting productivity and land value as well as important environmental issues associated with managing a large land base. The course will investigate components of agricultural production systems and the relationship of agriculture to its environment, surface and subsurface water quantity and quality, forest ecology and sustainable forest management. Emphasis will be placed on methods of gathering information in addition to laboratory exercises and field trips.
Note: During the on-campus portion of the course, students will receive a combination of face-to-face instruction and laboratory or field trip experience.

IPRM. 200.3
Legal Process and Instruments in Resource Management
A study of real property law in Canada using specific examples. Students will examine a number of real property issues facing Aboriginal people and land by examining instruments in detail, including ways of holding property, property transfer, property rights, taxation and property responsibility and obligations.
Prerequisite(s): IPRM. 100
Note: Course instruction is blended with two weeks face-to-face lecture and web supported home study.

IPRM. 210.3
Resource Management Project Assessment
Incorporates learning from previous courses in the IPRM Certificate Program. Students will take a project from their reserve and using tools learned, evaluate and assess the proposed project: legally, economically, and environmentally. Students will research land, history, market and impact of the proposal to determine pros and cons of the proposal. Written and oral presentations are required.
Restriction(s): Only open to students in the CIPRM program
Prerequisite(s): IPRM. 100, 101, 102, 103 or permission of the department
Note: This is a blend of face-to-face and distance instruction. The face-to-face instruction will be offered on campus for a two week period and the web-supported home study.

IS — INTERNATIONAL STUDIES

IS 110.3 — 1(3L)
Global Issues
This course is an introduction to conceptual, theoretical and substantive aspects of globalization and global issues. It examines political, economic and social dimensions of globalization and specific contemporary global issues, including migration, terrorism, security, crime, development, poverty, food, health, education, energy, environment, and trade.

IS 201.3 — 1(3L)
Global Citizenship Cultures and Coexistence
The objective of this course is to introduce students to various aspects of global citizenship, global cultures and coexistence. Special emphasis is devoted to two important and interrelated questions. First, what are or what should be the roles, rights and responsibilities of individual and groups in an increasingly globalized world? Second, what are the implications of cultural plurality for a globalized world, and vice versa? Third, what forms and degrees of coexistence have emerged to date and will likely emerge in the future? This course will facilitate efforts of students to answer such questions.
IS 202.0
Global Experiential and Cultural Learning
This zero credit unit course is designed to recognize global experiential learning acquired by students through various means deemed valid by the Program Director or Coordinator/Administrator, including: (a) studying abroad; (b) completing an internship abroad with a bona fide international, regional or local organization; or (c) working or serving abroad with any governmental or non-governmental agency or corporate entity. An alternative means of meeting the global experiential learning requirements of this course is to serve as an intern or a volunteer for at least sixty hours with any agency or company that deals with international issues, relations, immigrants, or international students, or any other organization that provides students with learning opportunities that provide them with valuable insights on global issues deemed valid by the program Director or Coordinator/Administrator. In addition to experiential learning, this course will also provide students with materials and assignments related to cultural learning designed to develop what is commonly referred to as cultural competency.

Permission of the department is required.
Note: This is a required course in the Certificate of Proficiency in Global Studies program. Contact the Department of Political Studies for more information and permission to register.

IS 211.3 — 1/2(3L)
Introduction to International Studies Development
International Development is one of the cornerstones of the International Studies programme. In a world that is increasingly interconnected and interdependent, it is imperative to understand the conditions under which a majority of the world lives, how these conditions have come to be, what is being done to address concerns of inherent inequity and poverty, and the importance of doing so. This means engaging in the issues of colonialism, globalisation, gender, debt, trade, democracy, sustainable development, migration, health, education, and the emerging powers to name but a few. To make sense of such a diverse and complex set of issues, the course has three primary objectives: first, to contextualise international development into its historical setting; second, to introduce the theories which seek to understand and explain international development; third, to apply these theoretical constructs to specific issues and cases of international development. This course is intended to not only provide an introduction to International Development but also highlight the intended to not only provide an introduction to the issues, achievements, controversies, challenges and possibilities of the contemporary world. It is well known that we live in an age of intense international engagement. Countries and peoples are tied together by economics and trade, migration, environmental realities, and popular culture while also divided by religions, values, ideologies, issues of military and economic power, and ethnic conflicts. It is difficult to make sense of the complex interactions and tensions that define our world. In IS 200, we will look at patterns of conflict in international affairs, from world wars to ideological clashes and social protests, and the processes and institutions of cooperation, which range from the United Nations and a variety of political conventions to broadly based social movements that seek to address the inequities and unfairness of the modern era.

Permission of the department.
Prerequisite(s): 18 credit units at the 100-level including at least 12 credit units from ANTH, ECON, GEOG, HIST, POLS, RLST, RUSS, SOC, SPAN, UKR, WGST.
Note: Students who have taken IS 200.6 may not take this course for credit.

IS 298.3 — 1/2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

IS 299.6 — 1and2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

IS 385.3 — 1/2(35)
Latin American Studies
Offered as part of the Antigua, Guatemala Term Abroad. Specific course topics will change on each occasion it is offered, but will typically cover a range of interdisciplinary topics focused on Guatemala, Central America, and Latin America.

Permission of the department required.
Prerequisite(s): Attendance at the Guatemala Term Abroad.

IS 388.3 — 1/2(15)
Independent Research
Offers senior International Studies students the opportunity to do an interdisciplinary Independent Research course. This will be most attractive to students away from the university on study trips. Research projects and topics must be approved by the International Studies Administrative Committee.

Prerequisite(s): Permission of the International Studies Administrative Committee and the project supervisor.

IS 398.3 — 1/2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

IS 399.6 — 1and2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

IS 401.3 — 1and2(35)
International Cooperation and Conflict
Explores the contribution which interdisciplinary theory and research make toward understanding international issues, particularly international cooperation and conflict. Topics will include nationalism and ethnicity, the role of international organizations in conflict resolution and democratization, human rights, militarism and peacekeeping.

Permission of the department required.
Prerequisite(s): Fourth-year standing in the International Studies Program or the permission of the IS Chair.
Note: Students for credit for IS 400 may not take this course for credit.

IS 402.3 — 1and2(35)
International Development
This seminar explores the contribution which interdisciplinary theory and research make toward understanding international issues, particularly international development. Topics will include theoretical conceptualization of development and sustainability, global poverty and inequality, the globalization debate, foreign aid and structural instabilities.

Permission of the department required.
Prerequisite(s): Fourth-year standing in the International Studies Program or permission of the IS Chair.
Note: Students with credit for IS 400 may not take this course for credit.

IS 404.0
International Studies Honours Colloquium
An oral presentation in a colloquium setting of a paper pertinent to the student’s area of concentration in International Studies. The presentation will normally be based on a paper already prepared, or in preparation, for a 300 or 400 level course.

Restriction(s): Fourth-year honours student in any International Studies Stream.

IS 498.3 — 1/2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

IS 499.6 — 1and2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

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**ITDL — INTERDEPARTMENTAL COURSES**

**College of Medicine**

**ITDL. 398.3 — 1/2(3S)**  
**Special Topics**  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

**ITDL. 399.6 — 1and2(3S)**  
**Special Topics**  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

**ITDL. 498.3 — 1/2(3S)**  
**Special Topics**  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

**ITDL. 499.6 — 1and2(3S)**  
**Special Topics**  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

**JPNS — JAPANESE**

**College of Arts and Science**

**JPNS. 114.3 — 1/2(3L)**  
**Introductory Japanese I**  
This course offers introductory (elementary) level Japanese language instruction. The course is for complete beginners who have a keen interest in Japan and the language. The aim of the course is to develop the basic skills of writing, reading, listening, and speaking. In Japanese. 114.3, students will familiarize with the Japanese sounds and language structures by mastering hiragana, katakana writing systems along with a few kanji characters.

**JPNS. 117.3 — 1/2(3L)**  
**Introductory Japanese II**  
This course offers introductory (elementary) level Japanese language instruction. The course is for complete beginners who have a keen interest in Japan and the language. The aim of the course is to develop the basic skills of writing, reading, listening, and speaking. In Japanese. 117.3, students will learn more kanji and grammar patterns based on Japanese. 114.3. Students are encouraged to study Hiragana and Katakana characters before the class starts. By the end of this course students will be at a similar level to Japanese-Language Proficiency Test Level N5.

**JPNS. 214.3 — 1/2(3L)**  
**Intermediate Japanese I**  
This course is for students who have completed JPNS. 117.3. Students will learn more kanji and complex grammar patterns based on Introductory Japanese I and II. This will enable students to communicate more confidently and express themselves using the skills of reading, writing, listening and speaking.

**JPNS. 217.3 — 1/2(3L)**  
**Intermediate Japanese II**  
This course is for students who have completed JPNS. 214.3. Students will learn more kanji and complex grammar patterns. This will enable students to communicate more confidently and express themselves using the skills of reading, writing, listening and speaking. By the end of this course students will be at a similar level to Japanese-Language Proficiency Test Level N3.

**JPNS. 233.3 — 1/2(3L-3P)**  
**Popular Culture and Cinema in Japan**  
Japanese popular culture, in the forms of manga, anime, films, and even characters like Hello Kitty, have become an integral part of popular culture across the globe today. From Godzilla to Miyazaki films, it seems that Japan is cool! This course explores the Japanification of global popular culture by examining Japanese popular culture and its reception in the west and in East Asia from the 1950s through the present. Course meetings will include lectures, discussions, reading examples of manga and anime in translation, and viewing and discussing noteworthy films. Particular attention will be paid to how issues of modernity, loss, anguish and rebirth are all cultural and religious themes at play significant, yet sometimes silent, roles in Japanese popular culture.

**KIN — KINESIOLOGY**

**KIN. 121.3 — 1/2(3L)**  
**Functional Basis of Physical Activity**  
In surveying the functional effects of physical activity the course will examine strength development and training, anaerobic training, aerobic training, flexibility, diet and other selected topics. Physical growth patterns of children and the effects of exercise on growing tissues will also be covered. Laboratory experiences will be provided to supplement the lectures.

**KIN. 122.3 — 1/2(3L)**  
**Social Behavioral Foundations of Physical Activity**  
Introduction to the basic concepts and topics associated with the behavioral aspects of physical activity. The focus is basic principles of motor learning and the social psychology of sport. A brief introduction to cultural aspects of physical activity in Canada is also presented along with current issues.

**KIN. 150.3 — 1/2(3L)**  
**How Body Move I**  
Introduces students to the theoretical and practical study of human movement. Students will become knowledgeable in the basic sports science principles underpinning human movement while at the same time developing their own body-management skills (moving efficiently and safely). Through the medium of gymnastics, students will be introduced to the six mechanically-related Movement Patterns from which most human movement evolves: The Body in Stillness (Statics), The Body in Explosive Movement (Spring or Take-off), The Body in Repetitive Movement (Locomotion), The Body in Absorbing Movement (Landing), The Body in Rotation and The Body in Swing. Students will be assessed on both theoretical and practical content.

**KIN. 222.3 — 1/2(3L-1P)**  
**Biomechanics I**  
A study of the principles of statics and dynamics related to human motor performance in exercise and sport. Systematic methods for analyzing simple and complex motor skills are presented.

**KIN. 223.3 — 1/2(3L)**  
**Contemporary Health Issues**  
Provides a forum for the discussion of current health issues. Global health concerns (e.g. environment, media, medical technologies, health care), as well as personal behaviors related to one's health and the health of others, will be examined. Students will develop the skills needed to seek out and evaluate health information enabling them to make wise choices for themselves and others.

**KIN. 225.3 — 3(3L-2P)**  
**Introductory Exercise Physiology I**  
An introductory course on the effects of physical activity on specific physiological systems. Specific emphasis will be placed on the basic aspects of skeletal muscle and neural physiology.

**KIN. 226.3 — 3(3L-2P)**  
**Introductory Exercise Physiology II**  
Continues to study the effects of physical activity on basic physiological function and systems. Special emphasis will be placed on the basic aspects of cardiovascular and respiratory function.
KIN. 231.3 — 1/2(3L)
Social Psychological Foundations of Physical Activity
Explores individual human behaviour in a physical activity context. The emphasis will be placed upon understanding social-psychological concepts as they relate to the physical activity setting.
Prerequisite(s): KIN. 121 and. 122.

KIN. 232.3 — 1/2(3L)
Physical Activity in Society
Introduces the sociology of physical activity, including sport, and challenges students to think critically about physical activity in Canadian society. Overarching topics include: (a) the emergence of physical activity as a way to promote health and prevent chronic disease in Canadian society, (b) social inequality, arising from social structural factors such as social class, age, race, gender, and sexual orientation, and physical activity, and (c) the impact of social institutions on physical activity in society.
Prerequisite(s): KIN. 121 and. 122.

KIN. 233.3 — 35
History of Sport and Physical Education in Canada
A historical and comparative study of the role, significance, and extent of sport and physical education in Canadian society and a series of selected cultures. The development and significance of sport and physical education in the U.S.A., Germany, Sweden, and China will also be studied.
Prerequisite(s): KIN. 121 and. 122.

KIN. 240.3 — 1/2(3L)
Pedagogy in Physical Activity Setting I Theory
A study of the philosophical and theoretical concepts involved in a physical education environment. The intent is to establish a foundation upon which further developments in the area may be undertaken. Topics will include factors such as: developmentally appropriate physical education, factors influencing the learning of motor skills, development of movement tasks, and a comprehensive understanding of human movement taxonomies.
Prerequisite(s): KIN. 121 and. 122.
Note: Cannot receive credit for both KIN. 240 and. 245. Previous credit for KIN. 245 fulfills the KIN. 240 requirement in the B.Sc. (Kin.) program.

KIN. 255.3 — 1/2(3L)
Program Planning and Design for Leisure and Sport
Provides students with the basic information required to successfully plan a leisure or sport program for a variety of agencies and target groups. In an effort to address the changing demographic trends that influence leisure and sport programs, focus will be on needs assessments of clients, resource implications, short- and long-term planning.
Prerequisite(s): KIN. 121 and. 122.

KIN. 281.3 — 1/2(3L-P)
Fitness Foundations for Life
Introduces students to fitness foundations for life and their relationship to a healthy lifestyle through traditional fitness methods and current trends in different mediums. Students will become knowledgeable in physical activity prescription and the application of specific fitness programming, as well as enhancement of leadership skills in aerobic fitness, flexibility, resistance training, and expressive movement. Students will be assessed on both theoretical and practical content.
Prerequisite(s) or Corequisite(s): KIN. 121, 122, and. 150. Note: Student may not receive credit for both KIN. 281 and KIN. 270.

KIN. 300.3 — 1/2(3L)
Exercise Psychology
This course is designed to explore the application of psychological, behavioural, and social factors concepts in exercise and physical activity settings.
Restriction(s): This course is restricted to students in the College of Kinesiology.
Prerequisite(s): KIN. 231

KIN. 333.3 — 2(3L)
Theory of Coaching
Designed to provide the student with an appreciation and understanding of the theory and practice of coaching. Students will look at the development of techniques of communication between the coach, individuals and/or groups as they relate to team organization and integration. There will be a development of the concept that coaching is a specialized form of teaching.
Restriction(s): Open to students entering Third Year Kinesiology.

KIN. 341.3 — 1/2(3L)
Pedagogy in Physical Activity Setting II Practice
The aim of this course is to develop an increased understanding of selected principles and practices of motor skill development in children and youth. In addition emphasis will be placed upon the establishment of optimal environments for the instruction and practice of motor skills. Opportunities will be provided for the observation and application of these principles and practices in lab and field based settings.
Prerequisite(s): KIN. 240.
Note: Student may only receive credit for one of KIN. 341, 345, and. 346. Previous credit for KIN. 345 fulfills the KIN. 341 requirement in the B.Sc. (Kin.) program.

KIN. 380.3 — 1/2(3L)
Research Methods in Kinesiology
Provides an introduction to research methods and design used in kinesiology research. The course will focus on critical evaluation of research studies and the use of various types of research methods with emphasis on the sport and physical activity context.
Prerequisite(s): KIN. 121 and. 122; or permission of the department.
Prerequisite(s) or Corequisite(s): STAT. 245 or PLSC. 314 or PSY. 233.
Note: Students may not receive credit for both KIN. 380 and 390.

KIN. 381.3 — 1/2(3L-P)
Adult Fitness and Exercise Management I
Students will have the opportunity to complete the CSEP Certified Personal Trainer theory and practical examinations.
Formerly: KIN. 270
Prerequisite(s): KIN. 222, 225, 226, and. 281
Note: Students may not receive credit for both KIN. 381 and 420.

KIN. 382.3 — 1and2(1L-3P)
Adult Fitness and Exercise Management II
Students will have the opportunity to challenge the Certified Exercise Physiologist (CEP) examination, provided that all prerequisites have been satisfied.
Prerequisite(s): KIN. 381
Note: Students may not receive credit for both KIN. 382 and 470.
KIN. 421.6 — 1and2(3P)
Athlete Health Practicum
Provides for practical field experience in the prevention and care of sporting injuries. Students will be assigned a field experience as a student trainer with a Huskie Athletics team for a season. For details, consult the Academic Advisor.

Permission of the Department required.
Prerequisite(s): KIN. 321.3.
Note: One year volunteer experience in the Huskie Athletics Student Trainer Program with a team assignment, regular attendance at seminars, and some clinic hours are required. Valid CPR and First Aid Certification are also required. Apply to the academic advisor.

KIN. 423.3 — 1/2(3L)
Physical Activity for Persons with Impairment
Focuses on physical activity programs for persons with impairments. Current trends in Canadian physical activity program philosophy and delivery are considered in concert with the more general philosophy and delivery systems for persons with impairments. Basic adapted physical activity principles focusing on activity, program and instructional modification are also considered.
Prerequisite(s): KIN. 222, 225, 226, 231, and. 322.

KIN. 424.3 — 1/2(3L-1.5P)
Aging and Activity
Will focus on exercise programming for older adults with respect to understanding the biology of aging as it affects potential for physical activity in later years. Emphasis will be on the special and changing needs of older adults and the adaptations to traditional exercise modalities necessary to ensure success in "active living." As part of the practicum experience, students are expected to spend 6-10 hours during the term, outside of class lecture times, observing and participating in community-based activity programs for seniors.
Prerequisite(s): KIN. 225 and. 226.

KIN. 425.3 — 2(3L-2P)
Physiology of Exercise
Will involve an overview of neuromuscular and cardiorespiratory physiology and a focus on special topics such as causes of fatigue during exercise, gender differences in response to exercise, and physiological responses during exercise in environments with altered temperature and atmospheric pressure (ie. altitude and diving).
Prerequisite(s): KIN. 225 and. 226.

KIN. 426.3 — 1/2(3L)
Health Aspects of Physical Activity and Physical Fitness
A comprehensive review of current knowledge regarding the effects of physical activity and physical fitness on physical and mental health. Additional topics include exercise and aging, cost/benefit of physical activity and risks of exercise.
Prerequisite(s): KIN. 225 and. 226.

KIN. 428.3 — 1/2(3L-2P)
Nutrition Drugs and Physical Activity
Examines the effects of nutritional intake and drug usage on physical performance. Preparation for competitive or recreational activities demands an understanding of: (1) the nutritional requirements which underpin such activity, and (2) the major consequences that ingestion of performance enhancing drugs may have upon the health and physical achievement of an individual.
Prerequisite(s): KIN. 225 and. 226.

KIN. 429.3 — 1/2(2L-2P)
Exercise and Cardiac Rehabilitation
Primarily a practicum course in cardiac rehabilitation. Students will intern within the tri-hospital cardiac rehabilitation program offered through Saskatoon District Health. The major emphasis of this course is the role of exercise in cardiac rehabilitation.
Permission of the Department required.
Prerequisite(s): KIN. 381.
Note: PATH. 205 and PHSL. 346 are recommended. Apply to the academic advisor.

KIN. 430.3 — 1/2(3L)
Psychological and Behaviour Change Aspects of Physical Activity and Health Interventions
This course will focus on the psychological theory, research, and methods of changing psychological factors and behaviour known to influence physical activity. The specific focus will be upon physical activity and health interventions and will concern individual behaviour change. Topics include concepts about interventions such as, behaviour change and examples of interventions for asymptomatic and symptomatic populations.
Restriction(s): This course is restricted to students in the College of Kinesiology.
Prerequisite(s): KIN. 330.

KIN. 431.3 — 1/2(3L)
Mental Training for Sport and Physical Activity
An introduction to mental skills training for sport and physical activity. This course will build on the material presented in KIN. 231.3 and focus on the development and application of a mental skills training program in sport and physical activity. Analysis, discussion, and application will focus on ethical issues, pre-competition and competition planning, goal-setting, arousal control, imagery, self-talk, attention control, and program evaluation.
Prerequisite(s): KIN. 231.

KIN. 432.3 — 1/2(2L-15)
Ethics and Values in Sport and Physical Activity
Students will be introduced to a number of decision making models which guide the ethical decision making process. Contemporary issues and controversies from the behavioural, functional, educational and management areas of physical activity will be examined from an ethical and moral perspective.
Restriction(s): Only open to Kinesiology students entering their Third Year.

KIN. 442.3 — 1/2(3L-P)
Biomechanics II
This is a second level biomechanics course which provides students an opportunity to further their study in both the qualitative and quantitative aspects of sport biomechanics.
Prerequisite(s): KIN. 222.

KIN. 445.3 — 1and2(R)
Advanced Readings and Special Studies in Kinesiology
Students are required to present in writing a detailed description of the proposed special study to a college faculty member with expertise in that area. The faculty member may then wish to sponsor the study by requesting approval from the Assistant Dean.
Formerly: Permission of the department required.
Note: Open to senior students who have a strong background and wish to pursue planned study in a special phase of Kinesiology.

KIN. 451.3 — 1and2(P)
Community Service Learning in a School Setting
Community Service Learning (CSL) combines working within the community with experience-based learning. This course will offer students an opportunity to plan, teach and learn in a community school setting. Students will work with teachers to promote healthy living through physical activity and nutrition activities. Students will be asked to share their experiences through discussion, journals and presentations.
Prerequisite(s): KIN. 240.3 and KIN. 341.3. Apply to Academic Advisor, College of Kinesiology.

KIN. 471.6 — 1and2(P)
Administration Practicum
Students will be involved in assigned field experience equal to 10 hours per week for one complete term. In addition, a monthly group seminar will be held to discuss programs and problems related to the field experience. Provides for practical field experience in the administration of sport and leisure programs. Will be under the direction of college staff and competent community authorities. FIELD EXPERIENCE: Students will be assigned to work with leisure services boards, intercollegiate athletic boards, amateur sport associations or special games committees. Work done will be evaluated by the college staff and the professional in the field.
Permission of the department required.
Note: Open to senior students. Apply to the academic advisor. Preference will be given to senior students who have completed a minimum of 6 credit units of Entrepreneurship and/or Edwards School of Business classes.

KIN. 481.6 — 1and2(P)
Advanced Adult Fitness and Exercise Management Practicum
A practical-based course that will expose the student to healthy and unhealthy populations. Experiences may include such areas as musculoskeletal rehabilitation, athlete training, and health and wellness promotion. Many of the hour requirements to challenge the Certified Exercise Therapist designation (through CSEP) will be satisfied by the course requirements.
Permission of the department required.
Prerequisite(s): KIN. 381 and. 382.
Note: Apply to academic advisor.
KIN. 490.3 — 1/2(3S)
Honours Seminar
Students will attend presentations, review articles, and prepare materials that will assist them in interpreting and presenting research in exercise and sport science.

Formerly: Permission of the department required
Restriction(s): Open to students in the B.Sc. (Kin.) Honours Program.
Prerequisite(s): KIN. 380.

KIN. 494.6 — 1/2(3P)
Honours Thesis
The student will work two terms on a project under a faculty member's supervision; become familiar with the pertinent research literature; establish procedures, collect, record and analyze experimental results; submit to the College a written thesis which incorporates the background to the work done, procedures used, results obtained and a discussion of the results and their significance. The student will present the thesis findings in KIN. 490.3 Honours Seminar. Before beginning, the student must submit an outline of the project for approval of the Associate Dean. At the end of the project, the student will submit to the department a journal and a written report in thesis form.

Permission of the department required.
Restriction(s): Open to students in the B.Sc. (Kin.) Honours Program with a minimum Cumulative Weighted Average of 75% or higher.
Prerequisite(s): KIN. 380.
Corequisite(s): KIN. 490.

KIN. 498.3 — 1/2(3L)
Special Topics
Takes advantage of special circumstances in which one time special topic offerings can be made available to senior students in the College.

KIN. 499.6 — 1and2(3L)
Special Topics
Takes advantage of special circumstances in which one time special topic offerings can be made available to senior students in the College.

KINA — KINESIOLOGY ACTIVITY

KINA. 200.2 — (3L)
How Body Moves Projectiles and Implements
Introduces students to the theoretical and practical study of the common movement patterns from which most Games evolve. Students will gain knowledge and skills in how the body generates and absorbs force using projectiles (throwing, shooting, kicking, spiking, trapping, etc) and implements (bats, racquets, clubs, sticks, etc). Low organized games and lead-up games will be used extensively to teach students the commonalities in teaming and evading used in team games. Students will be assessed on both theoretical and practical content.

Prerequisite(s): KIN. 150

KINA. 210.2 — (3L)
Introduction to Fundamentals of Movement and Rhythm
Introduces fundamentals of movement and rhythm. Includes basic movement techniques designed to give the student an understanding of body alignment, body balance and control of the centre.

KINA. 211.2 — (3L)
Aquatics
Includes practical and theoretical work. Practical aspects include strokes, lifesaving skills and rescues, resuscitation and first aid training. Opportunity is provided to earn the Lifesaving Society Star Patrol and Fitness Award. CPR-C certification is required. There will be a special fee assessed of approximately $75.00 for CPR certification.

Note: Must have one of AquaQuest 7, Swim Kids Level 6, Lifesaving Rookie Patrol or demonstrate equivalent distance swimming (150 meters). Distance swimming is checked by the instructor the first day of classes. Certified WSI Instructors are not permitted to take KINA. 211. However, another 2 credit unit activity must be taken in lieu of KINA. 211.

KINA. 220.2 — (3L)
Basketball
An introduction designed to develop knowledge and understanding of the performance of individual basketball skills and basic knowledge of FIBA rules. Minor emphasis on the basic elements of team play. Level I technical certification possible.

KINA. 226.2 — (3L)
Football
A practical approach to the basic skills involved in competitive football. Such skills as passing, kicking, blocking and tackling will be covered during the class periods. Basic offensive and defensive tactics will also be covered.

KINA. 227.2 — (3L)
Hockey
Fundamental skill areas of ice hockey are covered with some emphasis on team play.

KINA. 229.2 — (3L)
Volleyball
Introduces fundamental techniques in the game of volleyball. Includes description of basic individual skills, the development of teaching progressions, skill analysis and correction and current rule interpretations and officiating techniques.

KINA. 235.2 — (3L)
Track and Field
Introduces basic events of track and field. Develops understanding of the fundamental principles underlying the teaching and execution of each event. A practical approach to develop the ability to demonstrate basic skills. Some coverage of organization and administration in track and field and cross country running. Level I technical certification possible.

KINA. 445.2 — (3P)
Special Studies in Physical Activities
Restricted to senior students who wish to pursue an advanced planned study in a physical activity. Students wishing to pursue a special study area are required to present in writing a detailed description of the proposed study to a college faculty member with expertise in that area. The faculty member may then wish to sponsor the study by requesting approval from the Assistant Dean.

KIST — KINESIOLOGY-STATS EQUIVALENTS

KIST. 1000
Note: Students with credit for PLSC. 314, PLSC. 214, PSY. 233, or STAT. 245 may not take this course for credit.

LATN — LATIN

College of Arts and Science

LATN. 112.3 — 1(5L)
Latin for Beginners I
An introduction to the basics of Latin grammar, with particular attention to accidence.

LATN. 113.3 — 2(5L)
Latin for Beginners II
An introduction to the main elements of basic Latin syntax.

Prerequisite(s): LATN. 112.

LATN. 202.3 — 1(3L)
Intermediate Latin I
Consolidation of basic Latin grammar and introduction to advanced Latin texts. The readings of some of the less difficult ancient Latin texts.

Prerequisite(s): LATN. 113.
Note: Minimum of 75 per cent in Latin. 113 recommended.

LATN. 203.3 — 2(3L)
Intermediate Latin II
Readings in continuous Latin prose texts. Introduction to Latin poetry and metrics. Latin prose composition.

Prerequisite(s): LATN. 202.

LATN. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

LATN. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.
LATN. 398.3 — 1/2(3S)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LATN. 399.6 — 1and2(3S)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LATN. 400.3 — 1/2(3S)  
Senior Latin  
Advanced study, in Latin, of particular authors, works, or genres, with emphasis on the precise translation and analysis (grammatical, metrical, stylistic, historical, and/or literary) of the assigned Latin texts. May be taken more than once for credit.  
Prerequisite(s): LATN. 203.  
Note: Pre-1815; Europe and Great Britain. Students may take this course more than once for credit; provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

LATN. 498.3 — 1/2(3S)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LATN. 499.6 — 1and2(3S)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LAW — LAW

LAW. 201.6 — 1and2(3L)  
Contracts  
An introduction to the law of contracts, including formation of contractual obligations, consideration, privity, contract formalities, capacity, contractual terms, misrepresentation, mistake, illegality, discharge and remedies.

LAW. 204.6 — 1and2(3L)  
Criminal Law  
Basic concepts and procedures, principles of criminal liability, physical and mental elements of a crime, common law and statutory defenses, the Canadian Charter of Rights and Freedoms, capacity, justification, parties to offences, and specific offences.

LAW. 208.6 — 1and2(3L)  
Property I  
A survey of the law of personal property. The forms and methods by which interests in personal property are created, used and transferred. A survey of English land law and its introduction to, and use in, Saskatchewan.

LAW. 212.6 — 1and2(3L)  
Tort Law  
An introduction to the legal processes through which an injured person can seek compensation either from the state, from insurance schemes or in a tort action. Detailed consideration will be given to the Saskatchewan Criminal Injuries Compensation Scheme, the tort of negligence, and the Saskatchewan Automobile Accident Insurance Act. Preliminary treatment will also be given to civil procedure, ethical issues, and access to justice considerations, together with a critique of Canada’s legal response to personal injury.

LAW. 231.3 — 1/2(3L)  
Constitutional Law I Division of Powers  
Principles of federalism and of constitutional interpretation. The judicial system. Detailed examination of the distribution of legislative power between Parliament and the Provincial Legislatures. Constitutional amendment. Policy issues will also be addressed.

LAW. 233.3 — 1/2(3L)  
Constitutional Law II Charter of Rights and Freedoms  
An examination of the Charter of Rights and Freedoms. Emphasis will be placed on general principles of interpretation and theories of judicial review and human rights, general provisions of the Charter (s. 24, 12, 5, etc.) and issues concerning selected charter rights and freedoms, such as section 2, 7 and 15.

LAW. 243.0 — 1and2(1L)  
Legal Research and Writing  
An introduction to the methods of legal research and writing. Students will be required to complete a number of legal memoranda as well as bibliographical and research assignments. The first year moot court program forms part of this course.

LAW. 302.3 — 1/2(3L)  
Commercial Relationships  
Designed to give students the opportunity to examine the law applicable to a range of commercial legal relationships that commonly occur in business and consumer transactions: sale of goods, equipment leasing, agency, suretyship and negotiable instruments law.

LAW. 303.3 — 1/2(3L)  
Secured Financing in Canada  
Canvasses secured consumer and business financing practices in Canada involving collateral in the form of both personal and real property. The subjects addressed include the policy and economic implications of secured financing law, including the history, doctrinal basis and specific provisions of the primary sources of secured financing law in Canada-provincial Personal Property Security Acts and the secured financing regime of the Bank Act and the various statutes that apply to mortgages. The study of case law will provide the contextual framework to interpret and apply this legislation. These subjects are examined in the context of the two primary themes of the course, inter partes enforcement of security agreements and third party priority issues.  
Prerequisite(s): LAW. 302.

LAW. 304.3 — 1/2(3L)  
Immigration and Refugee Law  
Examines the policies, laws, regulations, guidelines, procedures, and cases that illustrate how Canada defines membership in the Canadian community.

LAW. 314.3 — 1/2(3L)  
Health Law  
Introduces students to the basic principles of medical law and their application to common issues in health care. It also explores the legal framework for the health professions and the health care system.

LAW. 326.3 — 1/2(3L)  
Trusts  
Covers the creation, administration, variation and breach of express trust, including charitable trusts. Resulting and constructive trusts are also examined.

LAW. 332.3 — 1/2(3L)  
Recent Developments in Public Law Remedies  
Considers a number of issues in public law remedies, including constitutional/Charter remedies and prerogative remedies. In doing so, it will draw upon theoretical, historical, and comparative materials (notably from the United States and the United Kingdom). Some of the issues to be considered may include: the relationship between remedies and substantive rights; writs of habeas corpus; structural injunctions; remedies for extraterritorial state action; constitutional exemptions; reading in and reading down; declarations (and suspended declarations) of invalidity; stays of proceedings; the exclusion of evidence in criminal proceedings; and Charter damages.  
Restriction(s): Open to Law students only.

LAW. 340.3 — 1/2(3L)  
Administrative Law I  
A survey of the role of administrative agencies within the Anglo-Canadian legal system focusing primarily on consideration of the extent to which agency and executive action is subject to judicial review and control.

LAW. 342.3 — 1/2(3S)  
Appellate Advocacy  
This seminar is a theory and practice course, combining the study of legal principles unique to appellate litigation practice with practical written exercises, a mock Court of Appeals Chambers and a moot. The objective of this seminar is to increase a student’s understanding of the appellate process in both civil and criminal matters.
LAW. 343.3 — 1/2(3L)
Topics in Advanced Legal Reasoning
Examines, explicitly and in detail, techniques of legal reasoning. A significant portion of this course is focused on a detailed examination of precedent (stare decisis)-based reasoning, a significant portion on interpretation (mainly statutory interpretation), and a smaller portion on other selected issues differing from year to year (which might include the relevance of comparative law, explicit discussion of the role of policy in legal reasoning, writing on symbolic representations of legal reasoning and use of artificial intelligence-aided legal decision-making, etc.). The legal reasoning techniques examined will support skill development (although the course, it should be noted, is not specifically focused on research or writing skills), although they permit at the same time examination of an underlying theoretical issue of in what ways legal reasoning is or is not distinct.

LAW. 351.3 — 1/2(3L)
Evidence I
Examination of the foundations of the law of evidence in civil and criminal trials in Canada. The principles, rules, statutes and procedures are examined from a critical perspective with emphasis on the history, rationale and reform of rules and statutes affecting the admissibility of evidence. The topics examined are admissibility, relevance, character evidence, opinion evidence, hearsay evidence, competence, privilege and confessions.

LAW. 361.3 — 1/2(3L)
Business Organizations I
Examination of the basic features of business corporations. Topics include: corporate personality, the process of incorporation, the powers and duties of directors and officers, shareholder rights and remedies.

LAW. 363.3 — 1/2(3L)
Agricultural Law I
Agriculture is a highly regulated industry in most jurisdictions; Canada and Saskatchewan are no exception. Historically governments have intervened in agriculture under the pretext of ensuring stability in both the agriculture and consumer communities. It is because of this intervention, Agricultural Law is often considered the law of exceptions. Reviews specific legislation designed to regulate agriculture, such as the Saskatchewan Farm Security Act, as well as agricultural exceptions in general legislation. Case law and other legal analysis will be included when necessary.
Prerequisite(s): Successful completion of first year law.

LAW. 372.3 — 1/2(3L)
Family Law I
Introduction to trends in families and family law, the constitutional and statutory framework for the regulation of families and the role of process issues in family law practice. The course also provides a detailed examination of maintenance and property rights as between spouses, both married and common law.

LAW. 384.3 — 1/2(3L)
Civil Procedure
A chronological study of the procedural steps, rules and related substantive law in a civil action from the moment of the decision to sue to the trial of the matter. The context of the adversarial process in an action is examined by reference to the policies underlying civil procedure, the role and authority of the lawyer, the organization and jurisdiction of the courts, limitations of actions and costs. The civil action is examined through a focus on principles of jurisdiction and venue, type and manner of commencement of proceedings, pleadings, multiple claims and parties, and discovery. The course will involve the drafting of documents.

LAW. 393.3 — 1/2(2S-1R)
Gender and Law
Examines the social construction of gender, and critical and feminist perspectives on law.

LAW. 394.3 — 1/2(3L)
Jurisprudence
Examines the nature and function of the law, focusing particularly on the relationships between the law and society, law and morality and law and political theory.

LAW. 398.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LAW. 399.6 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LAW. 401.3 — 1/2(2L-1R)
Securities Regulation
An introduction to the principles of securities regulation in Canada. The course will provide an overview of the regulatory system including registration and prospectus requirements (and exceptions thereto), continuous disclosure, insider trading and reporting, and control transactions. Special emphasis will be given to the regulatory aspects of advising a public company, including corporate finance, disclosure and governance matters.
Corequisite(s): LAW. 361.

LAW. 402.3 — 1/2(3L)
International Commercial Transactions
Addresses a variety of issues that arise in the context of international private sales transactions and the law that is applicable to their solution. Introduction to basic conflict of laws (private international law) rules that determine how the law applicable to a particular contractual issue is determined. The United Nations Convention on Contracts for the International Sale of Goods is examined and the effect of its application to central features of an international sale of goods contract are explored. The law applicable to digital communications in contract formation is examined.

LAW. 403.3 — 1/2(2S-1R)
Advanced Criminal Law
The course focuses on substantive criminal law with emphasis on critical analysis of the grounds of criminal liability and criminal responsibility. The challenges that social and cultural diversity pose for the development of substantive criminal law will be considered throughout.
Note: Students with credit for LAW 805 cannot receive credit for this course.

LAW. 404.3 — 1/2(3L)
Judgment Enforcement Law
The issuance of a judgment does not, in itself, enable a successful claimant to reach the financial resources or property of the judgment debtor for purposes of satisfaction of the successful plaintiff's claim. The enforcement of a judgment for the payment of money entails resorting to the specialized system of law that constitutes the subject of this course. The various methods of judgement enforcement are examined. In addition the law applicable to fraudulent conveyances and preferences is examined in detail. It is expected that the Saskatchewan Legislature will enact The Enforcement of Money Judgement Act in late, 2011 or early, 2012. This Act will revolutionize judgment enforcement law in Saskatchewan. An important aspect of the course examines changes resulting once the legislation is proclaimed.

LAW. 405.3 — 1/2(2S-1R)
Law and Culture
This interdisciplinary seminar explores legal culture within the larger cultural contexts that it shapes and is shaped by. In studying the ways in which law and cultures intersect in history, theory, and practice, students will enhance their critical understanding of the independence and interdependence of law and justice; the value of cultural theory in reading legal texts; the challenges and opportunities of inter-cultural perspectives; the role of media images of the law and lawyers; issues of race, gender, class, commodification, and sexuality; the construction of public and private spheres; censorship and intellectual property; agency and accountability; cultural myths and narrative powers.
LAW 407.3 — 1/2(3L)
Bankruptcy Insolvency and Receiverships
Designed to permit close examination of central features of the law of bankruptcy, insolvency and equitable receiverships. Recent changes to bankruptcy and insolvency law will be considered and comparisons will be made with the law of other jurisdictions which have recently enacted reforms in this area of the law. The specific issues that will be examined in the context of bankruptcy and insolvency law will include: the role and efficacy of consumer and business insolvency proceedings; the position of secured creditors of the bankrupt; the status of statutory lien holders; the relationship between receivership and bankruptcy; dealings with undischarged bankruptcies, bankruptcy exemptions, the role of unsecured creditors in bankruptcy administration and consumer bankruptcies. The central features of Insolvency (reorganization) systems contained in the Companies Creditors Arrangement Act and the Bankruptcy and Insolvency Act are examined in detail. The specific issues that will be examined in the context of equitable receivership include: the receiver as agent of the debtor and representative of the secured party, the special position of a receiver-manager and receiverships under The Personal Property Security Act and Bankruptcy and Insolvency Act.
Prerequisite(s): LAW 404.

LAW 408.3 — 1/2(25-1R)
Multi Party Negotiation
This unique course explores problem solving in the multiparty and cross cultural context, often involving complex situations and larger than social conflict. Students take part in extensive simulations, integrating theory and practice.
Note: LAW 430 strongly recommended.

LAW 410.3 — 1/2(3L)
Intellectual and Industrial Property I
The general nature of intellectual and industrial property rights and the present legal framework in Canada for the protection and exploitation of such rights. Traditional and emerging categories and their theoretical underpinnings. The substantive law of patents will be examined. An examination of the developments and problems caused by new technologies and the demands made on the law by a post-industrial, information society.

LAW 413.3 — 1/2(25-1R)
Current Issues in Law Reform
This seminar will introduce students to the principles and process that guide the reform of the law. The seminar will use selected readings and presentations by guest lecturers and the professor to provide the foundation for a consideration of the process, machinery and potential for law reform initiatives in areas of provincial jurisdiction. Students will be introduced to approaches to law reform, interact with the Law Reform Commission of Saskatchewan and will learn about the successes and failures of a number of recent provincial law reform initiatives.

LAW 415.3 — 1/2(3L)
Municipal Law
This course examines the scope and exercise of municipal authority, municipal liability in tort, as well as zoning and other means of land use regulation.

LAW 416.3 — 1/2(25-1R)
Elder Law
Examines the way in which the law impacts elders in our society. We will examine topics such as the concept of aging, considerations in representing elders, housing, concepts of guardianship and substitute decision making, capacity and consent, healthcare directives, elder neglect and abuse and the role of the Public Trustee.

LAW 417.3 — 1/2(3L)
Insurance Law
An examination of general topics of insurance law and how the Saskatchewan Insurance Act affects those topics in relation to fire insurance, life insurance and automobile insurance. These topics include the legal position of agents in the business of insurance and the Insurance Law concepts of indemnity, insurable interest, non-disclosures and misrepresentations, warranties and conditions, proximate cause, valuation, subrogation and contribution.

LAW 418.3 — 1/2(25-1R)
Sexual Assault
The seminar examines sexual assault in domestic and international criminal and civil law. Topics addressed include: 1) comparison of alternate theoretical conceptualizations and legal definitions of sexual assault; 2) interpretation of current substantive law: consent in the actus reus, consent and voluntariness, mens rea, mistakes of fact and law, the ‘reasonable steps’ provision; 3) administration of justice in relation to sexual assault: police and prosecutorial practices and policy, determinations of credibility and admissibility of evidence, questions of law and fact, the judicial role, jury instructions, sentencing; 4) civil actions; 5) criminal compensation boards; 6) the Charter and international human rights law, the UN Declaration of Human Rights, Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), 1979, Declaration on the Elimination of Violence Against Women, 1993, Statute of the International Criminal Court (Rome Statute), 1998, including recognition of ‘rape’ and other forms of sexual violence of comparable gravity as ‘war crimes’ and crimes against humanity’. Note: LAW 351 and LAW 423 strongly recommended.

LAW 419.3 — 1/2(3L)
Remedies I
Examination of the principles and rules for remedying breaches of contract, tortious wrongs, and invasions of property rights. It will consider issues arising in the assessment of compensatory and non-compensatory damages, as well as equitable remedies like injunctions and specific performance.

LAW 420.3 — 1/2(25-1R)
Current Issues in Insolvency
In our world of ever growing corporate structures and technology the practice of insolvency is changing and adapting. This seminar will examine new and emerging legal issues that today’s companies face when they reorganize under the Companies’ Creditors Arrangement Act in Canada by comparing it to how the United States treats similar issues under Chapter 11 of the Bankruptcy Code. The various areas of law that will be discussed include how mass tort claims can be included in the reorganization process (ie. the Red Cross tainted blood scandal), cross-border insolvencies of multinational corporations, the treatment of environmental claims, the treatment of intellectual property as property, employment law and the treatment of employee benefits and pensions in a reorganization as well as discussing public policy issues surrounding the reorganization of companies.

LAW 421.3 — 1/2(3L)
Legal Ethics and Professionalism
Introduces students to i) the roles, responsibilities and authority of the legal profession and ii) the legal and ethical duties of lawyers in the practice of law. The regulation of various aspects of the profession - admission, regulation of the practice of law, lawyer discipline, etc. are critically examined. As well, students will learn the elements of a lawyer’s duties to client, the court and others, including himself or herself. This involves an understanding of the lawyer’s role in the adversary system, the nature of lawyer-client confidentiality, integrity and conflicts of interest in various roles performed by lawyers.

LAW 423.3 — 1/2(3L)
Criminal Procedure
Jurisdiction, including classification of offences, time limitations, jurisdiction under the Charter; pre-trial procedure and practices, including search and seizure, arrest and detention, right to counsel; judicial interim release (bail); the preliminary inquiry and the process of discovery; the charging process, including stays and withdrawals; pleas; trials; trial by jury.
Prerequisite(s): LAW 351 recommended.

LAW 425.3 — 1/2(3L)
Sentencing in Criminal Justice System
Selected topics relevant to sentencing in the criminal justice system combining theory, doctrine and practice. Theoretical aims of punishment and their translation into current legal doctrine and practice will be discussed, with particular emphasis on the Canadian and Saskatchewan context.

LAW 427.3 — 1/2(3S)
Gale Moot
Participation in the Gale Moot Competition held annually in Toronto is required. It will involve research and advocacy, both oral and written, on a complex case or problem in the field of criminal and/or constitutional law. Students are responsible for the preparation of both an Appellant’s and a Respondent’s factum, and will participate in at least three practice moots at the College prior to the competition. Recommended for students with an interest in public speaking and exacting research.

LAW 428.3 — 1/2(3L)
Wills
Execution, construction and revocation of wills, as well as issues of probate, survivorship, intestate succession, dependents’ relief, and family issues as they relate to wills and estates.
LAW. 429.3 — 1/2(2S-1R)
Law and Disability
Examines the way in which the law defines who a person with a disability is, and then both facilitates and hinders those individuals in their journey to achieve full participatory citizenship. Some areas we examine such as disability theory will be primarily applicable to the disabled communities. Other areas including human rights, employment, housing, decision making and so-called ‘right to die’ issues will be of wider application. These areas will be examined with respect to their application to people with disabilities.

LAW. 430.3 — 1/2(2S-1R)
Negotiation and Dispute Resolution
Examination of the form and function of negotiation as a problem-solving process. Negotiation is critical to lawyers and others concerned with preventing or resolving disputes. Effective negotiation skills will be studied from theoretical, critical and practical perspectives. Emphasis will be placed on the role of the lawyer in negotiation.

LAW. 431.3 — 1/2(2S-1R)
Advanced Constitutional Law
Examination of current issues in constitutional law, including issues of constitutional theory, federalism and the constitutional protection of individual and group rights.

LAW. 432.3 — 1/2(2S-1R)
Human Rights
An understanding of contemporary debates about universalism and of the meaning of human rights with attention to political theory and international underpinnings. The concept of discrimination and the constitutional position of human rights and fundamental freedoms in Canada. Detailed analysis of the concept of equality as it is embedded in domestic anti-discrimination law and enshrined in section 15 of the Charter.

LAW. 433.3 — 1/2(2S-1R)
Sallows Human Rights Seminar
The Sallows Seminar in Human Rights will be offered once a year, usually in the first term. It will be led by the visiting Sallows Professor in Human Rights and have a varied content, depending upon the visiting Sallows Professor in Human Rights and constitutional position of human rights and fundamental freedoms in Canada. Detailed analysis of the concept of equality as it is embedded in domestic anti-discrimination law and enshrined in section 15 of the Charter.

LAW. 436.3 — 1/2(3L)
Aboriginal Law
The Aboriginal peoples of Canada; Aboriginal title and Aboriginal rights; treaties and the treaty-making process, including hunting and fishing rights, Natural Resources Transfer Agreements; the Metis; land claims; federal and provincial jurisdiction over Aboriginal peoples and lands; Indian Act, including membership and Bill C-31; constitutional recognition and protection of the rights of Aboriginal peoples; Aboriginal self-government.

LAW. 437.3 — 1/2(2S-1R)
Advanced Studies in Aboriginal Law
The seminar will involve an advanced discussion of current Aboriginal issues. Areas for discussion may include aspects of Aboriginal self-government, Aboriginal rights in international law, traditional Aboriginal law, Aboriginal title and sovereignty, treaties, Metis rights, hunting and fishing rights, reserve lands, federal and provincial jurisdiction.

LAW. 438.3 — 1/2(2S-1R)
Poverty and the Law
Examines the social, economic and legal conditions affecting people who live in poverty in Canada. Consideration of various definitions of poverty and the relationship between poverty and race, gender and class inequality. Explores the role of law in regulating and/or alleviating poverty.

LAW. 439.3 — 1/2(2S-1R)
Mediation
Mediation-broadly speaking, the process of assisting the negotiation of others-is being increasingly used to resolve legal disputes. This course explores mediation from both theoretical and practical perspectives. As well as examining various types of mediation and the role and style of the mediator, students will develop mediation skills such as questioning, listening, and generating options for resolving disputes.

LAW. 441.3 — 1/2(3S)
Laskin Moot
This seminar is designed to provide academic supervision and credit for the five students who are members of the College team in the Laskin Memorial Moot Court competition. The team consists of four oralsists and potentially one research counsel. Participants do research and written and oral advocacy on a complex problem in administrative and constitutional law. The seminar is recommended for those with an interest in advocacy, exacting research, and public law issues.

LAW. 444.3 — 1/2(3L)
Environmental Law
Surveys the actual and potential role of the law in protecting the integrity of the environment from threats posed by scientific and technological advances over exploitation of resources, rapid development and population growth.

LAW. 445.3 — 1/2(2S-1R)
Public Health Law
Explores legal issues in the context of public health, examining the legal framework and roles of law relevant to the protection and promotion of health.

LAW. 446.3 — 1/2(2S-1R)
Natural Resources Law
Seminar introducing the legal regulation of natural resources. Explores a variety of legal and policy considerations involved in the exploitation of natural resources. Subjects addressed include sustainable development of natural resources, the ownership and disposition of natural resources, and social and environmental considerations.

LAW. 447.3 — 1/2(3S)
Aboriginal Rights Moot
The Aboriginal Rights Moot is a non-competitive moot structured on the traditional Aboriginal circle consensus-building process. It is designed to allow Aboriginal law students to debate and discuss Aboriginal rights issues vital to the Aboriginal peoples.

Prerequisite(s): LAW 436.

Note: Team is chosen in October and competition takes place in March.

LAW. 449.3 — 1/2(3S/5)
Canadian Legal History
Introduces students to fundamental developments in Canadian legal history, and uses a historical perspective to enhance understanding of Canadian legal institutions and principles. The course will survey the ingredients of the Canadian legal heritage: English, European and American influences; the legacy of civil, common and customary law. There will also be discussion of the impact of Canadian historical events on specific areas of Canadian law, such as immigration law, family law, criminal and constitutional law.

LAW. 450.3 — 1/2(3L)
Western Canada Moot
This course involves preparation and participation in a trial advocacy moot initially involving the six western Canadian law schools followed by a national competition. Participants are involved in juried trial relating to a problem in evidence, criminal procedure and/or criminal law. Participants are expected to prepare opening juror addresses, examinations-in-chief and cross examinations and closing arguments. In addition, there is research on various evidentiary points which arise during the course of argument. Note: There is no prerequisites for this course although it is desirable that students will have completed a course in either evidence or criminal procedure.

LAW. 451.3 — 1/2(3L)
Evidence II
Primarily examines the law of evidence from a critical perspective. We will examine the history, rationale and reform of evidence rules and statutes with some examination of their relationship to the system of proof. We will examine the exclusion of evidence of common law and under the Charter. We will also consider a number of selected topics which bring an interdisciplinary, theoretical, comparative or other relevant perspective to the law of evidence.

Prerequisite(s): LAW 351.

LAW. 452.3 — 1/2(3L)
Trial Advocacy
Advocacy techniques, practice and tactics in civil and criminal trial. Topics covered will include: the essentials of direct examination and cross examination, chambers advocacy, examinations for discovery, impeachment of witnesses, occurrence witness testimony, expert witnesses, the use of exhibits, family law, pre-trial conferences, and closing arguments and addresses as well as sentencing.

Prerequisite(s): LAW 351.
LAW. 453.3 — 1/2(3L)
Aboriginal Law and Policy in Canada
An overview of the main historical and contemporary legal and policy developments affecting Aboriginal people and their interests in Canada, and examination of the relationship between law and policy in this area. Following a review of the Constitutional and historical background, the emphasis will be on developments since the second half of the 20th century.
Note: LAW 436 recommended.

LAW. 455.3 — 1/2(3L)
Oil and Gas Law
Introduction to oil and gas law. Topics addressed will include: the nature of interests in oil and gas; rights of mineral interest holders inter se and the operation of the rule of capture; acquisition of freehold interests in oil and gas; the freehold oil and gas lease; estoppel, waiver and involuntary termination; disposition of minerals by the Crown; oil and gas conservation (pooling unitization and shut-in wells); and surface rights.

LAW. 456.3 — 1/2(3L)
Conflict of Laws
Conflict of Laws or Private International Law, as it is also widely known, deals with the analysis and resolution of legal problems involving more than one jurisdiction. Using cases primarily from Tort, contract, property, and family law, the student learns how to characterize a legal issue, how to determine which jurisdiction is the most appropriate forum and which jurisdiction’s law governs the issue, and how to evaluate the significance of factors that influence the recognition and enforcement of the foreign judgments.

LAW. 457.3 — 1/2(3L)
International Law
An examination of the legal principles governing the conduct of states and other subjects of international law. Topics studied will include the creation and ascertainment of international law, application of international law in domestic and international tribunals, sovereign immunity, diplomatic relations, law of armed conflict, international protection of human rights and international environmental protection.

LAW. 458.3 — 1/2(2S-1R)
Advanced Health Law
Students will develop and apply their knowledge of health law to specific topics in the areas of health care and medical research.
Prerequisite(s): Law. 314.

LAW. 459.3 — 1/2(3S)
Jessup Moot
This seminar is designed for students who wish to participate in the Canadian Regional Round of the Jessup International Law Moot Court Competition. The seminar will involve discussion of contemporary problems in public international law relevant to argument in the Jessup Moot, a survey of important cases decided by the World Court, and the preparation of a paper or brief that could serve as a basis for argument on the current moot topic assigned. A team of four or five students will be selected to represent the College at the forthcoming Moot. The seminar is recommended mainly for those with an aptitude for public speaking and exacting research.

LAW. 460.3 — 1/2(3L)
International Trade Law
Examines the principles and obligations contained in international trade agreements and the use of international dispute resolution to uphold and enforce such commitments. The international agreements to be addressed are: The World Trade Organization Agreement, including the GATT, 1994, and the North American Free Trade Agreement.

LAW. 461.3 — 1/2(3L)
Business Organizations II
An examination of the different vehicles that may be employed as alternatives to the corporation for the purpose of carrying on a business. The structures examined include the sole proprietorship, master/servant relationship, agency relationship, partnership, joint venture, limited partnership, business trust, co-operative corporation and franchise. The characteristics of these structures and other factors that influence the choice of business vehicle are explored in detail.
Prerequisite(s): LAW. 361.

LAW. 462.3 — 1/2(2S-1R)
Cooperative Law
A study of the co-operative corporation as a business form and the theory of co-operative enterprise. The first part of the seminar will look at co-operatives from a legal perspective. Among other things, the following topics will be discussed: incorporation, members’ rights, directors’ duties and obligations, taxation of co-operatives compared with other business units, and consideration of special types of co-operatives such as Credit Unions. The second part of the seminar will attempt to view the co-operative in a broader, social perspective. Reliance will be placed on various resource people, if available, in discussing these broader aspects. The third part of the seminar will be devoted to papers presented by the student members of the seminar.
Prerequisite(s): LAW. 361.

LAW. 463.3 — 1/2(2S-1R)
Fiduciary Obligations
Seminar introduces students to the law regulating the actions of fiduciaries. The content of fiduciary accountability is addressed in detail.

LAW. 465.3 — 1/2(2S-1R)
Law Development and the International System
This seminar explores the interaction between law and socio-economic development (with some emphasis on international law). The seminar engages the theoretical underpinnings of the law and development discourse as well as practical aspects of the development enterprise. It explores the meaning and the historical ascendance of the development concept; its continued metamorphosis into good governance and other related concepts; and the differing approaches to effecting development and the place of law there in. While the seminar includes consideration of the roles of international organizations like the World Bank and the International Monetary Fund in fostering development, students will also be introduced to some of the alternatives to the approaches of these international institutions that scholars, activists, grassroots movements and civil society organizations have advocated in recent times.
Note: Students are encouraged to have taken or be taking International Law. 457.3.

LAW. 467.3 — 1/2(3L)
Labour and Employment Law
A study of the legal concepts, institutions and procedures concerning the employment relationship in Canada, including the contract of employment at common law; legal protection of the right to organize; status under collective bargaining legislation; the concept of exclusive bargaining agent; the role of labour-relations tribunals; the legal principles relating to industrial disputes; and statutory regimes concerning employment.

LAW. 470.3 — 1/2(2S-1R)
Business Finance
The seminar introduces the legal considerations involved in financing the operations of business undertakings. Topics include types of securities, debt versus equity, covenant patterns, dividends, asset securitization, income trusts and securities markets.
Prerequisite(s): LAW. 361.

LAW. 471.3 — 1/2(3L)
Family Law II
Examination of rights to child support, custody and access, determination of paternity, child protection and adoption, and the enforcement of support and custody orders.
Prerequisite(s): LAW. 372.

LAW. 473.3 — 1/2(2S-1R)
Aboriginal Self Government in Canada
Will examine theoretical, constitutional, legal and policy aspects of Aboriginal self-government, drawing upon international, comparative and domestic sources, including the reports of the Royal Commission on Aboriginal Peoples of Canada.
Prerequisite(s): LAW. 436.

LAW. 474.3 — 1/2(2S-1R)
Children and Law
Seminar exploring the legal status and treatment of children from a historical, cross-cultural and multi-disciplinary perspective.

LAW. 477.3 — 1/2(3L)
Taxation I
Deals with federal income taxation which focuses on basic tax principles and underlying theoretical concepts. The taxation unit concentrated upon is the individual. Topics normally covered in the course include procedure, statutory interpretation, the tax base, measurement of income, deductions, exemptions, and capital gains.
LAW. 478.3 — 1/2(3L)
Taxation II
Focuses on taxation of business entities including corporations, trusts, and partnerships. Since this course builds on concepts introduced in Taxation I 477.3 knowledge of the basic concepts covered in that course is essential.
Prerequisite(s): LAW. 477.

LAW. 480.3 — 1/2(2S-1R)
Indigenous Peoples in International and Comparative Law
The question of the legal rights of indigenous peoples has emerged in a number of states since the last half of the twentieth century, and has influenced developments in the United Nations and the Organization of the American States, and also in their constituent organizations. This course will examine these developments. A major focus of the course will be on a comparative examination of the legal and policy developments pertaining to indigenous peoples in selected states.
Note: LAW. 436 recommended.

LAW. 481.3 — 1/2(2S-1R)
Business Regulation
Students in this seminar will investigate the norms and principles that inform the public and private regulation of business activity. Issues of legitimacy, scope, efficacy and enforceability are addressed.

LAW. 483.3 — 1/2(2S-1R)
Theorizing Aboriginal Rights
Participants in this seminar will engage rigorously with a variety of moral/legal political theory writing that has implications for judicial and policy debates on the recognition of Aboriginal rights and limits on Aboriginal rights.
Note: Students will find helpful any background they bring from courses related to Aboriginal rights and/or to moral/legal/political theory. However, no specific prerequisite is required.

LAW. 485.3 — 1/2(2S-1R)
International Criminal Law
Will engage with the dynamically-evolving field of international and transnational criminal law, with participants critically analysing doctrine and mechanisms for individual accountability for international crimes. Although participants will also examine other topics related to the evolving concepts of transnational and international crime, one particular emphasis will be on statutory materials, case law, and writing related to the international criminal tribunals in Rwanda and Yugoslavia and the International Criminal Court.
Note: Previous knowledge from criminal law, international law, human rights, and other related areas will be helpful but is not mandatory.

LAW. 486.3 — 1/2(2S-1R)
Law and Psychiatry
Introduction to psychiatric theory; the methodology of psychiatric diagnosis and modern psychiatric treatment; the role of psychiatrists in the legal process. Psychiatry and the criminal process: demands for mental examination, fitness to stand trial, sentencing, automatism, insanity and dangerous offenders. The concept of competency: contractual and testamentary capacity. Civil commitment of the mentally ill: a comparative study. The psychiatrist as expert witness. Selected problems.
Prerequisite(s): LAW. 351.
Note: LAW. 314 is recommended.

LAW. 490.3 — 1/2(3S)
Law Review
This course publishes the Saskatchewan Law Review. The work involves selecting and editing material submitted for publication, participating in policy decisions, proofreading, and other miscellaneous tasks. Each student also undertakes written work for possible publication in the Review.
Note: A one-year commitment to the Review is required. Academic credit is, however, awarded only for one term. Students will designate the term for which academic credit is awarded.

LAW. 491.3 — 1/2(2S-1R)
Clinical Law Seminar
A 3-credit one-semester (13 week) academic seminar. The seminar is designed as an opportunity for students to critically reflect upon their clinical experiences, the law, the legal system, and their roles as legal advocates. The seminar attempts to create a balance between substantive content and more critical reflective discussions about the relevant clinical literature and its application to the experiences of the students. Critical questions relating to professional responsibility, the legal system, and the limits and possibilities of legal practice in situations of social injustice will be examined throughout the term. In many classes, the case rounds model will be used, wherein students discuss and analyze their files and clinical work as a group, and learn from each other's experiences.
Corequisite(s): LAW. 492.12
Note: Students with credit for LAW. 482.3 may not take this course for credit.

LAW. 492.12
Clinical Law Practicum
A 12-credit unit one-semester (13 week) practicum. Students will be placed at Community Legal Assistance Services for Saskatoon Inner City (CLASSIC) where they will take on the role of legal advocates under the close supervision of the clinics supervising lawyers and the course instructor. Students will assume carriage of client files in a wide variety of substantive law areas. They will learn, through experience, supervision and ongoing skills and substantive law training, about all aspects of legal practice in a poverty law context, including client interviewing and counseling, file management, legal research, the preparation of legal documents, letters and memoranda, and representing clients in administrative law hearings and provincial court trials. Students may also have opportunities to conduct public legal education sessions in the community and be involved in community based projects and law reform initiatives. The practicum will provide students an opportunity to engage the law more deeply, to explore the various real-life contexts in which it works, and to build relationships with the people whose lives it affects. Students will experience the dynamics of lawyer-client relationships, develop professional identities, grapple with ethical issues, and develop lawyering skills. The practicum will be graded on a pass-fail basis. However, a detailed letter of explanation and evaluation of the student's performance can be provided upon request. The practicum will provide extensive exposure to criminal, civil and administrative law procedure, evidence law, trial advocacy, negotiation, legal research and writing, and professional responsibility.
Corequisite(s): LAW. 491.3
Note: Students with credit for LAW. 305.6 may not take this course for credit.

LAW. 495.3 — 1/2(3S)
Individual Directed Research
This seminar allows interested students to undertake a substantial research project. Enrolment is limited to two students for each of the professors willing to take on student(s). The course is not timetabled as a convenient meeting time can be arranged to suit the instructors and students concerned. Students must approach individual professors with a research proposal. All proposals must be approved by the Studies Committee.

LAW. 498.3 — 1/2(3L/2S-1R)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LAW. 499.6 — 1and2(3S) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LING — LINGUISTICS

LING. 110.3 — 1/2(3L)
Introduction to Grammar
Provides a survey of classical English grammar. It covers word classes, roles of constructing phrases, clauses, and sentences in English. Challenging areas of English grammar such as passive, tense, aspect, participles, gerunds, will be studied in detail. Finally, aspects of grammar pertinent to teaching English as a foreign language will be studied.

LING. 111.3 — 1/2(3S)
Structure of Language
An introduction to the findings, theories and methods of modern structural linguistics. Includes phonetics, phonology, word-formation, syntax, semantics and pragmatics. Basic analytical skills are emphasized. Examples will be drawn from a wide variety of natural languages.

LING. 112.3 — 1/2(3L)
Dynamics of Language
An introduction to language acquisition, dialectology and historical linguistics. Includes how language varies geographically and socially, how it changes, borrowing, common descent and typological similarities among languages. The human biological propensity to acquire language and language universals are considered.
Prerequisite(s): LING. 111.
LING. 241.3 — 1/2(3L-1P)
Introduction to Syntax
Advanced introduction to traditional, structural, and transformational models of grammar. Emphasizes recent trends in linguistic analysis and theory. Natural language data will be analyzed extensively.
Prerequisite(s): LING. 110, or LING. 111, or permission of the department.

LING. 242.3 — 1/2(3L-1P)
Phonetics
Introduces articulatory phonetics, the structure and function of the vocal tract, the major classes of speech sounds and systems of phonetic notation. A brief discussion of acoustic and perceptual phonetics will be given. Recognition, production and notation of speech sounds and the preliminaries of phonological analysis will be emphasized.
Prerequisite(s): LING. 111.

LING. 243.3 — 1/2(3L)
Morphological Patterns in Language
Investigates the internal structure of words and the rules by which words are formed. Material from a wide variety of languages is drawn upon to explore morphological processes, their relationship to syntactic structures, and to language typology. Practical work in morphological analysis is emphasized.
Prerequisite(s): LING. 111.

LING. 244.3 — 1/2(3L)
Sociolinguistics
Presents language in its social context, covering aspects of linguistic variation within and across speech communities. Topics include language and class, gender, age, speech context and ethnicity. Language standardization, code-switching, bilingualism and diglossia, rules of conversation and appropriate address, and societal features of language change will be discussed.
Prerequisite(s): LING. 111 and one of LING. 112, or SOC. 111, or SOC. 112, or WGST. 210.

LING. 245.3 — 5P(3L)
Lexicology
General Lexicology is one of the basic courses of theoretical linguistics. This course addresses fundamental issues of general lexicology and lexicography. It provides understanding of the lexis as a systemic whole, its development, latest theories about the processes. The course focuses on the basic unit of the language word (lexeme), its structure, meaning, etymology, variants. The word is viewed in three aspects: structural, semantic and functional. There is thorough treatment of word-formation, its historical development, semantic and morphological aspects. Much attention is paid to phraseology. Lexicographical issues cover entries, dictionary types and size, explanations, translation, computer dictionaries, databases. The course will also dwell upon aspects of stylistics from the lexicological point of view. Examples will come from many languages including English, German, Russian, Italian, Estonian, etc.
Prerequisite(s): LING. 111 and LING. 112.

LING. 247.3 — 5P(3L)
The Worlds Major Languages
Gives an overview of six most influential languages of the world: English, French, Spanish, Russian, Arabic and Chinese. The course explores the main concepts of geographical linguistics, factors that make a language influential, globalization and language ideology, the language life cycle and the role of globalization in language obsolescence. The focus will be on the spread of each of these languages in two aspects: geographical-historical (the origins of the languages, their spread in space and time) and socio-cultural (linguistic variation, language as national identity marker). A considerable portion of time will be devoted to the linguistic portraying of these languages: characterization of their typological features on the levels of phonology, grammar and syntax, as well as study of fragments constituting their different linguistics pictures of the world.
Prerequisite(s): LING. 111 and LING. 112.

LING. 248.3 — 1/2(3L)
Second Language Acquisition
The course provides an overview of second language acquisition theories. It considers views on the nature of language learning, on first and second language acquisition and native/non-native language processing.
Prerequisite(s): LING. 111 and LING. 112.

LING. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LING. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LING. 340.3 — 1/2(3L-1P)
Principles of Phonology
Basic concepts of phonology and the procedures of phonological analysis are introduced, with an emphasis on generative phonology. Data from a variety of natural languages is analyzed.
Formerly: LING. 240.3
Prerequisite(s): LING. 111; or permission of the department.
Note: Students with credit for LING. 240 may not take this course for credit.

LING. 341.3 — 1/2(3L)
Semantics
Will introduce advanced linguistics students to the foundations of lexical and grammatical semantics. It will also deal with the semantics-pragmatics interface and introduce students to the basics of formal semantics in order to enable them to work with computational models of language and learn how to do simple semantic processing.
Prerequisite(s): LING. 241 or permission of the department.

LING. 342.3 — 1/2(3L)
Aboriginal Languages of Canada
Linguistic structures of native America, with special reference to the families of North America. Genetic relationship and areal typology will be included.
Prerequisite(s): LING. 111 and at least one of the following: LING. 112, NS 107, or CREE. 101.

LING. 343.3 — 1/2(3L)
Child Language Development
This course provides an overview of the field of first language acquisition. It examines issues of language development from the child’s birth to high school graduation. The course materials address a variety of topics in applied linguistics, such as linguistic development in infancy, acquisition of linguistic ability in phonology, morphology, syntax, semantics, and speaking skills. Furthermore, it examines underlying factors that may lead to atypical language development and evaluates language-therapeutic approaches in addressing those factors. It also includes a practical component applying and evaluating research methodology in child language research.
Permission of the Department.
Prerequisite(s): LING. 111 and LING. 112.

LING. 345.3 — 1(3L)
Introduction to Linguistic Research
Provides an undergraduate-level introduction to research methods in their application to language and linguistics studies. The major focus is on research methodology: project design, data collection, and data analysis. Students will develop practical skills in writing research proposals and grant applications.
Formerly: LING. 298.3
Prerequisite(s): LING. 111, LING. 112, 6 credit units of senior Linguistics.

LING. 346.3 — 1/2(3L)
Language in Time and Space
An introduction to the historical linguistics of unwritten and written languages. Topics will include genetic and topological relationship, comparative reconstruction, dialect formation, phonological, morphological and semantic change, and writing systems. The integration of linguistics with prehistory and historical ethnology will be emphasized.
Formerly: LING. 246
Prerequisite(s): LING. 112.
Note: Students with credit for LING. 246 may not take this course for credit.

LING. 347.3 — 1(3L)
Conversation and Discourse Analysis
The course will introduce students to conversation and discourse analysis. It will deal with the foundations of pragmatics, such as speech acts, felicity conditions and the cooperative principle in conversation. Later, the focus will shift to discourse analysis in which language use is examined within its sociocultural context. Students will be introduced to current research paradigms such as critical discourse analysis and sociocultural theory. Finally, the implications of research findings on language teaching within a communicative framework will be discussed.
Prerequisite(s): LING. 111.
LING. 349.3 — 1/2(3L-1P)
Computational Linguistics
The course will introduce advanced linguistic students to the foundations of computational linguistics. Using freely available resources for natural language processing, students will be introduced to corpus linguistics, data mining, tokenizing, part-of-speech-tagging, morphological analysis and syntactic parsing.
Prerequisite(s):
6 credit units of LING or CMPT; or permission of department.
Note: Participants should have completed LING. 111 and at least one other Linguistics course at 200 or 300 Level. Alternatively they should have completed at least 6 credit units of Computer Science courses.

LING. 350.3
Career Internship
This course provides students with an internship experience which allows them to develop a better appreciation of the relationship between their studies and potential careers routes as well as develop leadership roles in community while fostering the outreach connections between the university and community.
Prerequisite(s):
Minimum 48 credit units of university study and permission of the Linguistics Program Chair.

LING. 398.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LING. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LING. 402.3 — 1(3L)
Language and Culture
Focuses on the relationship between language and culture. Language is represented as a tool for the expressing, storing and transmitting of some cultural elements. Examples are drawn from a variety of languages and include folk tales and narratives, popular song lyrics, spells, shamanism, mass media and everyday speech.
Prerequisite(s):
LING. 111 plus either LING. 112 or LING. 244, and 6 credit units of senior Linguistics courses.

LING. 403.3 — 1(3L)
Research Methods in Linguistics
Helps students to develop an ability to obtain, organize, and analyze language-related experimental data. Empirical methods are explored with some attention given to data-driven quantitative methods employed in natural language analysis. The course includes language data collection, language corpora, the fundamentals of automated syntactic parsing, text classification, information extraction, tagging, and summarization.
Prerequisite(s):
LING. 112, 6 credit units of senior LING, and LING. 345.

LING. 404.3 — 1/2(3L)
Language and Gender
Focuses on the role of languages in constructing and sustaining gender in different societies around the world. Students will also examine linguistic mechanisms of creating gender divisions and stereotypes, as well as remedying gender-related inequalities.
Prerequisite(s):
LING. 111; and LING. 244 and 3 credit units of senior LING or permission of the department.

LING. 478.3 — 1/2(IS)
Honours Project
A reading course on a specialized topic combining at least two of the components of the student’s program: linguistics, languages and/or literature. This course will also provide an initiation into research methods leading to a term paper.
Permission of the department and the instructor required.

LING. 498.3 — 1/2(3L/25-1R)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LING. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LIT. 262.3 — 1/2(3L)
Exiles and Emigres in Expatriation
Literary selections from French, German, Hispanic and Russian literatures. All class lectures and readings in English. Selections may include works of Voltaire, Conrad, Nabokov, Brecht, Carpentier and Makine. Students majoring in Comparative Literature will have a one-hour tutorial each week to read and discuss in the original language the literary selections pertinent to their language specialization.
Prerequisite(s):
ENG. 110 or 6 credit units from ENG. 111, 112, 113, 114, 115 or LIT. 100.

LIT. 263.3 — 1/2(3L)
Heroines Anti Heroines and Gender Definition in Literature
Literary selections from French, German, Hispanic and Russian literatures. All class lectures and readings in English. Authors studied may include Flaubert, Tolstoy, Mme de La Fayette, Garcia Marquez, Merimee, Christa Wolf and Brecht. Students majoring in Comparative Literature will have a one-hour tutorial each week to read and discuss in the original language the literary selections pertinent to their language specialization.
Prerequisite(s):
ENG. 110 or 6 credit units from ENG. 111, 112, 113, 114, 115 or LIT. 100.

LIT. 264.3 — 1/2(3L)
Mephisto and Faust Knowledge Power Damnation and Redemption
The development of the Faust and Mephisto figures from the Renaissance to the twentieth century in literature. French, German, Hispanic and Russian works will be included. All class lectures and readings will be in English. Students majoring in Comparative Literature will have a one-hour tutorial each week to read and discuss in the original language the literary selections pertinent to their language specialization. 
Prerequisite(s):
ENG. 110 or 6 credit units from ENG. 111, 112, 113, 114, 115 or LIT. 100.

LIT. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

LIT. 299.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LIT. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
LUES — LAND USE AND ENVIRONMENTAL STUDIES

LUES. 298.3 — 1/2(3L) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LUES. 299.6 — 1/2(3L) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LUES. 398.3 — 1/2(3S) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LUES. 498.3 — 1/2(3S) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

LUES. 499.6 — 1/2(3S) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

MATH — MATHEMATICS

MATH. 100.6 — 1and2(3L)
Mathematics for Education Students
An introductory course designed for students planning to teach at the elementary school level. Topics include basic algebra review, mathematics of finance, number theory, linear algebra, linear programming, counting techniques, probability and statistics.

Prerequisite(s): Mathematics A30 or B30 or C30; or Foundations of Mathematics 30; or Pre-Calculus 30.
Note: Intended for students entering the Elementary Program in the College of Education. Does not fulfill requirements of a major or honours in either mathematics or statistics, or any other Arts and Science degree program. Students may have credit for MATH. 100 and other junior mathematics and statistics courses subject to regulations of the Department of Mathematics and Statistics. See "Junior Mathematics Course Credits" in the Department's portion of the Arts and Science section of the Calendar.

MATH. 102.3 — 1/2(3L-1.5P)
Precalculus Mathematics
Discusses mathematical ideas essential for the study of calculus. Topics include: the fundamentals of algebra; functions, their properties and graphs; polynomial and rational functions; exponential and logarithmic functions; trigonometric and inverse trigonometric functions; trigonometric properties.

Prerequisite(s): Mathematics A30 and B30; or Workplace and Apprenticeship Mathematics 30; or Foundations of Mathematics 30; or Pre-Calculus 30.
Note: This course may not be taken for credit concurrently with or after any other 100-level MATH course. Students are allowed to have credit for only one of MATH. 102 or 104; students who take MATH. 102 and then take MATH. 104 will lose credit for MATH. 102. This course may be used as an alternative prerequisite for MATH. 110, 121, 123, or 125 (clears deficiencies in high school 30-level mathematics courses). MATH. 102 may not be included in the courses required in C4 or C6 for Applied Mathematics, Mathematical Physics, Mathematics or Statistics. In Arts and Science programs, this course may be used only in the Electives Requirement.

MATH. 104.3 — 1/2(3L)
Elementary Calculus
An elementary introduction to calculus including functions, limits, derivatives, techniques of differentiation, curve sketching and maximum and minimum problems, antiderivatives and the integral.
Formerly: MATH. 101.
Prerequisite(s): Mathematics B30 or Foundations of Mathematics 30 or Pre-Calculus 30.
Note: Students with credit for MATH. 101 may not take this course for credit. Students with credit for MATH. 104 may subsequently receive credit for MATH. 110, 121, 123 or 125. Students with credit for MATH. 110, 121, 123, or 125 may not subsequently receive credit for MATH. 104. Students may not register for MATH. 104 concurrently with any of MATH. 110, 121, 123, or 125. This course may not be included in the courses required in C4 or C6 for Applied Mathematics, Mathematical Physics, Mathematics or Statistics. Students are allowed to have credit for only one of MATH. 102 and 104; students who take MATH. 102 and then take MATH. 104 will lose credit for MATH. 102. This course may be used as an alternate prerequisite for MATH. 110, 121, 123 or 125 (clears deficiencies in high school 30-level mathematics courses). Students with credit for one of MATH. 101, 104, 110 or STAT. 103 may subsequently take MATH. 100 for half credit only. Students with credit for MATH. 100 may subsequently take one of MATH. 104, 110 or STAT. 103 for credit.

MATH. 110.3 — 1/2(3L-1.5P) Calculus I
Introduction to derivatives, limits, techniques of differentiation, maximum and minimum problems and other applications, implicit differentiation, anti-derivatives.

Prerequisite(s): Mathematics B30 or C30; or Pre-Calculus 30; or MATH. 102 or MATH. 104.
Note: Students wishing to complete a full year of calculus should register for either MATH. 112 or 116 for Term 2. At the completion of MATH. 110, students will be allowed the option of changing their choice of the Term 2 course. Students may have credit for only one of MATH. 110, 121, 123 or 125.

MATH. 116.3 — 1/2(3L-1.5P) Calculus II
Techniques of integration; the definite integral and simple differential equations with applications and numerical techniques; the theoretical foundations of limits, including the epsilon-delta formulation; continuity and differentiability; advanced curve sketching; inverse functions; inverse trigonometric functions.

Prerequisite(s): MATH. 110.
Note: Intended to complete the basic introduction to calculus for students in the mathematical and physical sciences, and for others who require a solid introduction to calculus. The specified prerequisite for most second-year courses in mathematics and statistics, including all courses accepted in major and honours programs. Students may have credit for only one of MATH. 112, 116, 124, or 128. Students with credit for MATH. 123 may take this course for credit.

MATH. 121.3 — 1(3L-1.5P)
Mathematical Analysis for Business and Economics
An introduction to mathematics for business and economics students using examples from business to motivate mathematical techniques. Necessary mathematical terms and concepts are developed, but emphasis is on applications to business with sufficient theory to support applications. Topics: algebraic functions, mathematics of finance, analysis of functions, differential and integral calculus.

Restriction: Enrolment in the Edwards School of Business.

Prerequisite(s): Mathematics B30 or C30; or Foundations of Mathematics 30 or Pre-Calculus 30 (Pre-Calculus 30 preferred); or MATH. 102 or MATH. 104.
Note: Students may have credit for only one of MATH. 110, 121, 123, or 125. Arts and Science students needing 6 credit units of 100-level calculus should take MATH. 110 followed by MATH. 116.
MATH. 123.3 — 1(3L-1.5P)
Calculus I for Engineers
A review of basic algebraic concepts, trigonometry and functions. An introduction to limits and differential and integral calculus, max-min problems, curve sketching, related rate problems. Specifically for students in the College of Engineering.
Restriction(s): Enrolment in the College of Engineering.
Prerequisite(s): Mathematics A30, B30 and C30; or Pre-Calculus 30; or MATH. 102 or MATH. 104.
Note: Students may have credit for only one of MATH. 110, 121, 123, or 125.

MATH. 124.3 — 2(3L-1.5P)
Calculus II for Engineers
Differentiation and integration of inverse trigonometric, exponential, hyperbolic and logarithmic functions with applications. Techniques of integration; applications to work, pressure, moments and centroids. Polar co-ordinates and parametric equations of plane curves; complex numbers.
Restriction(s): Enrolment in the College of Engineering.
Prerequisite(s): MATH. 123 (taken).
Note: Students may have credit for only one of MATH. 112, 116, 124, or 128.

MATH. 125.3 — 1(3L-1.5P)
Mathematics for the Life Sciences
An introduction to mathematical modeling with a focus on applications to the life sciences. Topics include: algebraic functions and their graphs, limits and rates of change, differentiation techniques and applications, exponential and logarithmic functions, integration and the area under a curve, introduction to differential equations. The main feature of this course is the use of structured examples from life sciences to establish a need for mathematical techniques. Necessary mathematical terms and concepts will be developed. The emphasis throughout this course is on applications of mathematics to life sciences with just enough theory to support applications. Extensive examples from Biology, Health, Chemistry and Physics will be used.
Prerequisite(s): Mathematics A30, B30 and C30; or Pre-Calculus 30; or MATH. 102 or MATH. 104.
Note(s): Students may receive credit for only one of MATH. 110, 121, 123, or 125. Students with credit for MATH. 115 may not take this course for credit. Arts and Science students needing 6 credit units of MATH. 125; and MATH. 128).

MATH. 211.3 — 1/2(3L-1P)
Numerical Analysis I
An introductory course. Topics include errors, solutions of linear and non-linear equations, interpolation, numerical integration, solutions of ordinary differential equations.
Prerequisite(s): MATH. 110 and 116.

MATH. 223.3 — 1(3L-1P)
Calculus III for Engineers
Vectors and coordinate geometry in 3-space; vector functions and curves; partial differentiation; applications to partial derivatives; multiple integration.
Restriction(s): Enrolment in the College of Engineering.
Prerequisite(s): MATH. 123 and 124.
Note: Engineering students may take this course with prerequisite of MATH. 110 and 116 if they seek permission of the Engineering Students’ Centre. Arts and Science students majoring in Physics may receive permission to take this course by contacting the Department of Mathematics and Statistics. Students with credit for MATH. 225 or 276 may not take this course for credit.

MATH. 224.3 — 2(3L-1P)
Calculus IV for Engineers
Vector fields; vector calculus; ordinary differential equations; sequences, series, and power series.
Restriction(s): Enrolment in the College of Engineering.
Prerequisite(s): MATH. 123, 124 and 223 (all taken).
Note: Arts and Science students majoring in Physics may receive permission to take this course by contacting the Department of Mathematics and Statistics. Students with credit for MATH. 226 may not take this course for credit.

MATH. 225.3 — 1(3L-1P)
Intermediate Calculus I
Analytic geometry, vectors, vector functions, partial differentiation, multiple integration, line integrals and Green’s theorem.
Prerequisite(s): MATH. 110 and 116 or (MATH. 121 or MATH. 125; and MATH. 128).
Note: Students with credit for MATH. 223 or MATH. 276 may not take this course for credit.

MATH. 226.3 — 2(3L-1P)
Intermediate Calculus II
Infinite sequences and series, complex numbers, first order and linear differential equations.
Prerequisite(s): MATH. 110 and 116 or (MATH. 121 or MATH. 125; and MATH. 128).
Note: Students with credit for MATH. 224 may not take this course for credit.

MATH. 238.3 — 1(3L-1.5P)
Introduction to Differential Equations
Solutions of first order and second order differential equations, elementary existence results, fundamentals of some operational and transform methods of solution, power series solutions, 2 x 2 systems, elementary numerical methods. An introduction to modelling will arise through the use of examples from the physical and biological sciences, economics and social sciences, engineering. Examples will include: population models, mechanical vibrations, Kepler’s problem, predator-prey models.
Prerequisite(s): One of MATH. 110 and 116 or MATH. 121 or MATH. 125; and MATH. 128 or (MATH. 123 and MATH. 124).
Note: Students intending to enter an honours or double honours program are encouraged to take this course.

MATH. 258.3 — 1/2(3L-1P)
Euclidean Geometry
A course in plane Euclidean geometry. Particularly recommended for teachers of mathematics.
Prerequisite(s): One of MATH. 100, 104 (formerly 101), 110, 121, 123, 125, or STAT. 103.
Note: Basic introduction to high school geometry recommended. May not be included in the courses required in C4 or C6 for Applied Mathematics, Mathematical Physics, Mathematics or Statistics.

MATH. 264.3 — 1/2(3L)
Linear Algebra
Vector spaces, matrices and determinants, linear transformations, sets of linear equations, convex sets and n-dimensional geometry, characteristic value problems and quadratic forms.
Prerequisite(s): 3 credit units of MATH or STAT.
Note: Students are not permitted to take more than one of MATH. 264, 266 or 358 for credit. May not be included in the courses comprising a major or honours in either mathematics or statistics.

MATH. 266.3 — 1/2(3L)
Linear Algebra I
A study of linear equations, matrices and operations involving matrices, determinants, vector spaces and their linear transformations, characteristic values and vectors, reduction of matrices to canonical forms, and applications.
Prerequisite(s): One of MATH. 110 and 116 or (MATH. 121 or MATH. 125; and MATH. 128).
Note: Designed to meet the needs of students majoring or honouring in mathematics, statistics, computer science or one of the natural sciences. Students are not permitted to take more than one of MATH. 264, 266 or 358 for credit.

MATH. 276.3 — 1(3L-1.5P)
Vector Calculus I
A discussion of the real numbers including least upper bound; sequences and series and convergence criteria; vector analysis; limits and continuity in n-dimensions; differentiation in n-dimensions and the derivative as a linear mapping; curves in space.
Prerequisite(s): One of MATH. 110 and 116 or (MATH. 121 or MATH. 125; and MATH. 128).
Note: Students intending to enter an Honours or Double Honours program in Mathematics or Statistics are encouraged to take this course. Students with credit for MATH. 223 or 225 may not take this course for credit.
MATH. 277.3 — 1/2(3L-1.5P)  
Vector Calculus II  
Maxima and minima of functions with and without constraints; Taylor polynomials; inverse and implicit function theorems; integration of functions of several variables and the change of variable formula for multiple integrals; line integrals and surface integrals; Green's, Gauss', and Stokes' theorems; introduction to differential forms.  
Prerequisite(s): MATH. 276 (or MATH. 225 with a grade of 80% or better).  

MATH. 298.3 — 1/2(3L)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.  

MATH. 299.6 — 1and2(3L)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.  

MATH. 301.0 — (15)  
Honours Seminar I  
Students taking an Honours program in Mathematics or Statistics, or a Double Honours program in Mathematics or Statistics and a second subject, are required to participate in this seminar, normally during the third year of their program.  

MATH. 313.3 — 1/2(3L)  
Numerical Analysis II  
Prerequisite(s): MATH. 211, and. 266 or equivalent in linear algebra.  
Note: Students may receive credit for a maximum of two of MATH. 313, 314 and. 315.  

MATH. 314.3 — 1/2(3L)  
Numerical Analysis III  
Numerical differentiation and integration, initial value, and boundary-value problems for ordinary differential equations, introduction to numerical solutions to partial-differential equations.  
Prerequisite(s): MATH. 211 and. 238.  
Note: Students may receive credit for a maximum of two of MATH. 313, 314 and. 315.  

MATH. 327.3 — 1/2(3L)  
Graph Theory  
Graph Theory and its contemporary applications including the nomenclature, special types of paths, matchings and coverings, and optimization problems solvable with graphs.  
Prerequisite(s): MATH. 264 or 266, and either CMPT. 260 or 6 credit units. 200-level MATH.  

MATH. 328.3 — 1/2(3L)  
Combinatorics and Enumeration  
The theory of Combinatorics and Enumeration and its contemporary applications, including generating functions and recurrence relations, and the Polya and Ramsey Theories. A wide variety of practical applications will be presented.  
Prerequisite(s): MATH. 264 or 266, and either CMPT. 260 or 6 credit units. 200-level MATH.  

MATH. 331.3 — 1(3L-1.5P)  
Applied Mathematics Differential Equations I  
Formerly: Half of MATH. 338  
Prerequisite(s): MATH. 224 or MATH. 226 or MATH. 238 (or approval of instructor/department)  
Note: Students with credit for MATH. 338 may not take this course for credit.  

MATH. 336.3 — 1/2(3L)  
Mathematical Modelling I  
The course is designed to teach students how to apply Mathematics by formulating, analyzing and criticizing models arising in real-world situations. An important aspect in modelling a problem is to choose an appropriate set of mathematical methods - 'tools' - in which to formulate the problem mathematically. In most cases a problem can be categorized into one of three types, namely: continuous, discrete, and probabilistic. The course will consist of an introduction to mathematical modelling through examples of these three basic modelling types.  
Prerequisite(s): MATH. 211.3, MATH. 264.3 or 266.3, STAT. 241.3, 6 credit units in 200-level calculus. (MATH. 223 and. 224.3) or (MATH. 225.3 and. 226.3) or (MATH. 276.3 and. 277.3).  

MATH. 339.3 — 1(3L-1.5P)  
Applied Mathematics Differential Equations II  
Laplace transform, function spaces, Fourier series, Fourier transform, introduction to distributions and generalized functions, Green's function, application to linear partial differential equations.  
Formerly: Half of MATH. 338.6  
Prerequisite(s): MATH. 331.3 or approval of the instructor  
Note: Students with credit for MATH. 338 may not take this course for credit.  

MATH. 350.3 — 1/2(3L-1.5P)  
Group Theory  
Introduction to group theory, including: cyclic groups, symmetric groups, subgroups and normal subgroups, Lagrange's theorem, quotient groups and homomorphisms, isomorphism theorems, group actions, Sylow's theorem, simple groups, direct and semidirect products, fundamental theorem on finitely generated Abelian groups.  
Prerequisite(s): MATH. 266  
Note: Students may receive credit for only one of MATH. 360 or 361 or 363.  

MATH. 362.3 — 1(3L-1P)  
Rings and Fields  
Introduction to ring and field theory, including: polynomial rings, matrix rings, ideals and homomorphisms, quotient rings, Chinese remainder theorem, Euclidean domains, principal ideal domains, unique factorization domains, introduction to module theory, basic theory of field extensions, splitting fields and algebraic closures, finite fields, introduction to Galois theory.  
Prerequisite(s): MATH. 266  
Note: Students may receive credit for only one of MATH. 360 or 362 or 363.  

MATH. 363.3 — 2(3L)  
Abstract Algebra  
Introduction to algebraic structures, notably groups and rings. Topics include binary operations, groups, subgroups, homomorphisms, cosets, Lagrange's theorem, permutation groups, the general linear group; rings, polynomial rings, Euclidean rings.  
Prerequisite(s): One of MATH. 100, 104 (formerly. 101), 110, 121, 123, 125, or STAT. 103.  
Note: Recommended for teachers of mathematics. May not be included in the courses comprising an honors program in either mathematics or statistics. Students with credit for MATH. 360 or 361 or 362 may not take MATH. 363 for credit.  

MATH. 364.3 — 1(3L)  
Number Theory  
A course in elementary number theory with emphasis upon the interrelation of number theory and algebraic structures: review of unique factorization and congruences, the ring of integers modulo n and its units, Fermat’s little theorem, Euler’s function, Wilson’s theorem, Chinese remainder theorem, finite fields, quadratic reciprocity, Gaussian integers, and the Fermat theorem on primes congruent to one modulo four.  
Prerequisite(s): One of MATH. 100, 104 (formerly. 101), 110, 121, 123, 125, or STAT. 103.  
Note: Recommended for teachers of mathematics. May not be included in the courses required in C4 or C6 for Applied Mathematics, Mathematical Physics, Mathematics or Statistics.  

MATH. 366.3 — 1/2(3L)  
Linear Algebra II  
Follow-up to MATH. 266. Further important properties of linear transformations, such as spectral theorems and Jordan normal form, will be dealt with.  
Prerequisite(s): MATH. 266  
Note: Designed to meet the needs of major and honors students in mathematics, as well as students majoring in computer science or one of the natural sciences.
MATH. 371.3 — 1(3L)
Metric Spaces and Continuous Functions
A rigorous construction of the real numbers followed by an introduction to general metric spaces and their basic properties. Continuous functions are studied in detail.
Prerequisite(s): MATH. 238 and 276.

MATH. 373.3 — 1/2(3L)
Integration Theory
Review of the Newton, Riemann and Riemann-Stieltjes integrals and their shortcomings, the generalized integrals including the Lebesgue integral, the main convergence theorems, Lebesgue measure, Lp-spaces and an introduction to Fourier analysis.
Prerequisite(s): MATH. 371. Note: Students with credit for MATH. 470 may not take this course for credit.

MATH. 379.3 — 2(3L)
Complex Analysis
Fundamental concepts, analytic functions, infinite series, integral theorems, calculus of residues, conformal mappings and applications.
Prerequisite(s): MATH. 225 or 276; and MATH. 226 or 238.

MATH. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

MATH. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

MATH. 401.0 — 1and2(1.5S)
Honours Seminar II
Students taking an Honours program in Mathematics or Statistics, or a Double Honours program in Mathematics or Statistics and a second subject, are required to participate in this seminar, normally during the fourth year of their program.
Prerequisite(s): MATH. 301.0.

MATH. 433.3 — 1/2(3L)
Applied Group Theory
Treats the following topics from group theory: permutation groups, crystallographic groups, kinematic groups, abstract groups, matrix Lie groups, group representations. Specific topics include the rotation group (spinors and quantum mechanical applications), the Lorentz group (representations and wave equations), SU(3) (its Lie algebra and physical relevance).
Prerequisite(s): MATH. 276 and MATH. 366; or MATH. 278 and MATH. 266 and permission of the instructor. Note: MATH. 277 is recommended.

MATH. 436.3 — 1/2(3P)
Mathematical Modelling II
This course is a continuation of MATH. 336.3. The course is designed to further develop students’ capacity to formulate, analyze and criticize mathematical models arising in real-world situations. The present course will put emphasis on student activities rather than on lectures. Students will be expected to work in small groups on problems chosen by the instructor and to develop their independent skills at the formulation, analysis and critique of specific problems, and ultimately come to a greater understanding of the modelling process.
Prerequisite(s): MATH. 336 or permission of the instructor.

MATH. 438.3 — 1/2(3L)
Methods of Applied Mathematics
Calculus of variations, integral equations and applications.
Prerequisite(s): MATH. 238, 276 and 277.
Note: Students cannot receive credit for MATH. 438 and MATH. 838.

MATH. 439.3 — 1/2(3L)
Partial Differential Equations
Classification of second order partial differential equations, some properties of elliptic, parabolic, and hyperbolic equations, applications.
Prerequisite(s): MATH. 238, 276 and 277.

MATH. 452.3 — 1/2(3L)
Introduction to Modern Differential Geometry
Submanifolds of Rn; Riemannian manifolds; tensors and differential forms; curvature and geodesics; selected applications.
Formerly: Half of MATH. 350.6.
Prerequisite(s): Algebra prerequisite: MATH. 366; Differential Geometry and Analysis prerequisite: MATH. 352 or MATH. 371.
Note: Students may receive credit for only one of MATH. 350 or 452.

MATH. 465.3 — 1/2(3L-1.5T)
Introduction to Cryptography
Presents a thorough introduction to the mathematical foundations of cryptography. Results from number theory and algebra and how they are used for the safe transmission of information are studied. Various security protocols, the mathematical principles needed for them, and the mathematical principles used in possible attacks are examined.
Prerequisite(s): MATH. 364 or permission of the Head of Mathematics and Statistics.

MATH. 485.3 — 1/2(3L)
Elementary General Topology
Topological spaces, separation axioms, products, quotients, convergence, connectedness, extension theorems, and metric spaces.
Prerequisite(s): MATH. 371.

MATH. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

MATH. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

MCIM — MICROBIOLOGY AND IMMUNOLOGY

College of Medicine

MCIM. 223.3 — 2(3L)
Principles of Microbiology and Immunology for Nursing
This course takes a patient-oriented approach in introducing students to medically-important microorganisms including bacteria, viruses, fungi, and parasites. Topics include the structure and function of microorganisms, host-pathogen interactions, immunological principles, antimicrobial agents and resistance, infection control principles, and a representative survey of medically relevant microorganisms.
Prerequisite(s): BIOL. 120.3.
Note: This course replaces MCIM. 224.3 in the Nursing program. Students who already have credit for MATH. 224.3 or BMSC. 210.3 will not be required to take MCIM. 223.3. Students with credit for MCIM. 224.3 or BMSC. 210.3 cannot take this course for credit.

MCIM. 224.3 — 2(3L-3P)
Microbiology for Pharmacists and Nutritionists
Introduces students to medically-important microorganisms including bacteria, viruses, fungi, and parasites. Topics include the structure and function of microorganisms, host-pathogen interactions, immunological principles, antimicrobial agents and resistance, infection control principles, and a representative survey of medically relevant microorganisms. Laboratory exercises stress the observation, growth, and safe handling of microorganisms.
Restriction(s): Students must be enrolled in the College of Pharmacy and Nutrition.
Prerequisite(s): BIOL. 120 and 121.
Note: Replaces MICR. 214 in the Pharmacy and Nutrition programs; students who already have credit for MICR. 214 will not be required to take MICR. 224. Students with credit for MICR. 224 or MCIM. 223 may not take this course for credit.

MCIM. 308.3 — 1(3L)
Medical Bacteriology
Considers the characteristics of bacterial agents of infectious diseases in humans. Host-pathogen interactions are emphasized with respect to pathogenesis and the innate immune response. Methods for prevention and treatment of infectious disease are discussed.
Prerequisite(s): BMSC. 200, 210.
Note: Students with credit for MICR. 308 may not take this course for credit.

MCIM. 309.3 — 2(3L)
Medical Virology
The principles of animal virology are covered, including classification, cell-virus relationships, basic techniques in virology, transmission of viruses, and study of viral disease.
Prerequisite(s): BMSC. 200, 210.
Note: Students with credit for MICR. 309 may not take this course for credit.
MCIM. 321.3 — 2(3L)
Principles of Immunology
Considers the cellular, molecular and genetic mechanisms responsible for the physiological functioning of the immune system. Topics include the clonal selection theory, the structure and diversity of antibody molecules, the MHC-restricted recognition of antigen by T cells and the regulation of the immune response.
Prerequisite(s): BMSC. 200, 210.
Note: Recommended to be taken concurrently with MCIM. 390. Students with credit for MICR. 421 may not take this course for credit.

MCIM. 326.3 — 1(3L)
Introductory Prokaryotic Genetics and Physiology
Introduces the metabolic and genetic properties of bacterial cells. Topics include bacterial growth and culture systems, key metabolic pathways and their regulation, nutrient transport systems, organization of genetic material, regulation of bacterial gene expression and genetic analysis, DNA replication, recombination and manipulation, and exchange mechanisms.
Formerly: MCIM. 216.
Prerequisite(s): BMSC. 200 and. 210.
Note: BMSC. 240 is recommended. Recommended to be taken concurrently with MCIM. 391. Students may not receive credit for this course if they have received credit for MCIM. 216.

MCIM. 390.3 — 2(3L-4P)
Experimental Microbiology and Immunology
The principles and applications of techniques used in microbiology and immunology are covered with an emphasis on problem solving by experimentation. Included are methods relating to safe handling, growth and identification of microbes and methods for studying virology and immunology.
Prerequisite(s): BMSC. 200.3, 210.3, 240.3
Note: Recommended to be taken concurrently with MCIM. 321.3. Intended primarily for Microbiology and Immunology students. Students with credit for MICR. 390 may not take this course for credit.

MCIM. 391.3 — 1(3L-4P)
Experimental Molecular Microbiology
The principles and applications of techniques used in microbiology are covered with an emphasis on problem solving. Included are methods for studying microbial physiology and genetics, and basic methods of microbial gene manipulation. Students with credit for MICR. 391 cannot receive credit for BIOC. 311.
Prerequisite(s): BMSC. 200.3, BMSC. 210.3, and BMSC. 240.3.
Note: Recommended to be taken concurrently with MCIM. 326. Intended primarily for Microbiology and Immunology students. Students with credit for MICR. 391 or BIOC. 311 may not take this course for credit.

MCIM. 398.3 — 1/2(3S)
Research Project in Microbiology and Immunology
A research project is selected in consultation with a faculty supervisor in whose laboratory the research will be carried out. Students will become familiar with the scientific literature and the laboratory techniques pertinent to the project. Experimental work will be undertaken and data compiled and analyzed. To complete the research project, a written report will be tabled and a short oral presentation will be given to faculty and students.
Formerly: MICR. 497
Permission of the department is required.
Prerequisite(s): Minimum cumulative average of 70% in those courses counting toward the microbiology requirement of an Honours Degree in Microbiology.
Note: Intended primarily for those students majoring in microbiology and immunology who are considering a post-graduate degree in microbiology, immunology or another area of the life sciences.
Students with credit for MICR. 491 may not take this course for credit.

MCIM. 399.6 — 1and2(3S)
Research Project in Microbiology and Immunology
A research project is selected in consultation with a faculty supervisor in whose laboratory the research will be carried out. Students will become familiar with the scientific literature and the laboratory techniques pertinent to the project. Experimental work will be undertaken and data compiled and analyzed. To complete the research project, a written report will be tabled and a short oral presentation will be given to faculty and students.
Formerly: MICR. 497
Permission of the department is required.
Prerequisite(s): Minimum cumulative average of 70% in those courses counting toward the microbiology requirement of an Honours Degree in Microbiology.
Note: Intended primarily for those students majoring in microbiology and immunology who are considering a post-graduate degree in microbiology, immunology or another area of the life sciences.
Students with credit for MICR. 491 may not take this course for credit.

MCIM. 401.6
Research Project in Microbiology and Immunology
A research project is selected in consultation with a faculty supervisor in whose laboratory the research will be carried out. Students will become familiar with the scientific literature and the laboratory techniques pertinent to the project. Experimental work will be undertaken and data compiled and analyzed. To complete the research project, a written report will be tabled and a short oral presentation will be given to faculty and students.
Formerly: MICR. 497
Permission of the department is required.
Prerequisite(s): Minimum cumulative average of 70% in those courses counting toward the microbiology requirement of an Honours Degree in Microbiology.
Note: Intended primarily for those students majoring in microbiology and immunology who are considering a post-graduate degree in microbiology, immunology or another area of the life sciences.
Students with credit for MICR. 491 may not take this course for credit.

MCIM. 498.3 — 1/2(3S)
Research Project in Microbiology and Immunology
A research project is selected in consultation with a faculty supervisor in whose laboratory the research will be carried out. Students will become familiar with the scientific literature and the laboratory techniques pertinent to the project. Experimental work will be undertaken and data compiled and analyzed. To complete the research project, a written report will be tabled and a short oral presentation will be given to faculty and students.
Formerly: MICR. 497
Permission of the department is required.
Prerequisite(s): Minimum cumulative average of 70% in those courses counting toward the microbiology requirement of an Honours Degree in Microbiology.
Note: Intended primarily for those students majoring in microbiology and immunology who are considering a post-graduate degree in microbiology, immunology or another area of the life sciences.
Students with credit for MICR. 491 may not take this course for credit.

MDSP — MEDICINE SPECIAL TOPICS

College of Medicine

MDSP. 598.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

MDSP. 599.6
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

ME — MECHANICAL ENGINEERING

ME 214.3 — 1(3L-3P alt weeks)
Introduction to Materials and Manufacturing
Provides an introduction to the relations between the structure and properties in engineering materials. It deals with the basics of structure, strengthening and deformation mechanisms of steels.
ME 215.3 — 2(3L-3P alt weeks)
Fluid Mechanics I
The basic principles of fluid mechanics are introduced. A generalised approach to fluid statics is used as an introduction to calculating the forces exerted by fluids on surfaces. Fluid dynamics is approached using a control volume formulation and basic pipe flow is introduced. Potential flow is applied to calculate the velocity and pressure fields over basic shapes.
Prerequisite(s): MATH. 223 (taken).
Prerequisite(s) or Corequisite(s): GE 125.

ME 227.3 — 1(3L-3P alt weeks)
Thermodynamics I
The fundamental laws of thermodynamics involving compressible fluid flow, mass and energy transfers are developed. Problems are analyzed for closed and open systems using the concepts of heat and work and the basic laws. The course content is amplified by tutorials and laboratory experiments.
Prerequisite(s): CHEM. 114 and MATH. 124 (taken).

ME 229.3 — 2(1.5L-3P)
Introduction to Engineering Design
Introduces the mechanical engineering student to the concepts behind engineering design. Special seminars by practicing professionals supplement the course materials. Specific topics to be covered are: historical background, log books, scheduling, literature search, cost analysis, project management, CAD techniques, report writing, design ethics, safety in design, sustainability and legal responsibilities. Students are responsible for participating in and completing an applied design project as well as complete WHMIS basic training.
Prerequisite(s): (GE 110 or GE 121) and GE 125 (taken) and ME 214 (taken).

ME 251.3 — 2(3L-1.5T)
Engineering Analysis I
Introduces some of the mathematical tools and procedures used to solve engineering problems. Topics include: intermediate linear algebra; numerical methods for linear systems; nonlinear equations, integration and differentiation; probability, statistics, and hypothesis testing. Applications of these tools to engineering problems will be stressed.
Prerequisite(s): (GE 111 or GE 120) and MATH. 223 (taken).

ME 313.3 — 1(3L)
Mechanics of Materials I
General principles underlying the mechanics of materials are discussed and applied to the advanced strength analysis of common structural elements.
Prerequisite(s): GE 111 (taken), GE 213 (taken), and MATH. 223 (taken).

ME 314.3 — 2(3L)
Machine Design
Deals with various machine design fundamentals and the use of integrated design software. Design for fatigue and consideration of fracture mechanics is emphasized. Topics include: the selection of fasteners, rolling element bearings, V-belts and roller chains and the design of coil and leaf springs, spur gears, clutches and brakes.
Prerequisite(s): ME 313 (taken) or BLE. 324 (may be taken concurrently) and ME 316 (taken) and ME 324 (taken).

ME 316.3 — 1(3L)
Dynamics and Vibrations
Kinematics of rigid bodies and systems of rigid bodies using both stationary and moving coordinate systems. Three-dimensional kinetics. Introduction to vibration analysis. Introduction to Lagrangian dynamics. Discussion of design considerations, including numerical solution techniques, parameter estimation, and linkage synthesis. Cam-follower mechanisms.
Prerequisite(s): GE 226 and MATH. 224 (taken) and [BLE. 311 (may be taken concurrently) or ME 251 (taken)].

ME 318.3 — 1(6P)
Mechanical Engineering Laboratory I
A general laboratory course demonstrating and further investigating engineering principles related primarily to material treated in the third year first term lectures. Considerable importance is placed on the development of student report writing capability.
Prerequisite(s): ME 214 (taken).
Prerequisite(s) or Corequisite(s): ME 313 and ME 327.

ME 321.3 — 1(3L)
Engineering Analysis II
Addresses partial differential equations involved in engineering problems such as heat transfer and wave propagation. Solution techniques include separation of variables for analytical solutions and the finite-difference method for numerical solutions. Applications in mechanics, heat transfer, vibrations, and electro-magnetism are discussed.
Prerequisite(s): ME 251 (taken) and MATH. 224 (taken).

ME 323.3 — 2(3L)
Mechanics of Materials II
The strength analysis of more complex structural elements is discussed. Also introduces the general principles of the mechanics of solids. Methods leading to computer aided analysis are emphasized.
Prerequisite(s): ME 313 (taken).

ME 324.3 — 1(3L)
Engineering Materials
Covers the iron-carbon diagram in detail. The processes taking place during heat treatment of steels are examined. Non-ferrous alloys, composites, and non-metals are also covered. The subject of corrosion is introduced.
Prerequisite(s): GE 212 or ME 214.

ME 327.3 — 1(3L)
Heat Transfer
The basic concepts of the three major fields of heat transfer; conduction - basic laws and applications; convection - free and forced convection, internal and external flows, heat exchangers; radiation - laws of generation and exchange.
Prerequisite(s): ME 215 and ME 227.

ME 328.3 — 2(6P)
Mechanical Engineering Laboratory II
A general laboratory course demonstrating and further investigating engineering principles related primarily to material treated in the third year, second-term lectures with emphasis on written reports.
Prerequisite(s): ME 318 (taken).
Prerequisite(s) or Corequisite(s): ME 323 and ME 335.

ME 330.3 — 2(3L)
Manufacturing Processes
Introduction to the processes in which physical objects are manufactured. Topics include casting, machining, powder metallurgy, special treatment of steels, joining, molding of plastics and superplastics forming of non-ferrous alloys.
Prerequisite(s): GE 213 and ME 324 (taken).

ME 335.3 — 3(3L)
Fluid Mechanics II
The basic principles of fluid mechanics are developed using a differential control volume formulation, and then applied to the study of incompressible flow. The distinction is made between ideal and viscous fluids, and laminar and turbulent flow. Both integral and differential methods are used to study boundary layers, with both industrial and environmental applications.
Prerequisite(s): MATH. 224 (taken) and ME 215.

ME 352.3 — 3(3L)
Engineering Analysis III
Introduction to the processes in which physical objects are manufactured. Topics include casting, machining, powder metallurgy, special treatment of steels, joining, molding of plastics and superplastics forming of non-ferrous alloys.
Prerequisite(s): GE 213 and ME 324 (taken).

ME 417.3 — 1(3L)
Thermodynamics II
A second course in equilibrium thermodynamics. It focuses on the second law and the concept of entropy, which are used to study the conditions of thermal, mechanical and chemical equilibrium, with applications to power cycles, refrigeration cycles and reacting mixtures. The second law is next used to develop the concept of availability or exergy. Finally, both the first and second laws are used to study one-dimensional compressible duct flow.
Prerequisite(s): ME 227 and ME 335 (taken).

ME 418.3 — 1(6P)
Mechanical Engineering Laboratory III
The laboratory exercises give the student responsibility for planning and setting up laboratory experiments and for the preparation of written reports. The use of standard measuring procedures in Mechanical Engineering is also emphasized. These laboratory exercises include control systems, fatigue and tribology, CNC manufacturing, engines and compressors, and vibrations.
Prerequisite(s): ME 328.
Prerequisite(s) or Corequisite(s): ME 417 and ME 431.

ME 431.3 — 1(3L)
Control Systems
Transfer functions, transient and frequency responses, performance specifications, stability analyses, introduction to design (compensation).
Prerequisite(s): ME 352.
ME 450.3 — 1(3L-1.5P alt weeks)
**Finite Element Analysis**
The finite element concept is introduced using simple structural elements. The method is then generalized using weighted residual methods. Numerous engineering problems drawn mainly from solid mechanics are solved using finite element methods. It is shown how the finite element method might be used for fluid flow and heat transfer analysis.
Prerequisite(s): ME 323 and ME 321 (taken).

ME 460.3 — 2(3L-3P alt weeks)
**Automation and Robotics in Manufacturing**
An introduction to production automation and robotic modelling. Topics include: flow line production, automated assembly systems and line balancing, industrial robotics, kinematics, dynamics and trajectory control of robots.
Prerequisite(s): ME 229 and ME 316.

ME 463.3 — 1(3L-1.5P alt weeks)
**Advanced Structural Analysis**
Governing equations for mechanics of deformable bodies. Applications to typical engineering problems. Elements of structural stability and dynamics. Some geometricaly and materially nonlinear problems. Methods of numerical solutions, including the use of advanced FEM.
Prerequisite(s): ME 450 (taken).

ME 471.3 — 2(3L-3P alt weeks)
**Introduction to Aerodynamics**
This course is an introduction to aerodynamics which explores the lift and drag performance of airfoils. Potential flow is used to develop the theory of flow over airfoils and wings, using both classical and numerical - e.g. vortex panel - methods. Boundary layer theory is used to explain the role of viscosity and the potential for flow separation. Numerical models are used to predict skin friction values. Finally, the development of shock waves for supersonic conditions is considered.
Prerequisite(s) or Corequisite(s): ME 215.

ME 473.3 — 2(3L-3P alt weeks)
**Introduction to Computational Fluid Dynamics**
Introduces the student to the subject of Computational Fluid Dynamics, as well as numerical methods for predicting heat transfer. The course focuses on incompressible flow of a viscous fluid, including both diffusive and convective transport. Pressure solvers and turbulence models are also described. A comprehensive commercial CFD package is introduced to the students, as an example of the software used by engineers to perform numerical simulation of heat and fluid flow.
Prerequisite(s): ME 321 and ME 335.

ME 475.3 — 2(3L-3P alt weeks)
**Introduction to Mechatronics**
The objective of the course is to provide engineers with the tools necessary for managing the design and development of Systems requiring a multidisciplinary approach. It deals with life cycle models and disciplines required for integration of complex industrial systems. The course will review and links selected topics from mechanical, electrical, electronics, software and control engineering. Problems considered would involve real-time computer aided control of nonlinear and multivariable systems.
Prerequisite(s): ME 431 (taken).

ME 477.3 — 2(3L-3P alt weeks)
**Engineering Materials II**
Provides students with an exposure to advanced engineering materials not covered in the core ME materials courses. It covers broad classes of materials and their applications with emphasis on topics related to materials used in high temperature and other hostile environments. Failure of engineering materials and surface engineering are also covered.
Prerequisite(s): ME 324.
Prerequisite(s) or Corequisite(s): ME 330.
Note: Students may receive credit for only one of ME 846 and ME 477.

ME 478.3 — 2(3L-3P alt weeks)
**Introduction to Fire Protection Engineering**
Covers the basics of fire science, including important theory from heat transfer, fluid mechanics, thermodynamics and other fields. Simple fire models are used to design fire protection systems for buildings, such as sprinklers, detectors and building construction features. Main fire test methods in use today and the analysis of fire test data are also discussed.
Prerequisite(s) or Corequisite(s): ME 327.

ME 490.3 — 2(3L-3P alt weeks)
**Design of Fluid Power Circuits**
An introduction to the design of industrial and Fluid Power circuits. The operation and design of basic components are considered. A methodology to the design of industrial circuits is introduced and applied to industrial applications. Design criteria for open loop applications are introduced.
Prerequisite(s): ME 215 or CE 225 or CHE 210.

ME 491.3 — 1(3L-1.5P alt weeks)
**Thermal Systems Design**
A design course involving the application of the fundamentals of thermodynamics. Topics may vary depending on the choice of design project, but would typically include psychrometrics, internal and external energy gains, heating and cooling loads, duct and piping design, overall thermal design specifications and system component design and selection.
Prerequisite(s): ME 327 and ME 335 (taken).

ME 492.3 — 2(3L-3P alt weeks)
**Materials in Engineering Design**
Emphasizes materials engineering in the design process. It covers an overview of available engineering materials and their selection based on mechanical properties, surface durability and cost.
Prerequisite(s): ME 324.
Prerequisite(s) or Corequisite(s): ME 330.

ME 493.3 — 2(3L-3P alt weeks)
**Advanced Mechanical Design**
Deals with advanced mechanical design topics. It is considered as a continuation of Machine Design I, but with an emphasis on the use of integrated design software. The course includes use of finite element and other software, such as ANSYS, SolidWorks, and MATLAB in design. One portion of the course discusses the design process and introduces the design optimization methodology and integrated design optimization software, which will be used for solving unconstrained, constrained, and multi-objective optimal design problems. The course also includes design of systems under shock and impact loading, vibration isolation and control.
Prerequisite(s): ME 314 and ME 450 (taken).

ME 495.6 — 1and2(1L-3P)
**Industrial Design Project**
The synthesis and design of mechanical engineering components and systems. Students work in groups as a design team on selected projects submitted by industry. Oral and written presentations are made by students during the term with a formal oral presentation and final written report at the end of the course. Evaluations of oral and written presentations are made by supervisors as well as other outside examiners. Lecture material covers design processes and methodologies as well as design aspects related to occupational health and safety. This material is augmented through seminars given by industrial design specialists based on their design experiences.
Prerequisite(s): ME 229 and 81 credit units from (EN Four Year Common Core and ME Program Core).

ME 497.3 — 2(3L-1.5P)
**Acoustics and Vibrations in Design**
This course is an introduction to acoustics and vibrations in design. Free, and forced vibrations of systems will be examined. Applied theory includes the study of the fundamental single-degree-of-freedom (DOF) and the 2DOF systems using Newton's law of motion, the energy method, Lagrange's equations, and determination of natural frequencies, acoustics, properties, and noise standards. Design part of the course includes systems under shock and impact loading, vibration isolation and control. In addition the course will include noise control and design of mechanical systems for noise reduction. The course includes design oriented lab and assignments, and design based project.
Prerequisite(s): ME 316.

ME 498.3 — 1/2(3L-1.5P)
**Special Topics**
Offered occasionally to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

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MED — MEDICINE

College of Medicine

MED. 200.0
Pre Clerkship Electives
Self-selected clinical experience to help medical students consolidate and integrate learning.
Restriction(s): Restricted to students enrolled in the College of Medicine

MED. 201.4 — 1and2
Pharmacology
Students will learn the scientific rationale for the use of therapeutic drugs. Information presented in the lectures is reinforced in small group clinical case participation sessions. The objective is to provide a sound knowledge of pharmacological concepts and principles to assist the students in their future clinical practice.
Restriction(s): Restricted to students enrolled in the College of Medicine.
Note: Students with credit for DENT. 391 will not receive credit for this course.

MED. 202.3 — 1and2(1.5L)
Systemic Pathology
Study of the pathogenetic mechanisms and pathology involved in clinical disease processes as applied to patient management.
Restriction(s): Restricted to students enrolled in the College of Medicine

MED. 203.6 — 1and2(3L)
Microbiology and Infectious Diseases I
Outlines the characteristics of microorganisms and emphasizes basic microbiologic principles. Incorporates both the etiologic approach to the teaching of medical microbiology and the systems approach to the teaching of infectious disease. Patient management problems stress the clinical approach to patients with infectious disease.
Restriction(s): Restricted to students enrolled in the College of Medicine

MED. 204.20 — 1and2(10L)
Professional Skills II
Through direct student/patient interaction and small group tutorials, stresses the refinement of basic clinical skills, the physician/patient relationship, and will introduce diagnostic and therapeutic strategies.
Restriction(s): Restricted to students enrolled in the College of Medicine

MED. 205.16 — 1and2(8L)
Clinical Systems
Provides an interdisciplinary approach to diseases involving the major organ systems. With input from clinical, diagnostic and basic science departments, students will learn the pathogenesis and pathophysiology of specific diseases, the signs and symptoms of patients presenting with these diseases, and the diagnostic and therapeutic principles required for patient management.
Restriction(s): Restricted to students enrolled in the College of Medicine

MED. 207.2
Community Health and Epidemiology I
This course will focus on subjects that can impact on health and health inequities and what we in the health care system can do about them.
Restriction(s): Restricted to students enrolled in the Doctor of Medicine program in the College of Medicine

MED. 300.0
Pre Clerkship Electives
Self-selected clinical learning experience to help medical students consolidate and integrate learning.
Restriction(s): Restricted to students enrolled in the College of Medicine

MED. 301.3 — 1(3L)
Community Health and Epidemiology II
This course will focus on the leadership and management skills required of physicians in the health care system, and on issues in global, environmental and occupational health. It will utilize lectures, seminars, site visits and community service learning to do so.
Restriction(s): Restricted to students enrolled in the College of Medicine

MED. 302.2 — 1(1.5L)
Systemic Pathology
Study of the pathogenetic mechanisms and pathology involved in clinical disease processes as applied to patient management.
Restriction(s): Restricted to students enrolled in the College of Medicine

MED. 303.2 — 1(2L)
Microbiology and Infectious Diseases II
Covers the management of human infectious diseases, including diagnosis and treatment, and the underlying microbiological principles, using a largely case based format, with many small group sessions. The topics are scheduled over the available 6 months to complement the Systems approach to medical teaching.
Restriction(s): Restricted to students enrolled in the College of Medicine

MED. 304.10 — 1(10L)
Professional Skills III
Provides an interdisciplinary approach to diseases involving the major organ systems. With input from clinical, diagnostic and basic science departments, students will learn the pathogenesis and pathophysiology of specific diseases, the signs and symptoms of patients presenting with these diseases, and the diagnostic and therapeutic principles required for patient management.
Restriction(s): Restricted to students enrolled in the College of Medicine

MED. 305.8 — 1(8L)
Clinical Systems
Through direct student/patient interaction and small group tutorials, stresses the refinement of basic clinical skills, the physician/patient relationship, and will introduce diagnostic and therapeutic strategies.
Restriction(s): Restricted to students enrolled in the College of Medicine

MED. 400.0
Electives
A wide choice of electives by subject and location is allowed. This elective period allows students to broaden their medical education and to explore in-depth future career opportunities.
Restriction(s): Restricted to students enrolled in the College of Medicine

MED. 401.0
Selective CARMS
A wide selection of options by subject and location will be allowed within these courses. The selective period allows students to broaden their medical education or to explore in-depth future career or research areas.
Restriction(s): Restricted to students enrolled in the College of Medicine

MED. 403.0 — 2 weeks
Anesthesia
This is a compulsory rotation for final year medical students with the terminal objective that the graduating student possess the technical expertise of ACLS with the knowledge required of a family practitioner to competently prepare and counsel patients for anaesthesia and surgery at a basic level. Students are taught peri-operative management. This includes pre-operative evaluation and optimization, adult, pediatric, obstetric and outpatient anaesthesia and monitoring, and post-operative care including recovery room, intensive care and pain management. Interactive seminars and rounds cover related material.
Restriction(s): Restricted to students enrolled in the College of Medicine

MED. 404.0 — 6 weeks
Family Medicine
Clerkship students will participate in a six-week primary outpatient-based experience. The students will do two weeks in one of the Family Medicine Teaching Units or an urban practice and four weeks in a rural or remote location. The four principles of Family Medicine will be stressed. The Family Medicine clerkship will provide exposure to the full spectrum of early undifferentiated health problems commonly encountered in the community setting. Clerkship students will also have a two-week rotation in an Emergency Department.
Restriction(s): Restricted to students enrolled in the College of Medicine

MED. 405.0 — 12 weeks
Internal Medicine
A mandatory course during which the student is assigned to the Internal Medicine Department. During these rotations the student is assigned to a call schedule. Students are responsible for assessing patients, developing a treatment plan and, in some cases, evaluating its results, all under the supervision of Residents and/or Faculty.
Restriction(s): Restricted to students enrolled in the College of Medicine
MEDC — MEDICINE

College of Medicine

MEDC. 100.0 — 6 weeks Obstetrics and Gynecology
Provides final year medical students with direct clinical experience and participation in management of gynecologic and obstetric problems. The clinical teaching will take place in a teaching hospital affiliated with the University of Saskatchewan. Regular seminars, ward rounds, and departmental rounds will be used for teaching, as well as direct patient care, in both disciplines.

Restriction(s): Restricted to students enrolled in the College of Medicine

MEDC. 406.0 — 6 weeks Obstetrics and Gynecology
Provides final year medical students with direct clinical experience and participation in management of neonatal/pediatric problems. The clinical teaching will take place in a teaching hospital affiliated with the University of Saskatchewan. Regular seminars, ward rounds and departmental rounds are used for teaching as well as direct patient care.

Restriction(s): Restricted to students enrolled in the College of Medicine

MEDC. 407.0 — 6 weeks Pediatrics
Provides final year medical students with direct clinical experience and participation in management of neonatal/pediatric problems. The clinical teaching will take place in a teaching hospital affiliated with the University of Saskatchewan.

Restriction(s): Restricted to students enrolled in the College of Medicine

MEDC. 408.0 — 6 weeks Psychiatry
A Clinical Clerkship in which the student will gain experience with inpatient, outpatient, and emergency consultations. Students will be expected to take part in the night call rotation as well. There is a seminar series.

Restriction(s): Restricted to students enrolled in the College of Medicine

MEDC. 409.0 — 8 weeks Surgery
An eight-week senior surgical clerkship where the students will further develop their competencies in diagnosis and management of a broad range of problems within the field of surgery. The students will spend 6 weeks in the discipline of general surgery and an additional 2 weeks in a surgical (sub) specialty. This course involves increasing responsibility for direct care of in-hospital and ambulatory care patients. In addition, the student will participate in teaching rounds, seminars, and lectures.

Restriction(s): Restricted to students enrolled in the College of Medicine

MEDC. 498.3 Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

MEDC. 101.0 Basic Life Support for Health Care Providers
Provides a basic level of knowledge and skill in first aid and basic cardiac life support.

Restriction(s): Restricted to students enrolled in the College of Medicine.

Prerequisite(s): Admission to M.D. program (Year 1, Term 1)

MEDC. 111.0 Success in Medical School I
Assist the medical student in orientating to the medical program and provides support throughout the first year.

Restriction(s): Restricted to students enrolled in the College of Medicine.

Prerequisite(s): Admission to M.D. program (Year 1, Term 1)

MEDC. 112.3 — 1(1L-1S-1P) Medicine and Society I
Through classroom and community-based learning experiences, this Introduction to Health Care in Canada will allow students to learn how to determine and meet the diverse health needs of specific and significant populations in Saskatchewan and Canada. These populations may be determined by chronological age, gender, geography, ethnic and cultural background, culturally safe and modified care, and other criteria.

Restriction(s): Restricted to students enrolled in the College of Medicine.

Prerequisite(s): Admission to M.D. program (Year 1, Term 1)

MEDC. 113.8 Clinical Skills I
Designed to assist the student in developing fundamental clinical skills upon which they will build throughout their professional lives. Interviewing, communication skills, basic physical examination skills, and foundations of clinical reasoning are the focus of the course. The development of effective and caring relationships with patients is fundamental to the success of this course and all future clinical experiences.

Restriction(s): Restricted to students enrolled in the College of Medicine.

Prerequisite(s): Admission to M.D. program (Year 1, Term 1)

MEDC. 114.4 Clinical Integration I
Working in small groups, students will learn to integrate their knowledge and clinical reasoning skills from courses offered during the first term of the program focused on addressing issues raised in cases related to the care of patients, families, communities and populations. Major vertical themes as well as legal and ethical reasoning and medical informatics will be emphasized.

Restriction(s): Restricted to students enrolled in the College of Medicine.

Prerequisite(s): Admission to M.D. program (Year 1, Term 1)

MEDC. 115.18 Principles of Medical Science
Provides basic concepts related to biomedical sciences to include: Introduction to Homeostasis, Anatomy and Histology, and Physiology; the Cell, Genetics and Neoplasia; Nutrition; and Pharmacology, Therapeutics and Toxicology. It will provide the requisite scientific knowledge framework for the Clinical Foundations of Medicine Course.

Restriction(s): Restricted to students enrolled in the College of Medicine.

Prerequisite(s): Admission to M.D. program (Year 1, Term 1)

Note: Students with credit for DENT 291 will not receive credit for this course.

MEDC. 122.3 — 2(1L-1S-1P) Medicine and Society II
Through classroom and community-based learning experiences, this course will focus on population and preventative health care that will allow students to further refine their ability to determine and meet the diverse health needs of specific and significant populations in Saskatchewan and Canada. Students will further explore the determinants of health and learn more about disease prevention, public health principles, and environmental and occupational hazards. This course will conclude with a module titled, ‘Medicine in the Community’ focused on placing students in community settings for two weeks in May.

Restriction(s): Restricted to students enrolled in the College of Medicine.

Prerequisite(s): MEDC. 112.3.

MEDC. 123.8 Clinical Skills II
Learning in Clinical Skills II will enable students to improve their basic clinical skills, including patient-centered communication and physical examination through a combination of assessment of ‘real-life’ patients and structured learning sessions. Students will further develop clinical reasoning skills including development of differential diagnoses.

Restriction(s): Restricted to students enrolled in the College of Medicine.

Prerequisite(s): MEDC. 113.8

MEDC. 124.4 Clinical Integration II
Working in small groups, students will learn to integrate their knowledge and clinical reasoning skills from courses offered during the first term of the program focused on addressing issues raised in cases related to the care of patients, families, communities and populations. Major vertical themes as well as legal and ethical reasoning and medical informatics will be emphasized.

Restriction(s): Restricted to students enrolled in the College of Medicine.

Prerequisite(s): MEDC. 114.4
MEDC. 126.18  
Foundations of Clinical Medicine I  
This course is an integration of four of the eleven human body systems: Hematology; Respiratory; Cardiovascular; and Gastrointestinal. Students will learn to care for patients with common and/or urgent medical conditions by acquiring and applying knowledge and clinical reasoning skills to generate reasonable differential diagnoses and management plans, select and interpret appropriate investigations, and explain the pathogenesis and pathophysiology of the subject conditions.  
Restriction(s): Restricted to students enrolled in the College of Medicine;  
Prerequisite(s): MEDC. 115.18

MGT — MANAGEMENT  
College of Edwards School of Business  
MKT. 400.6 — Tand2(3S)  
Honours Seminar in Management  
Directed readings and individual research in the area of management. The major course requirement involves the preparation of an honours research paper under the supervision of one or more faculty in the particular area of specialization. The resulting honours paper is normally presented at a department seminar.  
Permission of the department required.

MKT — MARKETING  
College of Edwards School of Business  
MKT. 400.6 — Tand2(3S)  
Honours Seminar in Marketing  
Directed readings and individual research in the area of marketing. The major course requirement involves the preparation of an honours research paper under the supervision of one or more faculty in the particular area of specialization. The resulting honours paper is normally presented at a department seminar.  
Permission of the department required.

MUAP — MUSIC APPLIED  
College of Arts and Science  
MUAP. 120.0  
Band  
(01) Concert Band or (02) Wind Orchestra. Emphasis is on the study and performance of the most significant literature.  
Note: The course may be repeated four times.  
MUAP. 121.0  
Chorus  
(01) Greystone Singers or (03) University Chorus. Emphasis is on the study and performance of the most significant literature.  
Note: The course may be repeated four times.  
MUAP. 123.0  
Chamber Ensemble with Piano  
Emphasis is on the study and performance of the most significant literature.  
Note: The course may be repeated four times.  
MUAP. 124.0  
Percussion Ensemble  
Emphasis is on the study and performance of the most significant literature.  
Note: The course may be repeated four times.  
MUAP. 126.0  
Vocal Ensemble  
Emphasis is on the study and performance of the most significant literature.  
Note: The course may be repeated four times.  
MUAP. 128.0  
Collegeium Musicum  
Emphasis is on the study and performance of the most significant literature.  
Note: The course may be repeated four times.  
MUAP. 130.0  
Music Theatre  
Emphasis is on the study and performance of the most significant literature.  
Note: The course may be repeated four times.  
MUAP. 131.0  
Contemporary Music Ensemble  
Emphasis is on the study and performance of the most significant literature.  
Note: The course may be repeated four times.  
MUAP. 132.0  
Jazz Ensemble  
Emphasis is on the study and performance of the most significant literature.  
Note: The course may be repeated four times.  
MUAP. 143.3 — 1P  
^Applied Music Private Study I  
(available to Music majors only) Private instrument lessons given weekly in which emphasis is on primarily solo literature, advancement of technique, and development of interpretation and comprehension. In addition to in-studio coursework, all students are required to present a jury at the end of the semester. They may also be required to participate in in-studio masterclasses and/or public recitals.  
Permission of the department required.  
Note: Students with credit for MUAP. 140, 142, 144, 146, 150, 152, 154, 156, 158, 159, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, or 182 cannot receive credit for this course.  
MUAP. 145.3 — 1P  
^Applied Music Private Study II  
(available to Music majors only) A continuation of studies following. 143.3, wherein the students further develop technique and repertoire with attention to performance practice for style, interpretation and comprehension. Students in the Performance stream are required to perform in recitals. In addition to in-studio coursework, all students are required to present a jury at the end of the term and may be required to participate in studio classes and recitals (see Department of Music for details).  
Prerequisite(s): MUAP. 143 or permission of the department  
Note: Students with credit for MUAP. 140, 142, 144, 146, 150, 152, 154, 156, 158, 159, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, or 182 cannot receive credit for this course.  
MUAP. 201.1  
Wind Orchestra  
This ensemble is open to all students of the University of Saskatchewan by audition. Auditions take place in the first week of September by appointment. Throughout the academic year, a wide variety of woodwind ensemble repertoire will be studied, rehearsed, and performed. Students will rehearse together on a regular basis with the intention of performing at two major concerts (one at the end of T1, one at the end of T2). Other concerts and a tour may be scheduled throughout the academic year. All concert and tour dates will be announced in early September, before the add/drop deadline. Students will be tested individually twice a year — once before the major T1 concert and once before the major T2 concert.  
Note: This course is considered an ‘A’ ensemble. This course may be repeated four times for credit.

MUAP. 202.1  
Concert Band  
This ensemble is open to all students of the University of Saskatchewan. No audition is necessary. Throughout the academic year, a wide variety of woodwind ensemble repertoire will be studied, rehearsed, and performed. Students will rehearse together on a regular basis with the intention of performing at two major concerts (one at the end of T1, one at the end of T2). Other concerts may be scheduled throughout the academic year. All concert dates will be announced in early September, before the add/drop deadline. Students will be tested individually twice a year — once before the major T1 concert and once before the major T2 concert.  
Note: This course is considered an ‘A’ ensemble. This course may be repeated four times for credit.

MUAP. 203.1  
Greystone Singers  
This course is open to all students of the University of Saskatchewan by audition. Auditions take place in the first week of September by appointment. Throughout the academic year, a wide variety of choral repertoire will be studied, rehearsed, and performed. Students will rehearse together on a regular basis with the intention of performing at two major concerts (one at the end of T1, one at the end of T2). Other concerts and a tour may be scheduled throughout the academic year. All concert and tour dates will be announced in early September, before the add/drop deadline. Students will be tested individually twice a year — once before the major T1 concert and once before the major T2 concert.  
Note: This course is considered an ‘A’ ensemble. This course may be repeated four times for credit.

MUAP. 204.1  
University Chorus  
This course is open to all students of the University of Saskatchewan, as well as members of the community (who pay a fee to attend). No audition is required. Throughout the academic year, a wide variety of choral repertoire will be studied, rehearsed, and performed. Students will rehearse together on a regular basis with the intention of performing at two major concerts (one at the end of T1, one at the end of T2). Other concerts may be scheduled throughout the academic year. All concert dates will be announced in early September, before the add/drop deadline. Students will be tested individually twice a year — once before the major T1 concert and once before the major T2 concert.  
Note: This course is considered an ‘A’ ensemble. This course may be repeated four times for credit.
MUAP 205.1
Orchestra with Strings
This ensemble is open to all string students in a B. Mus. program at the University of Saskatchewan by audition. Auditions take place in the first week of September by appointment. Throughout the academic year, a wide variety of orchestral repertoire will be studied, rehearsed, and performed. Students will rehearse together on a regular basis with the intention of performing at two major concerts (one at the end of T1, one at the end of T2). Other concerts and a tour may be scheduled throughout the academic year. All concert and tour dates will be announced in early September, before the add/drop deadline. Students will be tested individually twice a year - once before the major T1 concert and once before the major T2 concert.
Note: This course is considered an ‘A’ ensemble. This course may be repeated four times for credit.

MUAP 206.1
Music Theatre
This ensemble is open to all students of the University of Saskatchewan by audition. Auditions take place in the first week of September by appointment. Throughout the academic year, a wide variety of music theatre repertoire will be studied, rehearsed, and performed. Students will rehearse together on a regular basis with the intention of performing at two sets of major concerts (one set at the end of T1, one set at the end of T2). Other concerts may be scheduled throughout the academic year. All concert dates will be announced in early September, before the add/drop deadline. Students will be tested individually twice a year - once before the major T1 concert and once before the major T2 concert.
Note: This course is considered a ‘B’ ensemble. This course may be repeated four times for credit.

MUAP 207.1
Chamber Ensemble
This ensemble is open to all students of the University of Saskatchewan. An audition may be required - please contact the ensemble director for more information. If required, auditions take place in the first week of September by appointment. Throughout the academic year, a wide variety of chamber repertoire will be studied, rehearsed, and performed. Students will rehearse together on a regular basis with the intention of performing at two major concerts (one at the end of T1, one at the end of T2). Other concerts may be scheduled throughout the academic year. All concert dates will be announced in early September, before the add/drop deadline. Students will be tested individually twice a year - once before the major T1 concert and once before the major T2 concert.
Note: This course is considered a ‘B’ ensemble. This course may be repeated four times for credit.

MUAP 208.1
Jazz Ensemble
This ensemble is open to all students of the University of Saskatchewan by audition. Auditions take place in the first week of September by appointment. Throughout the academic year, a wide variety of jazz ensemble repertoire will be studied, rehearsed, and performed. Students will rehearse together on a regular basis with the intention of performing at two major concerts (one at the end of T1, one at the end of T2). Other concerts and a tour may be scheduled throughout the academic year. All concert and tour dates will be announced in early September, before the add/drop deadline. Students will be tested individually twice a year - once before the major T1 concert and once before the major T2 concert.
Note: This course is considered a ‘B’ ensemble. This course may be repeated four times for credit.

MUAP 209.1
Collegium Musicum
This ensemble is open to all students of the University of Saskatchewan. An audition may be required - please contact the ensemble director for more information. If required, auditions take place in the first week of September by appointment. Throughout the academic year, a wide variety of early music repertoire will be studied, rehearsed, and performed. Students will rehearse together on a regular basis with the intention of performing at two major concerts (one at the end of T1, one at the end of T2). Other concerts may be scheduled throughout the academic year. All concert dates will be announced in early September, before the add/drop deadline. Students will be tested individually twice a year - once before the major T1 concert and once before the major T2 concert.
Note: This course is considered a ‘B’ ensemble. This course may be repeated four times for credit.

MUAP 210.1
Contemporary Music Ensemble
This ensemble is open to all students of the University of Saskatchewan. An audition may be required - please contact the ensemble director for more information. If required, auditions take place in the first week of September by appointment. Throughout the academic year, a wide variety of contemporary music ensemble repertoire will be studied, rehearsed, and performed. Students will rehearse together on a regular basis with the intention of performing at two major concerts (one at the end of T1, one at the end of T2). Other concerts may be scheduled throughout the academic year. All concert dates will be announced in early September, before the add/drop deadline. Students will be tested individually twice a year - once before the major T1 concert and once before the major T2 concert.
Note: This course is considered a ‘B’ ensemble. This course may be repeated four times for credit.

MUAP 211.1
Ensemble
In all ensemble courses, a wide variety of musical repertoire is studied, rehearsed, and performed. Ensembles are open to all students of the University of Saskatchewan. Ensembles may require an entrance audition to be arranged with the instructor - please contact the Department of Music for further information. Each course is scheduled from September to April. The weekly practicum time may vary from ensemble to ensemble, but will never be more than 3 hours per week.
Note: This course may be repeated four times for credit.

MUAP 240.1 — 1P
Applied Music Private Study I
(available to music majors only)
Private instrument lessons given weekly in which emphasis is on primarily solo literature, development of technique, and development of interpretation and comprehension. It is recommended that this course be taken simultaneously with MUAP 143.3.
Prerequisite(s): MUAP 145 or permission of the department.
Note: Students with credit for MUAP 240, 242, 244, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, or 282 cannot receive credit for this course.

MUAP 243.3 — 1P
Applied Music Private Study III
(available to music majors only)
In-studio coursework, all students are required to present a jury at the end of the semester. They may also be required to participate in in-studio masterclasses and/or public recitals.
Prerequisite(s): MUAP 245 or permission of the department.
Note: Students with credit for MUAP 240, 242, 244, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, or 282 cannot receive credit for this course.

MUAP 250.0 — 1and2
B.Mus. Performance Third Year Recital
Serves as the acknowledgement that the student is qualified to begin preparation for their third year B.Mus. Performance stream recital.
Prerequisite(s): Minimum 80% in MUAP 245.3 and permission of the department.
Note: It is recommended that this course be taken simultaneously with MUAP 245.3.

MUAP 344.3 — 1P
Applied Music Private Study V
(available to music majors only)
Private instrument lessons given weekly in which emphasis is on primarily solo literature, development of technique, and development of interpretation and comprehension. It is recommended that this course be taken simultaneously with MUAP 245.3.
Prerequisite(s): MUAP 245 or permission of the department.
Note: Students with credit for MUAP 240, 242, 244, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, or 282 cannot receive credit for this course.
MUAP. 345.3 — 1P
Applied Music Private Study VI

(Available to Music majors only) A continuation of studies following. 143.3, wherein the students further develop technique and repertoire with attention to performance practice for style, interpretation and comprehension. In addition to in-studio coursework, all students are required to present a recital at the end of the semester. They may also be required to participate in in-studio masterclasses and/or public recitals.

Prerequisite(s): MUAP. 343 or permission of the department.


MUAP. 400.0 — 1and2
B.Mus. Performance Fourth Year Recital

Serves as the acknowledgement that the student is qualified to begin preparation for their fourth year B.Mus. Performance stream recital.

Prerequisite(s): Minimum 80% in MUAP. 345.3 and permission of the department.

Note: It is recommended that this course be taken simultaneously with MUAP. 445.3.

MUAP. 443.3 — 1P
Applied Music Private Study VII

(Available to Music majors only) Private instrument lessons given weekly in which emphasis is on primarily solo literature, advancement of technique, and development of interpretation and comprehension. In addition to in-studio coursework, all students are required to present a jury at the end of the semester. They may also be required to participate in in-studio masterclasses and/or public recitals.

Prerequisite(s): MUAP. 343 or permission of the department.

Note: Students with credit for MUAP. 440, 442, 444, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, or 482 cannot receive credit for this course.

MUAP. 445.3 — 1P
Applied Music Private Study VIII

(Available to Music majors only) A continuation of studies following. 143.3, wherein the students further develop technique and repertoire with attention to performance practice for style, interpretation and comprehension. In addition to in-studio coursework, all students are required to present a recital at the end of the semester. They may also be required to participate in in-studio masterclasses and/or public recitals.

Prerequisite(s): MUAP. 443 or permission of the department.

Note: Students with credit for MUAP. 440, 442, 444, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, or 482 cannot receive credit for this course.

MUS — MUSIC

College of Arts and Science

MUS. 101.3 — 1/2(3L)
Fundamentals of Music

Introduction to the basic parameters of music including notation, rhythm, intervals, melody, scales, key signatures; aural and written comprehension of the above rudiments. This course could provide foundational material for the music theory sequence.

Note: Sometimes offered as a web-based class. In this case, online materials are used and there are no scheduled lectures. Students majoring in music cannot take this course for credit. Students intending to major in music may take this course as a prerequisite for first year music courses if they do not pass the Theory Placement Exam. Students with credit for MUS. 100 cannot receive credit for this course.

MUS. 105.3 — 1/2(3L)
Introduction to Western Art Music

The art of listening to music, analysis of structure and form; history of the great periods in music through its literature.

Note: Involves a small cost in addition to tuition fees. Open to all students. Students majoring in music may not take this course for credit. Students with credit for MUS. 109 may not take this course for credit.

MUS. 111.3 — 1/2(3L)
History of Popular Music

An introduction to popular music of the United States and Canada. Organized chronologically, the course examines popular music from 1840 to present in a historical context. Fundamental musical skills (i.e. notation, directed listening) will be a component. No previous musical-specific training is required.

Note: Open to all students. Students majoring in music may not take this course as an open music elective, but may take this course as an arts elective.

MUS. 120.2 — 1(3P)
Musicianship I

The first of a four-term course of study designed to develop fundamental musical skills required by professional musicians or music directors.

Formerly: MUS. 119.

Permission of the department required.

Prerequisite(s): MUS. 101 or passing grade (65%) Music Theory Entrance Examination.

Corequisite(s): MUS. 133.

Note: Students with credit for MUS. 119 may not take MUS. 120 for credit.

MUS. 121.2 — 2(3P)
Musicianship II

The second of a four-term course of study designed to develop fundamental musical skills required by professional musicians or music educators.

Formerly: MUS. 119.

Prerequisite(s): MUS. 120.

Corequisite(s): MUS. 134.

Note: Students with credit for MUS. 119 may not take MUS. 121 for credit.

MUS. 129.0 — 2-Jan
Recitals

Non-credit course required of all B.Mus. and B.Mus. (Mus.Ed.) students. To obtain a passing grade all students must follow the prescribed guidelines as specified in the Department of Music’s Student Handbook. Students should keep open 12:30-13:30 on Mondays, Wednesdays and Fridays, and 20:00-21:30 on Thursdays and Fridays. Specific Sunday evenings are announced in September.

MUS. 133.3 — 1(3L)
Fundamentals of Music Theory I

Addresses theoretical musical concepts fundamental to the discipline of music. This includes fluency in clef reading, fluency in tertian diatonic harmony (chords and scales), figured bass, 2 species part writing, and an understanding of a variety of other fundamental musical concepts such as basic acoustics, intervals, scales, tonality, tempo, meter, beat, syncopation and so on.

Formerly: MUS. 113.

Permission of the department required.

Prerequisite(s): MUS. 101 or passing grade (65%) Music Theory Entrance Examination.

Corequisite(s): MUS. 120.

Note: Students with credit for MUS. 113 may not take MUS. 133 for credit.

MUS. 134.3 — 2(3L)
Fundamentals of Music Theory II

Discusses theoretical materials pertaining to functional harmony including functionality of all diatonic chords, secondary dominants, sequencing, cadences, and modulation (to closely related keys).

Formerly: MUS. 114.

Prerequisite(s): MUS. 133 (formerly MUS. 113).

Corequisite(s): MUS. 121.

Note: Students with credit for MUS. 114 may not take MUS. 134 for credit.

MUS. 150.3 — 1(3L-1P)
History of Music I Western Art Music. 1600 to 1830

History of Western art music with an emphasis on the main composers and their representative compositions, forms, genres, and compositional techniques including Florentine Camerata, opera, stile rappresentativo, basso continuo, cori spezzati, stile concertato, sonata da chiesa, sonata da camera, scordatura, linear/learned counterpoint, stile galant, Empfindsamer Stil, Harmoniemusik, Alberti/Merky bass.

Formerly: MUS. 140.

Note: Required for all Music programs (B.A., B.Mus., and B.Ed./B.Mus. (Mus.Ed.) degrees). Students with credit for MUS. 140 or MUS. 240 may not take MUS. 150 for credit.
MUS. 151.3 — 2(3L-1P)
History of Music II Western Art Music. 1815 to the Present
History of Western art music with an emphasis on the main composers and their representative compositions, forms, genres, and compositional techniques including diatonicism, chromaticism, program music, impressionism, pentatonicism, octatonicism, whole-tone scale, neo-Baroque and neo-Classicism, polytonality, atonality, dodecaphony, aggregate, row partitioning and combinatoriality, total serialism, minimalism, pointillism, chance music, electronic music.
Formerly: MUS. 141/MUS. 240.
Prerequisite(s): MUS. 150.
Note: Required for all Music programs (B.A., B.Mus., and B.Ed./B.Mus. (Mus.Ed.) degrees). Students with credit for MUS. 141 or MUS. 240 may not take: 151 for credit.

MUS. 160.0 Keyboard Proficiency
Students will show a minimum keyboard proficiency to the Department of Music either by providing their Royal Conservatory of Music Grade IV Piano certificate (or higher) or by performing on the piano at the Royal Conservatory of Music Grade IV level. Performances will be assessed by a faculty member in the Department of Music.
Note: Bachelor of Music students who have not completed this course will be assigned faculty keyboard proficiency testers in September of every year. It is the student’s responsibility to arrange assessment and testing. Students with credit for MUS. 317 may not receive credit for this course.

MUS. 175.3 — 1/2(3L)
Jazz History Survey
An overview of the history and evolution of jazz music. The course will include the examination and discussion of the most historically significant musicians in jazz and their music as well as the examination of the evolution of jazz music as an art form.
Formerly: MUS. 285.
Note: Students with credit for MUS. 285 will not receive credit for this course.

MUS. 180.0 Introduction to Library Research Methods
This is a non-credit course required for all B.Mus. B.Mus. (Mus.Ed.) students, and B.A. students majoring in music. The course addresses the nature of information and the role of the library in the research process. Course work will cover an introduction to music research; finding, evaluating, and using information including printed and recorded music and research on music; appropriate referencing of sources for writing scholarly program notes.
Restriction(s): This course is only open to students in the B.A. in Music and B.Mus. programs.
Note: Students majoring in Music are encouraged to take this course in their first term of their first year of studies.

MUS. 184.3 — 1/2(3L)
Jazz Materials
Course includes development of jazz theory, ear training, transcribing and keyboard skills. This course is the prerequisite to Jazz Improvisation (MUS. 283.3) and Jazz Arranging (MUS. 386.3). This course is the suggested co-requisite for Jazz Ensemble Techniques (EMUS. 337.3) and Jazz Ensemble. MUS. 184.3 is open to students of all colleges.

MUS. 203.3 — 2(3L)
Introduction to Composition
Familiarizes students with issues composers consider when creating music. Designed to benefit all students of the Department with an interest in musicianship through immersion in composing, improvising, and learning about musical forms - old and new. It is structured around the active participation of students as composers, performers, and analysts.
Formerly: MUS. 202
Prerequisite(s): MUS. 134 or permission of the department
Note: Students with credit for MUS. 202 may not take MUS. 203 for credit.

MUS. 220.2 — 1(3P)
Musicianship III
Third of a four-term course of study designed to develop fundamental musical skills required by professional musicians/music educators.
Formerly: MUS. 219.
Prerequisite(s): MUS. 121.
Corequisite(s): MUS. 233.
Note: Students with credit for MUS. 219 may not take MUS. 220 for credit.

MUS. 221.2 — 2(3P)
Musicianship IV
Fourth of a four-term course of study designed to develop fundamental musical skills required by professional musicians or music educators.
Formerly: MUS. 219.
Prerequisite(s): MUS. 220.
Corequisite(s): MUS. 234.
Note: Students with credit for MUS. 219 may not take MUS. 221 for credit.

MUS. 229.0 — 2-Jan Recitals
Non-credit course required of all B.Mus. and B.Mus. (Mus.Ed.) students. To obtain a passing grade all students must follow the prescribed guidelines as specified in the Department of Music’s Student Handbook. Students should keep open 12:30-13:30 on Mondays, Wednesdays and Fridays, and 2000-21:30 on Thursdays and Fridays. Specific Sunday evenings are announced in September.

MUS. 233.3 — 1(3L)
Fundamentals of Music Theory III
Discusses theoretical materials pertaining to formal structure (i.e.: binary, ternary, rondo, sonata form) and will continue at a more sophisticated level, the theoretical musical concepts introduced in Fundamentals of Music Theory II (i.e.: phrasing, tonic expansion, cadences, secondary dominant strings, rhythmic and melodic motifs, chord intensification, tonicization, augmented 6th chords (all), modal mixture, chromatic mediants, introduction to chromatic functional harmony and advanced voice-leading, comprehensive study of all subdominants (pre-dominants) and modulations within all key relationships).
Formerly: MUS. 213.
Prerequisite(s): MUS. 134 (or 114).
Corequisite(s): MUS. 220.
Note: Students with credit for MUS. 213 may not take MUS. 233 for credit.

MUS. 234.3 — 2(3L)
Fundamentals of Music Theory IV
Introduces students to many of the theoretical musical materials explored by a variety of composers in the 20th Century. This includes the study of synthetic scales (i.e.: octatonic, whole tone, etc.) chromatic polymodality, set theory analysis, ordered tone rows and serialism, twelve-tone matrices and an exploration of a variety of new ways to organize musical parameters and their contemporary notation.
Formerly: MUS. 214.
Prerequisite(s): MUS. 233 (or 213).
Corequisite(s): MUS. 221.
Note: Students with credit for MUS. 214 may not take MUS. 234 for credit.

MUS. 235.3 — 1/2(3L)
Music Technology Computer and Music Software
Recommended for all musicians who are interested in using computer software and new technologies in their everyday work in music. Includes an introduction to computer, digital synthesizer and MIDI language and will explore some important software available on the market.
Prerequisite(s): MUS. 134.

MUS. 242.1 — 1/2(1L)
Diction for Singers English Latin and Italian
Will present an introduction to International Phonetic spelling and Symbols along with appropriate pronunciation for vocal repertoire in English, Latin, and Italian languages. Classes meet once weekly for one hour. Students will bring repertoire they are currently studying to be mixed with other fundamental works that highlight the various idiosyncrasies of a singer’s diction in these languages.
Prerequisite(s): MUS. 133 or permission of the department.

MUS. 243.1 — 2(1L)
Diction for Singers II German
Will present an introduction to International Phonetic spelling and Symbols along with appropriate pronunciation for vocal repertoire in the German language. Classes meet once weekly for one (1) hour. Students will bring repertoire they are currently studying to be mixed with other fundamental works that highlight the various idiosyncrasies of singer’s diction in this language.
Prerequisite(s): MUS. 133 or permission of the Department of Music.

MUS. 244.1 — 2(1L)
Diction For Singers III French
Will present an introduction to International Phonetic spelling and Symbols along with appropriate pronunciation for vocal repertoire in the French language. Classes meet once weekly for one (1) hour. Students will bring repertoire they are currently studying to be mixed with other fundamental works that highlight the various idiosyncrasies of singer’s diction in this language.
Prerequisite(s): MUS. 133 or permission of the Department of Music.
MUS. 250.3 — 1/2(3L)
History of Music III Western Art Music Antiquity to High Renaissance

History of Western art music with an emphasis on the main composers and their representative compositions, forms, genres, and compositional techniques including Greek, systeim, melodic/rhythmic modes, artes liberales, missa ordinaria, proprium, officium; monophony and early polyphony, rhythmic/melodic notation, organology, fauxbourdon, falsobordone, Reformation, Counter-Reformation, Anglican church music, intabulations.

Prerequisite(s): MUS. 151 or permission of the department.

Note: Students who completed MUS. 150 and 151 prior to the fall of 2011 will find that there is overlap of content with the new MUS. 250.3 course, as this course effectively „spreads out” the information from the original MUS. 150 and 151 into three courses: MUS. 150, 151 and 250.

MUS. 283.3 — 1/2(3L)
Jazz Improvisation

Focuses on the study and development of musical skills as they pertain to the performance of jazz improvisation. Topics such as basic jazz-related theory; chord/scale relationships; motivic, chord based and modal improvisations are presented in a systematic manner. This course assumes no pre-existing knowledge base of jazz improvisation but does presume a basic working knowledge and control over any given musical instrument. This course is open to all instrumentalists.

Prerequisite(s): MUS. 184.

MUS. 298.3 — 1/2(3L)
Special Topics

Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

MUS. 299.6 — 1and2(3L)
Special Topics

Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

MUS. 302.6 — 1and2(3L)
Composition

Composition in small and large forms for various media.

Prerequisite(s): MUS. 234.

MUS. 303.3 — 1/2(3L)
History of Church Music

The significant developments in Judaeo-Christian religious music from its origins to the present day. The role of music in Jewish and particularly Western Christian traditions, both Roman Catholic and Protestant, will be examined.

Prerequisite(s): MUS. 250 or permission of the department.

Note: Students with credit for MUS. 204 cannot receive credit for this course.

MUS. 307.3 — 1(3L)
Orchestration I

A study of the art of orchestration and its practical application to strings, woodwinds and horn. The various styles of scoring, from Bach to the 20th Century, will be analyzed as well as discussion on the history of orchestration. Emphasis will be placed on arranging for full orchestra with particular attention to string, woodwind and horn sections.

Prerequisite(s): MUS. 234.

Note: Students with credit for MUS. 305 cannot take this course for credit.

MUS. 311.3 — 1/2(3L)
History of Opera

A survey study of the history of opera from the Florentines to modern times.

Prerequisite(s): MUS. 151.

Note: Students with credit for MUS. 310 cannot receive credit for this course.

MUS. 312.3 — 1/2(3L-1P)
Vocal Literature

Song literature of various western cultures will be studied toward acquiring a broad awareness of the vast repertoire of song.

Permission of the department required.

Prerequisite(s): Two years of applied voice training, MUS. 151 (formerly MUS. 141/240) and 234 (formerly MUS. 214).

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

MUS. 313.3 — 1/2(3L-1P)
Science and Sound of Singing

A scientific and pedagogical study of the process of singing, with an emphasis on combining these facets of study toward a better understanding for use as artists and vocal instructors.

Permission of the department required.

Prerequisite(s): Two years of applied voice training and MUS. 234.

Note: Students with credit for MUS. 356 cannot receive credit for this course.

MUS. 325.3 — 1/2(3L)
Conducting Introduction

An introduction to the basic grammar of conducting choral and instrumental music.

Prerequisite(s) or Corequisite(s): MUS. 233 (or MUS. 213) or permission of the department.

Note: Students cannot receive credit for EMUS. 335 and MUS. 325.

MUS. 326.3 — 1/2(3L)
Conducting Intermediate

A continuation of the introductory course in conducting choral and instrumental music with emphasis on score analysis, study, interpretation and performance.

Prerequisite(s): MUS. 325 (or EMUS. 335).

Note: Students cannot receive credit for EMUS. 336 and MUS. 326.

MUS. 329.0 — 2-Jan
Recitals

Non-credit course required of all B.Mus. and B.Mus. (M.Ed.) students. To obtain a passing grade all students must follow the prescribed guidelines as specified in the Department of Music’s Student Handbook. Students should keep open 12:30-13:30 on Mondays, Wednesdays and Fridays, and 20:00-21:30 on Thursdays and Fridays. Specific Sunday evenings are announced in September.

MUS. 345.3 — 1/2(3L)
Introduction to Electro Acoustic Music

Designed to create musical works (i.e. composition) within the electronic/digital electro-acoustic medium. The course introduces students to the department’s Electronic Music Laboratory (i.e. includes an EML orientation and allows students use of the EML). The course offers theoretical and acoustical foundations and artistic guidance.

Prerequisite(s): MUS. 234.

MUS. 346.3 — 1(3L)
Pre Baroque Counterpoint

Mainly a study of 16th-century contrapuntal techniques and forms. Though general stylistic features of the music are emphasized, differences in the styles of various composers are also studied. A brief study of pre-16th-century contrapuntal music is included.

Prerequisite(s): MUS. 234.

MUS. 354.3 — 1/2(3L)
Survey of Keyboard Literature

A history of piano literature from the origins of the instrument to the 20th century, discussing styles, forms and interpretations of works taken from all periods.

Formerly: MUS. 333.

Prerequisite(s): MUS. 134 and MUS. 151.

MUS. 359.3 — 1/2(3L)
Piano Pedagogy

An introduction to piano pedagogy at all levels, beginning with an overview of beginning pedagogy materials, and continuing with the study of technique, etudes and graded literature, with an emphasis on performance practices from the Baroque onwards, including practical approaches to phrasing, pedalling, tone production, harmonic structure and other principles for interpretation of the literature.

Formerly: MUS. 357.

Permission of the department required.

Prerequisite(s): MUS. 134, MUS. 151 and two years of applied piano.

Note: Students with credit for MUS. 357 may not take MUS. 359 for credit.

MUS. 363.3 — 1/2(3L)
Music of Baroque Period

A history of music from approximately 1600 to 1725. Emphasis will be on the main forms, composers and representative compositions from this period.

Prerequisite(s): MUS. 151 (formerly MUS. 141/240).
MUS. 364.3 — 1/2(3L)
Music of Classical Period
A history of music covering the Classical period from approximately 1700 to 1800. Emphasis will be on the main forms, composers and representative compositions from this period.
Prerequisite(s): MUS. 250 or permission of the department.

MUS. 365.3 — 1/2(3L)
Music of Romantic Period
A history of music covering the Romantic period from approximately 1800 to 1900. Emphasis will be on the main forms, composers and representative compositions from this period.
Prerequisite(s): MUS. 151.

MUS. 367.3 — 1/2(3L)
Music of Twentieth Century
Focuses on historically prevalent ideas and on analytic techniques necessary for a definitive understanding of the Twentieth-Century revolution of musical language.
Prerequisite(s): MUS. 151.

MUS. 368.3 — 1/2(3L)
Canadian Music
An overview of the development of music in Canada including relationships to both European folk and art music and to Aboriginal music.
Prerequisite(s): MUS. 151 or permission of the department.

MUS. 386.3 — 1/2(3L)
Jazz Arranging
An introduction to the fundamental concepts of jazz arranging. Areas of study include small group (combo) writing and large ensemble orchestration techniques.
Prerequisite(s): MUS. 184.

MUS. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

MUS. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

MUS. 402.6 — 1and2(3L)
Composition
Advanced studies in composition and continuation of work begun in MUS. 302.
Prerequisite(s): MUS. 302.

MUS. 428.3 — 1/2(3L)
Choral Pedagogy
A systematic study of the fundamentals of organizing and leading a choir. Topics include: the voice as instrument; auditioning and placement of singers; text, languages, and diction; warm-ups, choral balance, blend, and tone; rehearsal management, leadership, and organizing performances.
Prerequisite(s): MUS. 234 and MUS. 325.

MUS. 429.0 — 2-Jan
Recitals
Non-credit course required of all B.Mus. and B.Mus. (Mus.Ed.) students. To obtain a passing grade all students must follow the prescribed guidelines as specified in the Department of Music's Student Handbook. Students should keep open 12:30-13:30 on Mondays, Wednesdays and Fridays, and 2000-21:30 on Thursdays and Fridays. Specific Sunday evenings are announced in September.

MUS. 438.3 — 1/2(3S)
Seminar in Instrumental Conducting
A study of the fundamentals of conducting a wind ensemble, to develop psycho-motor and score-reading skills, and to expand repertoires of gestures for large and small ensembles. This course deals with methods of studying instrumental curricula, selecting repertoire, analysis, planning lessons, programming, teaching musical literacy, and evaluation. Examination of materials and resources is included, as is a review of the characteristics of successful secondary school instrumental music programs.
Prerequisite(s): MUS. 325 or permission of the department.

MUS. 447.3 — 1/2(3L)
Structural Musical Analysis
Complete pieces of music or complete movements of compositions will be analyzed by integrating traditional analytical methods with reductive techniques and approaches based on the scientific analysis of sound and communications. The techniques are applied to music of all styles.
Prerequisite(s): MUS. 234.

MUS. 450.3 — 2(3L)
Notation I Medieval to Renaissance Music
A study of the two general systems of music notation - white mensural and black - which preceded our modern system. Deals with lute and early keyboard tablatures. Includes discussions of problems and transcriptions into modern notation of ancient manuscripts.
Prerequisite(s): MUS. 234 and MUS. 151.

MUS. 453.3 — 1/2(3S)
Seminar in Choral Literature and Materials
A seminar in the standard choral repertoire for mixed, male and treble chorus with focus on representative works.
Prerequisite(s): MUS. 234 and MUS. 250.

MUS. 457.3 — 1/2(3L)
Music since 1950
A detailed study of important musical ideas and styles from 1950 to the present. Approached through the music and the theoretical writings of composers who have contributed important works during this time.
Prerequisite(s): MUS. 234 and MUS. 151.

MUS. 463.3 — 1/2(3L)
Seminar in Wind Literature and Materials
Examines the solo and ensemble literature for winds from the Middle Ages to the present era including the wind band repertoire.
Formerly: MUS. 350
Prerequisite(s): MUS. 134 and MUS. 151.
Note: Students with credit for MUS. 350 may not take this course for credit.

MUS. 464.3 — 1/2(3L)
Research Seminar in Musicology I
A study of topics of current interest in musicology. Includes the oral presentation of research as well as the preparation of major research papers. The specific topic will be announced each time the course is offered.
Prerequisite(s): MUS. 151.

MUS. 465.3 — 1/2(3L)
Research Seminar in Musicology II
Advanced research in musicology. The specific topic will be announced each time the course is offered.
Prerequisite(s): MUS. 464.

MUS. 472.3 — 1/2(3L)
Seminar in Music Bibliography and Research Techniques
A seminar designed to deepen the concepts and tools of scholarship developed in MUS. 241. Emphasizes developing research skills through the preparations of lectures, lecture-recitals, and papers. Special bibliographical topics in the principal areas of music will be discussed.
Prerequisite(s): MUS. 151.
Note: Students who have credit for MUS. 354 may not take this course for credit.

MUS. 474.3 — 1/2(3L)
Selected Music Research Topics
A seminar devoted to particular areas of study in music which are not covered by curriculum offerings.
Permission of the department required.
Note: Students must have advanced standing in a Bachelor of Music (Arts and Science) program. See Department Head for details.

MUS. 485.3 — 1/2(3S)
Introduction to Schenkerian Analysis
This seminar course examines both the analytical techniques and the cultural/philosophical backdrop for one of the most seminal figures in music theory, Heinrich Schenker (1868-1935). Schenker's comprehensive approach toward understanding and assessing the organizational principles central to tonal music revolutionized the field of music theory. Schenker's methodology is firmly entrenched in the field of music theory. The course requires prior knowledge of general analytical techniques and in particular, skills that are acquired in the two-year music theory core and beyond. The seminar will carry a workload commensurate with similar fourth-year offerings at the U of S.
Prerequisite(s): MUS. 234 and one of MUS. 346, MUS. 347, MUS. 367, MUS. 447 or MUS. 457, or by approval of the department.
Note: Students who took MUS. 498.3 Schenkerian Analysis may not take this course for credit.
MUS. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

MUS. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

NEPS — NURSING EDUCATION

PROGRAM

NEPS. 355.3 — 6.25L/S(8 weeks)
The Practice of Nursing IV Theory
Provides opportunities for participants to explore concepts related to selected challenges to the health of infants, children, adolescents, and childbearing families. This course is open only to participants in the Second Degree Entry Option of the NEPS.

Restriction(s): Open only to NEPS Post-Degree Entry Option students in the College of Nursing.
Prerequisite(s): NEPS. 350 and 352
Corequisite(s): NEPS. 354
Note: Students with credit for NURS. 330 will not receive credit for this course.

NEPS. 356.3 — 175C/P(over 9 weeks)
The Practice of Nursing IV Clinical
Provides participants with opportunities for the integration of theory and practice in assisting infants, children, adolescents, and childbearing families with challenges to their health. This course is open only to participants in the Second Degree Entry Option of the NEPS.

Restriction(s): Open only to NEPS Post-Degree Entry Option students in the College of Nursing.
Prerequisite(s): NEPS. 350 and 352
Corequisite(s): NEPS. 354
Note: Must have completed all required courses in the NEPS Second Degree Entry Option except NEPS. 456

NEPS. 357.2 — 3.1L/S(8 weeks)
Diversity in Families
Provides participants with opportunities to explore concepts related to families within the context of community and society. A variety of theoretical perspectives will be used to assess the strengths and challenges experienced by the contemporary family. This course is open only to participants in the Second Degree Entry Option of the NEPS.

Restriction(s): Open only to the NEPS Post-Degree Entry Option students in the College of Nursing.
Prerequisite(s): NEPS. 355, 357, and 450

NEPS. 451.3 — 9C/P(13 weeks)
Nursing Partnerships with Communities Clinical
Provides participants with opportunities for the integration of theory and practice using the Primary Health Care framework to explore the nursing role in population health promotion, community development, and community capacity building. Emphasis will be on social participation, including program development. This course is open only to participants in the Second Degree Entry Option of the NEPS.

Restriction(s): Open only to NEPS Post-Degree Entry Option students in the College of Nursing.
Prerequisite(s): NEPS. 355, 357, and 450

NEPS. 453.3 — 3.1L/S(13 weeks)
Research for Professional Practice
Introduces the participant to research concepts, methodology, and issues in health. The emphasis will be on critical appraisal of existing research as a basis for evidence-based practice. This course is open only to participants in the Second Degree Entry Option of the NEPS.

Restriction(s): Open only to NEPS Post-Degree Entry Option students in the College of Nursing.
Prerequisite(s): STAT. 244 or equivalent.

NEPS. 454.3 — 3.8L/S(13 weeks)
Leading and Managing in Health Care
Emphasizes the study of leadership and management concepts and theories as they relate to the context of nursing practice within health care organizations and systems.

Restriction(s): Open only to NEPS Post-Degree Entry Option students in the College of Nursing.
Prerequisite(s): NEPS. 354

NEPS. 455.3 — 3.1L/S(13 weeks)
Issues in Nursing
There will be opportunity for all participants to reflect upon the roles and competencies of the professional nurse within the context of their own evolving nursing experience. Legal, moral, and ethical principles will be applied to the analysis of current issues that have implications for caring in nursing practice. This course is open only to participants in the Second Degree Entry Option of the NEPS.

Restriction(s): Open only to NEPS Post-Degree Entry Option students in the College of Nursing.
Prerequisite(s): NEPS. 354 and NEPS. 351 or 356

NEPS. 456.6 — 240C/P(over 6 weeks)
Primary Health Care in the Community
Provides opportunities for the participant to expand the integration of research and primary health care concepts in the community. This course is open only to participants in the Second Degree Entry Option of the NEPS.

Restriction(s): Open only to NEPS Post-Degree Entry Option students in the College of Nursing.
Prerequisite(s): NEPS. 455
Note: Must have completed all required courses in the NEPS Second Degree Entry Option except NEPS. 457

NEPS. 457.6 — 240C/P(over 6 weeks)
Clinical Integration
Provides opportunities for participants to expand the integration of theory and practice in nursing care of individuals, families, groups, and communities. Emphasis will be placed on the integration of management and research concepts into clinical practice. This course is open only to participants in the Second Degree Entry Option of the NEPS.

Restriction(s): Open only to NEPS Post-Degree Entry Option students in the College of Nursing.
Prerequisite(s): NEPS. 455
Note: Must have completed all required courses in the NEPS Second Degree Entry Option except NEPS. 456

NEPS. 499.6
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

NRTH — NORTHERN STUDIES

College of Arts and Science

NRTH. 101.3 — 1/2(3L)
Introduction to Circumpolar World
Introduces students to the landscape, peoples and issues of the circumpolar region. Beginning with an examination of the geography, and the biological and physical systems of the Subarctic and Arctic, it then turns to the aboriginal and contemporary peoples of the region. The history of the Circumpolar World is treated in a broad fashion, to provide a grounding in the events and developments that have created the region's contemporary qualities. The second part of the course surveys some of the particular issues facing the region, including climate change, economic, political and social development. This course ultimately is intended to stimulate interest in the circumpolar world.

Note: This course may be used in the General or Elective requirement for Arts and Science programs.

NRTH. 321.3 — 1(3L)
Peoples and Cultures of the Circumpolar World
Introduces the peoples and cultures of the north Circumpolar Region through interdisciplinary study in the fields of anthropology, sociology, history, media and cultural studies, communications and literature. Students will be introduced to traditional cultures and contemporary peoples through Indigenous and Western perspectives. This course examines primary societies (traditional Indigenous societies up to Western contact) and secondary societies (non-Indigenous enclaves in the North).

Prerequisite(s): NRTH. 101 and 24 credit units at the University.
NRTH. 322.3 — 2(3L)
Peoples and Cultures of the Circumpolar World II
Aims to promote an integrated and multidisciplinary understanding of the circumpolar peoples and their adaptations and contributions to social, economic, political, and environmental changes. This course describes the emergence of tertiary societies and a description of self-determination, followed by sections on identity and language, media, arts and literature, education, recreation and family, respective to the three primary Circumpolar regions: North America and Greenland, Siberia and Northern Asia, and Northern Scandinavia and North-west Russia.
Prerequisite(s): NRTH. 101 and 24 credit units at the University.

NRTH. 331.3 — 1(3L)
Contemporary Issues of the Circumpolar World I
Introduces students to the important structures and forces affecting the sustainability of circumpolar communities. Students will deal with the population trends in the circumpolar region, natural resource use and the economies of these communities and economic ownership.
Prerequisite(s): NRTH. 101 and 24 credit units at the University including at least 6 credit units senior social sciences.

NRTH. 332.3 — 2(3L)
Contemporary Issues of the Circumpolar World II
Students will deal with the main challenges confronting the peoples and communities of the world’s northern regions, in terms of governance and politics, social issues, education and knowledge systems, and global issues.
Prerequisite(s): NRTH. 101 and 24 credit units at the University.

NRTH. 480.6 — 1and2
Northern Studies Honours Thesis
Students will work on a laboratory, field, library, or theoretical study under the supervision of a faculty member from the Northern Studies Steering Committee. Each individual project requires approval of a research proposal by the Northern Studies Academic Coordinator in the term preceding registration before permission will be granted. A thorough, written report in thesis format describing the project and the summarized results submitted at the end of the project will be evaluated by a faculty committee.
Prerequisite(s): Fourth year standing in the Northern Studies program, permission of the Academic Coordinator of Northern Studies, and supervision by a faculty advisor.

NRTH. 490.0 — 1/2(3S)
Seminar in Northern Studies
Seminar presentations by visitors, faculty and students on a broad selection of northern issues. Fourth year students in the Northern Studies program will be required to attend all seminars throughout the full academic year and present a one-hour seminar on a topic of their choice related to northern issues or problems in the environment, society, economy or politics.
Prerequisite(s): Fourth year standing in the Northern Studies program, or permission of the Academic Coordinator of Northern Studies.

NS — NATIVE STUDIES

NS 107.3 — 1/3L-15
Introduction to Canadian Native Studies
Aims to develop students’ critical reading, writing, and thinking skills and provide the background necessary for advanced Native Studies courses. Through course lectures and seminar discussions this course presents an overview of Aboriginal societies across Saskatchewan and Canada by linking processes of the past with contemporary issues.
Note: Students with credit for NS 105 or NS 106 (formerly NS 110) may not take this course for credit.

NS 210.3 — 1/2(3L)
Indigenous Ways of Knowing
This course introduces students to the rich and complex nature of forms and diversity of Indigenous Knowledge in comparative and local contexts. The focus will be on the relevance of local/traditional/Indigenous knowledge to decolonization, environmental sustainability, and self-governance.
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST

NS 212.3 — 1/2(3L)
Nehiyaw Tapsinowin Cree Cultural Histories
This is an introductory survey course of Cree cultural histories in North America with emphasis on Cree societies, experiences, resiliency strategies, and perspectives in present-day Saskatchewan. It will provide deeper insights into Cree history and life, knowledge translation, niihayàwêwin (Cree language, Cree speaking), the historical roots of contemporary issues, community engagement and research. Students will have the opportunity to work with Elders on research projects and gain experiential knowledge through participation in Cree social and cultural activities.
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST

NS 214.3 — 1/2(3L)
Saulteaux Cultural Expressions
This course aims to develop a critical awareness of the regeneration of Saulteaux values as evidenced in ethnohistory, language, literature and oral tradition. Students will gain familiarity with linguistic features of the language, the history of Saulteaux First Nations in Saskatchewan, and commonalities with other regional contexts and dialects of Anishinaabe. Students will relate historical and cultural information to the contemporary context. Elders teachings will comprise a significant portion of course instruction. Format will be lectures, elder discourse, readings, guest speakers, film, research and reflective writing.
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST
Note: Students with credit for NS 298.3 Saulteaux Cultural Expressions may not receive credit for this course.

NS 215.3 — 1/2(3L)
Metis Political and Poetic Writing
Through lectures, readings, seminar workshops and research, students will examine MÈtis writing for political and poetic themes such as identity, sovereignty, government relations, Indigenous rhetoric, identity, and worldview. The course will draw upon examples of historic and contemporary writing from speeches, essays, poetry, biography, novels, correspondence, songs, plays, and writing in public spaces.
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST
Note: Students with credit for NS 298.3 MÈtis Political and Poetic Writing may not receive credit for this course.

NS 220.3 — 2(3L)
Aboriginal Rights and the Courts
Will review the major court decisions rendered by the Supreme Court of Canada, U.S. Supreme Court, various provincial courts, and other tribunals that have shaped the scope of Aboriginal rights in Canada. In addition, the course will examine the role that Native Studies scholars can plan in court proceedings.
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST

NS 221.3 — 2(3L)
Indigenous Food Sovereignty
Examines issues around Indigenous foods looking at contributions, impacts and threats within a local and global context. Historically many of the world’s foods originate and have been adapted by Indigenous peoples and were the basis for thriving local economies. Modern developments are having major social, cultural and health impacts on Indigenous communities. This course will examine some of those impacts and what Indigenous peoples and their allies are doing to restore and preserve local economies.
Formerly: NS 480.
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST
Note: Students with credit for NS 480 may not take this course for credit.

NS 255.3 — 1/2(3L)
Cultural Survival of Aboriginal Family
Studies the adaptations and persistence of family as the fundamental unit of social and political organization of Aboriginal society from mid 19th century to the present. Topics to be considered are kinship, marriage, birth culture, child rearing, rites of passage, education, and interface with Canadian institutions and mainstream cultural expectations. Format is lectures, readings, seminars, guest speakers, film and research.
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST
Note: Students who have completed NS 298.3 “Cultural Survival of Aboriginal Family” may not take this course for credit.
NS 256.3 — 2(3L)
This course will examine the development and practice of Aboriginal Child Welfare in Canada from historic to contemporary times. Within a framework of examining the issue of Aboriginal control of child welfare as a right within the inherent right of self-government, major themes and concepts to be explored will include the intersecting interests of the child and Western liberal individual rights principles, the rights of the First Nations child, inter-representation issues and challenges faced by First Nations controlled Family and Child Services. Additional areas of child welfare will also be examined. It will also consider critical/Indigenous perspective related to central themes, discourses and concepts within Aboriginal Child Welfare policy and practice. The course format includes lectures, readings, case studies, guest speakers, film and research.
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST

NS 261.3 — 1/2(3L/S)
Aboriginal Intellectual and Cultural Traditions in Western Canada
Emphasis is on the First Nations and Metis peoples of Western Canada. Emphasis will be placed on the historical significance of worldviews as captured in their intellectual and cultural traditions. In order to explore these traditions, this course will focus on examining First Nations and Metis history in the late eighteenth century through to the mid-nineteenth century. Assignments will help the student develop tools of analysis essential to the development of research and writing skills.
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST
Note(s): Students with credit for NS 260 will not receive credit for this course.

NS 262.3 — 1/2(3L/S)
Aboriginal Narratives of Historical Memory
Emphasis will be on the narratives detailing the historical situations of First Nations and Metis peoples of Western Canada. This course is designed to demonstrate and analyze the development of these Aboriginal societies culturally, politically, economically and socially beginning in the late nineteenth century until the mid-twentieth century. Emphasis will be placed on the historical significance of Aboriginal societies in the development of Western Canada as well as their contemporary position.
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST
Note(s): Students with credit for NS 260 will not receive credit for this course.

NS 264.3 — 1/2(3L)
Aboriginal People and Canadian Politics
An analysis of contemporary Canadian political and administrative processes as they affect Native Peoples. Emphasis will be placed on the Federal system of government and its effects on Native identity, community programs and local autonomy.
Formerly: NS 263.6.
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST
Note: Students with credit for NS 207 or NS 263 may not take NS 264 for credit.

NS 265.3 — 1/2(3L)
Aboriginal People and Development
Surveys the historic, political and economic causes of Aboriginal underdevelopment. Government-sponsored development projects will be examined and new strategies for Aboriginal economic development will be explored.
Formerly: NS 365.6
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST
Note: Students with credit for NS 304 or NS 365 may not take NS 265 for credit.

NS 270.6 — 1and2(3L)
Literature of Native North America
Surveys literature (folklore, biography, drama, poetry and novels) about and by the Indigenous Peoples of North America. A multifaceted approach (aesthetic, linguistic, historical, and cultural) will be employed in examining this literature.
Formerly: NS 211
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST
Note: Students with credit for NS 211 may not take NS 270 for credit.

NS 271.3 — 1/2(3L)
Aboriginal Women in Canada
Examination of the position of women in traditional, pre-contact Native society, the changes to that position wrought by contact with Europeans, and contemporary issues of concern to Native women.
Formerly: NS 225
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST
Note: Students with credit for NS 225 may not take NS 271 for credit.

NS 272.3 — 1/2(3L)
Native Americans USA
A history of American Indians from the contact period to the development of government policies. The Bureau of Indian Affairs and the American treaties, the removal of the Eastern tribes to the middle west, the termination policy, and contemporary issues will be discussed.
Formerly: NS 372.6
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST
Note: Students with credit for NS 213 or NS 372 may not take this course for credit.

NS 273.3 — 1/2(3L)
North American Indigenous Gangs A Comparison of Canada and the United States
This course will examine Canadian Aboriginal and American Indian gangs. Students will consider the historical and societal context within which Indigenous gangs are produced leading to an increased awareness and understanding of Indigenous youth participation in gangs. Some topics to be covered include: reservation/reserve and urban connections, the inter-generational impacts of the residential/boarding school, female gangs/gang members, institutionalized (criminal justice system) interactions, and the impact of prisons on the perpetuation of Indigenous gangs.
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST
Note: Students with credit for NS 298.3 North American Indigenous Gangs: A Comparison of Canada and the United States may not receive credit for this course.

NS 280.6 — 1and2(2L‑1S)
Metis History in Western Canada
Through lectures and seminar readings, the origin and development of the Metis is analyzed. Emphasizes the historical significance of the Metis in the development of Western Canada. Discusses contemporary issues of the Metis.
Formerly: NS 200.
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST
Note: Students with credit for NS 200 may not take NS 280 for credit.

NS 281.3 — 1/2(2L‑1S)
First Nations History in Western Canada
Traces the history of Western Canadian First Nations from the earliest contact to the present era.
Formerly: NS 203.
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST
Note: Students with credit for NS 203 may not take NS 281 for credit.

NS 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

NS 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

NS 302.6 — 1and2(3S)
Seminar in Indian History
Through seminar presentations and readings, examines major developments and themes in Canadian Indian history.
Prerequisite(s): 12 credit units in Native Studies.
NS 340.3 — 1/2(3S)
Theory and Aboriginal Societies
Designed to enhance understanding and application of theories arising from Aboriginal Societies. Primary focus is on Aboriginal intellectual traditions and their role within the academic discourse that is effecting a change in the manner in which scholarship about Aboriginal peoples and societies is constructed.
Prerequisite(s): NS 261 and. 262 and 6 credit units. 200-level Native Studies.

NS 350.6 — 1and2(3L)
Native Studies Research
Develops student understandings of research methodologies, concepts and practices in Native Studies.
Formerly: NS 309
Prerequisite: NS 261 and. 262 and 6 credit units. 200-level Native Studies.
Note: Students with credit for NS 309 may not take NS 350 for credit.

NS 351.3 — 1/2(3L)
Indigenous Oral Histories Research
This course explores the forms, qualities, diversities and cultural foundations of Indigenous oral narratives, and addresses practical aspects of gathering, recording, interpreting and utilizing them.
Prerequisite(s): NS 210.3, and 6 credit units. 200-level NS

NS 366.6 — 1and2(3S)
Indigenous Peoples and Nation States
Issues of concern for indigenous peoples globally are considered, and analogies to the Canadian Native context made.
Formerly: NS 305
Prerequisite(s): NS 261 and. 262 and 6 credit units. 200-level Native Studies.
Note: Students with credit for NS 305 may not take NS 366 for credit.

NS 370.6 — 1and2(3L)
Images of Indigenous North America
Examines how the various historical and contemporary images or representations emerged and changed over time and the cultural world views, ideas and values behind the images. Further discussion will centre around how these images affect our relationships with each other. After critical analysis of images, strategies for changing images will be explored. This will be done through interactive lectures, presentations, group and individual activities, critical viewing and analysis of photographs, films, videos, magazines, newspapers, and other popular media forms.
Formerly: NS 208
Prerequisite(s): NS 261 and. 262 and 6 credit units. 200-level NS.
Note: Students with credit for NS 208 may not take this course for credit.

NS 373.3 — 1/2(3L)
Indigenous Masculinities in the Global Context
Though the literature on masculinity has increased dramatically in the last 15 years, researchers have only recently begun to explore the notion of Indigenous masculinities. The majority of research has emerged in the pacific islands and Africa, but has garnered sparse attention in North America. Through articles and books, lectures, class discussion, and written assignments, this course will introduce students to the issues of masculinity from global Indigenous perspectives and provide an introduction to the general masculinity literature. The course will explore to what degree the notions of masculinity in general, and global Indigenous masculinities specifically, applies to the North American context.
Prerequisite(s): 12 credit units in Native Studies Note: NS 271.3 is a recommended course.

NS 398.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

NS 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

NS 410.3 — 1/2(3S)
Aboriginal Self Determination Through Mitho Pimachesowin Ability to Make a Good Living
The course examines a range of contemporary issues relating to the conceptual foundations of Aboriginal Self Determination. Historically, the Aboriginal Way of Life had spiritual roots and encompassed all of life, and this holistic perspective continues to influence modern developments in varying degrees. This class will introduce students to the Cree concept of Mitho Pimachesowin (ability to make a good living) and its application to contemporary initiatives in Aboriginal Self Determination. It will also explore its related elements of autonomy, kinship, work ethic, respect, responsibility and resilience.
Prerequisite(s): 18 credit units NS or permission of the instructor.
Note: Students who have received credit for NS 498.3 Special Topics: Aboriginal Self Determination Through Mitho Pimachesowin (Ability to Make a Good Living) may not receive credit for this course.

NS 430.3 — 2(3S)
Issues in Cultural Preservation
Will take an interdisciplinary approach to explore issues of cultural preservation. The objective of the course is to allow students to examine how Aboriginal cultural preservation does or can affect areas important to Aboriginal people. Topics to be covered in the course include cultural representations in museums, repatriation, archaeology, governance, economic development, health, contemporary music, film, youth, urban, resource management, law, and sports, among others. This course has three basic goals: to discuss aspects that form the foundation of current cultural preservation initiatives, to acquaint students with principles of cultural preservation, and to examine how these principles can be applied to different activities, in a way that ensures Aboriginal cultural preservation.
Prerequisite(s): 12 credit units in senior NS courses, or permission from the department head.

NS 440.3 — 1/2(3S)
Theoretical Perspectives in Native Studies
Examines the concept of global Indigeneity, and the utility of this concept for understanding the Aboriginal contexts. Topics may include: underdevelopment, colonialism, internal colonialism, imperialism, and the metropolis-hinterland paradigm.
Formerly: NS 403
Prerequisite(s): NS 350 and 12 credit units in senior NS courses.
Note: Students with credit for NS 403 may not take NS 440 for credit.

NS 450.6 — 1and2(3S)
Applied Research in Aboriginal Communities
Applied research on Saskatchewan Aboriginal Communities that utilizes both written and oral sources.
Formerly: NS 404
Prerequisite(s): NS 350 and 12 credit units in senior NS courses.
Note: Students with credit for NS 404 may not take NS 450 for credit.

NS 451.6 — 1and2(3R)
Advanced Research Paper
The student will develop a research prospectus, undertake the research, and present a final report under the direction of a faculty advisor. Topics are open, subject to the availability of a faculty advisor.
Formerly: NS 402
Prerequisite(s): NS 350 and 352 and 12 credit units in senior NS courses.
Note: Students with credit for NS 402 may not take NS 451 for credit. Students planning to register in this course must submit a proposal before August 15th.

NS 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

NS 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

NURS — NURSING

NURS. 200.3 — 1(1.5L-1.5P)
Nursing Foundations Perspectives and Influences
Introduction of foundational concepts relevant to nursing as an evolving, dynamic profession. Topics explored will include safe and competent care, social justice, advocacy, and professional values and ethics. Students will appreciate the relationships among theory, practice, and research.
NURS. 201.3 — 2(1.5L-1.5P)
Perspectives on Health Wellness and Diversity in a Global Context
Explores health, wellness, and illness through the prism of primary health care, health promotion, interprofessional practice, and team leadership. Concepts will be explored and linked to diverse populations and contexts of nursing care across the lifespan. This knowledge informs clinical practice to improve individual, group, community, and population health and well-being from a local to a global context.

NURS. 202.3 — 1(3L-3P)
Assessment and Components of Care I
A systems approach to nursing assessment across the lifespan. Students will develop and apply nursing assessment and nursing skills in laboratory and clinical settings.

NURS. 203.3 — 2(3L-3P)
Assessment and Components of Care II
Building on content from NURS. 202.3, students will further explore a systems nursing assessment across the lifespan. Using that learning, the students will apply nursing skills in laboratory and clinical settings.

Prerequisite(s): NURS. 202

NURS. 204.3 — 1(2L-1S-1P)
Communication and Professional Relationships
Provides the foundation for understanding of interprofessional communication as an essential skill for professional practice. Students will develop skills in communication techniques such as: listening, questioning, empathy, mutuality, reciprocity, self-observation, reflection, sensitivity to emotional contexts, respect, genuineness, and assertiveness that contribute to relational practice.

NURS. 205.3 — 2(3L)
Research for Evidence Informed Practice
Emphasis will be on critical appraisal, translation, and uptake of existing research as a basis for evidence-informed practice. Introduces students to research concepts, methodologies, and issues in research and health care.

Prerequisite(s): A course in Statistics.

NURS. 220.3 — 10L-14P
Concepts of Patient and Family Centered Care
Students will further explore clinical competencies necessary for developing and planning care of patients with acute and chronic needs. Opportunities will be provided to demonstrate critical thinking in the performance of nursing interventions in simulated clinical situations.

Prerequisite(s): NURS. 200, NURS. 201, NURS. 202, NURS. 203, NURS. 204, NURS. 205, PHAR. 250, PHYSI. 208, MCIM. 223.
Note: Students will be required to pay a supplemental software access fee. Please contact the College of Nursing for further information.

NURS. 221.3 — 14P-36C
Patient and Family Centered Care in Clinical Practice
Opportunities to demonstrate critical thinking skills in the performance of nursing interventions necessary for the maintenance of patient safety, comfort, and physiological integrity in clinical situations.

Prerequisite(s) or Corequisite(s): NURS. 220

NURS. 304.3 — (3L-2P)
Family Nursing
Focuses on therapeutic nursing assessment and interventions with families across the lifespan. Participants will explore an array of evidence informed concepts, theories, and interventions related to family nursing in a variety of clinical settings, within the context of community and society. Ethically competent and culturally safe care will be explored through various nursing roles including counseling, advocating, teaching, leading, and supporting. Families dealing with chronic illness and caring for members at the end of life will be highlighted. Experiences in family assessment and intervention will be provided through interprofessional problem-based learning, case simulation, and course assignments.

Prerequisite(s): NURS. 204
Note: Students with credit for NEPS. 317 will not receive credit for this course.

NURS. 306.3 — 3L-15
Exploring Chronicity and Aging
An interprofessional approach will be used to consider a broad range of dimensions and challenges related to the aging process and the chronic illness experience. Explores individual and societal meanings and the implications of aging and chronic illness through the study of the current issues and controversies related to aging and chronic illness. Assessment of the strengths and vulnerabilities of individual clients in relation to the stressors they encounter and guides health care interventions are a key aspect of this course.

Prerequisite(s): NURS. 221.

NURS. 307.3 — 1(4L)
Integrating Mental Health into Nursing
Critically examines mental health and wellness, illness, and recovery within the practice of nursing. Explores all components of the health care continuum to investigate ways to promote optimum mental health across the lifespan. The course takes a strength-based approach in relation to all major mental health problems that students may encounter within the scope of nursing practice. Theories, concept, and principles from nursing and related disciplines will be discussed and used in the settings in which they are placed.

Prerequisite(s) or Corequisite(s): NURS. 307

NURS. 311.3 — 1(2L-1P)
Core Competencies for the Management of Complex Patient Care I
Managing complex patient care situations across the lifespan. More complex clinical skills will be taught using a combination of lecture, laboratory and simulation.

Restriction(s): Restricted to students in the College of Nursing.

NURS. 312.3 — 1(2L-1P)
Core Competencies for the Management of Complex Patient Care II
Managing complex patient care situations across the lifespan. More complex clinical skills will be taught using a combination of lecture, laboratory and simulation. Builds upon content from NURS. 311.3.

Restriction(s): Restricted to students in the College of Nursing.

NURS. 311.3 — 1(2L-1P)
Prerequisite(s): NURS. 311
Prerequisite(s) or Corequisite(s): NURS. 312
Note: Students with credit for NURS. 305 will not receive credit for this course.

NURS. 321.3 — (2L-2P)
Therapeutic Interventions for Individuals and Groups
Focuses on therapeutic nursing interventions with individuals and groups. Participants will explore an array of evidence informed concepts, theories, and interventions related to nursing in a variety of clinical settings, within the context of community and society. Ethically competent and culturally safe care will be explored through various nursing roles including counseling, advocating, teaching, leading, and supporting. Experiences in individual counseling and group facilitation will be provided through case simulation, labs, and course assignments.

Note: Students with credit for NEPS. 327 or NURS. 328 will not receive credit for this course.

NURS. 322.3 — 3L-15
Leadership in Education and Care
Provides opportunities for learners to explore theories, concepts, and frameworks for the management of and provision of client/patient-centred care within an interprofessional context. Learners will explore healthcare professionals’ roles in the provision of patient/client learning experiences to enhance their capacity for health and self-care. Information technology and informatics for the education of patients and the enhancement of patient care will also be explored. Theories of case management will be applied to patient/client situations of necessary resources to support disease management and enhancement of patient/client engagement in management of their own health situations. Leadership in the provision of holistic care will be addressed.
NURS. 328.3 — 1(2L-2P)
Therapeutic Interventions for Individuals and Groups (PD/BSN)
Focuses on therapeutic nursing interventions with individuals and groups. Participants will explore an array of evidence informed concepts, theories, and interventions related to nursing in a variety of clinical settings, within the context of community and society. Ethically competent and culturally safe care will be explored through various nursing roles including counseling, advocating, teaching, leading, and supporting. Experiences in individual counseling and group facilitation will be provided through case simulation, labs, and course assignments.
Prerequisite(s) or Corequisite(s): NURS. 304.3
Note: Students with credit for NURS. 321 or NURS. 327 will not receive credit for this course.

NURS. 330.3 — 1(4L)
Maternal Child and Adolescent Family Centered Nursing
Using evidenced-based theories, and practice, explores health concepts and health challenges of the infant, child, adolescent and child bearing family within the context of family centred care across a continuum of nursing care experiences. Incorporates the concepts of health promotion, wellness, self-determination, individualized, and safe care within an interprofessional and legally prudent environment.
Prerequisite(s) or Corequisite(s): NURS. 311 and 312.
Note: Students with credit for NEPS. 302 or NEPS. 335 will not receive credit for this course.

NURS. 331.3 — 12C
Maternal Child and Adolescent Family Centered Nursing Practice
Using evidence-based theories, and practice, students participate in clinical experiences of relevance to the theoretical concepts taught in Maternal, Child, and Adolescent Family Centered Nursing Theory course, which explores health concepts and health challenges of the infant, child, adolescent and child bearing family within the context of family centred care across a continuum of nursing care experiences. Concepts of health promotion, wellness, self-determination, individualized, and safe care within an interprofessional and legally prudent environment are incorporated.
Prerequisite(s) or Corequisite(s): NURS. 330.
Note: Students with credit for NEPS. 303 will not receive credit for this course.

NURS. 332.3 — 1(3L-1P)
Exploring Complexity and Acuity
Opportunities to develop critical thinking skills in the analysis of information related to the nursing management of complex and/or high acuity patients in settings providing acute intervention. Emphasis will be placed upon concepts involved in the interaction of pathophysiological processes, the treatment reimen and the patient as a person. The role of the professional nurse, as caregiver, decision-maker and, counselor will be developed. Critical functions of being competent in diagnostic and monitoring functions will be emphasized. Students will have an opportunity to develop skills in selecting, critiquing and using evidence to support clinical practice.
Prerequisite(s) or Corequisite(s): NURS. 311 and 312
Note: Students with credit for NEPS. 300 will not receive credit for this course.

NURS. 333.3 — 12C
Complex Nursing Care Practice
Provides opportunity to practice critical thinking skills in the analysis of information related to the nursing management of complex and/or high acuity patients in settings providing acute intervention. The roles of the professional nurse as caregiver, decision-maker, and counselor will be developed. The critical functions of being competent in diagnostic and monitoring functions will be emphasized. Students will have an opportunity to develop skills in selecting, critiquing, and using evidence to support clinical practice.
Prerequisite(s) or Corequisite(s): NURS. 332
Note: Students with credit for NEPS. 301 will not receive credit for this course.

NURS. 398.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

NURS. 422.3 — 1(2L-2S)
Issues in Leadership and Management
Transformative Practice in Health Care Organizations
Introduces the contemporary stage of knowledge by examining theories, research, issues, and competencies in leadership and management. Provides students with a framework for addressing ethical issues and ethical decision making to critically analyze a range of issues facing leader's in health care settings. Emphasis is placed on analyzing current and future issues affecting health care leadership and applying the role of nurse leader and manager to that context. Issues are explored with a particular emphasis on strategies to enhance nursing influence in the health care setting.
Prerequisite(s): NURS. 306, NURS. 308, NURS. 321, NURS. 322, NURS. 331, NURS. 333
Note: Students with credit for NEPS. 400 will not receive credit for this course.

NURS. 426.3
Health Program Planning
Provides opportunities for students to increase their understanding of planning and evaluating health-related programs.
Restriction(s): For BSN students only.
Permission of the College of Nursing is required.
Note: NEPS students that have completed NURS. 325 may take this class with permission.

NURS. 430.6 — 12C
Community Health Nursing Building Partnerships
Focuses on community health theories related to population health promotion, capacity building, community level change theory, and social theory. Emphasis will be on community assessment, program development, implementation, and evaluation with an integration of topics such as research, ethics, and the development of healthy public policy. Depending on the clinical placement, other opportunities may exist to explore epidemiology, social marketing, communicable disease management, global and environmental health, and issues unique to Saskatchewan's Aboriginal, rural, and remote populations.
Prerequisite(s) or Corequisite(s): NURS. 333.

NURS. 431.6 — 12C
Community Health Nursing Building Perspectives in Practice
Provides opportunities to apply community health theories related to population health promotion, capacity building, community level change theory, and social theory. Emphasis will be on community assessment, program development, implementation, and evaluation with an integration of topics such as research, ethics, and the development of healthy public policy. Depending on the clinical placement, other opportunities may exist to explore epidemiology, social marketing, communicable disease management, global and environmental health, and issues unique to Saskatchewan's Aboriginal, rural, and remote populations.
Prerequisite(s) or Corequisite(s): NURS. 430.

NURS. 440.3
Interprofessional Perspectives Health Systems and Policy Development within a Global Context
This course explores health care systems and recognizes that current and future health professionals function within a global context as they care for the health of clients, communities, and societies. Special consideration of health system elements include health human resources, leadership, bioethical considerations, health informatics/technologies, quality improvement and knowledge utilization as they influence care outcomes. Attention will be given to how professionals can apply these concepts and principles to political action for the development and implementation of evidence-informed and health care policy that affect individual and population health outcomes.
Prerequisite(s): Year 2 nursing clinical and theory courses, or Year 2 in a health related program
Note: Students with credit for NURS. 334 will not receive credit for this course.

NURS. 441.3
Transitioning to Professional Practice
Utilizing a distributive delivery model, this capstone course will assist students in examining clinical and ethical issues, organizational challenges, and policy limitations emerging from practice in NURS. 450.9 and NURS. 431.6. Students will be provided with face-to-face and online opportunities to engage each other, nurse leaders, and policy makers. This course will emphasize leadership, safety, interprofessional, and evidence based practice.
Prerequisite(s) or Corequisite(s): NURS. 450.9 and NURS. 431.6
Note: Students with credit for NEPS. 409.9 and NEPS. 431.6 will not receive credit for this course.

NURS. 450.9 — 40C
Practice Integration
Participants use nursing skills, building on past experiences and learning to strengthen their competencies necessary for safe and effective care in various institutional settings.
Prerequisite(s): NURS. 333.
NURS. 476.3  
Health and Aging  
Provides opportunities for students to examine population trends, and health issues of an aging population in urban and rural settings. Gerontological nursing standards will be utilized as a study framework.  
Restriction(s): For BSN students only.  
Permission of the College of Nursing is required.  
Note: NEPS students that have completed all of the Year 2 classes may take this class with permission.

NURS. 478.3  
Rural Nursing  
Provides opportunities for students to increase their knowledge and application of concepts and theory relevant to nursing in rural populations. Consideration will be given to the impact of regionalization and rural health policy development.  
Restriction(s): For BSN students only.  
Permission of the College of Nursing is required.  
Note: NEPS students that have completed NURS. 325 may take this class with permission.

NURS. 483.3  
Cultural Diversity and Aboriginal Health  
Provides students with the theoretical bases for the systematic examination of the cultural contexts of health. The primary focus will be on Aboriginal health issues. The interactions between the western medical model and the traditional health model will be explored.  
Restriction(s): For BSN students only.  
Permission of the College of Nursing is required.  
Note: NEPS students may take this class with permission.

NURS. 486.3  
Forensic Nursing in Secure Environments  
Provides opportunities for students to examine the role of the nurse in the provision of health care to offender populations in secure environments. Selected clinical issues will be explored to illustrate the knowledge, skills, and clinical judgment required of this specialty area.  
Restriction(s): For BSN students only.  
Permission of the College of Nursing is required.  
Note: NEPS students that have completed all of the Year 2 classes may take this class with permission.

NURS. 498.3  
Special Topics  
Provides opportunities for students to increase their knowledge and skills related to a special topic area in nursing.

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NUTR — NUTRITION

College of Pharmacy and Nutrition

NUTR. 120.3  —  1/2(3L)  
Basic Nutrition  
An introduction to nutrition and health. The concepts of recommended nutrient intakes and dietary guidelines are introduced. The major nutrients and their functions in the body are outlined. Nutrition issues facing the general public are presented.

NUTR. 221.3  —  2(3L-.5T)  
Advanced Nutrition Micronutrients  
This is an advanced nutrition course with emphasis on the underlying physiological and biochemical roles of the micronutrients (vitamins and minerals). The principles of digestion, absorption, transport, and metabolism will be discussed as will food sources and dietary recommendations.  
Corequisite(s): NUTR. 120, BMSC. 230 and PHSI. 208.

NUTR. 230.3  —  1(3L/S)  
Professional Practice I  
An introduction to the profession of dietetics. Review of historical, political, social aspects of health care; health care structures; and current issues relating to the nutrition discipline and the dietetics profession.  
Restriction(s): Course only open to students in the B.Sc. (Nutr.) program.

NUTR. 280.1  —  1/2(1S)  
Nutrition Competency Completion  
The special topics course enables students who require a specific course for the B.Sc.(Nutr.) program, and who have a similar course from another institution or program, but are missing a key Nutrition component of the required course, to undertake readings and assignments, such that the deficiency is cleared.

NUTR. 305.3  —  2(3L)  
Research Methods  
A study of research methods in science and nutrition. Focuses on interpreting, evaluating, applying and communicating scientific research.  
Prerequisite(s): NUTR. 221 and PLSC. 214.

NUTR. 310.3  —  1(3L‑2P/T)  
Food Culture and Human Nutrition  
The course examines food and food systems, with a focus on human diversity and culture. The impact of factors that affect food availability, accessibility, adaptability, production, preparation, processing, distribution and consumption will be studied in relation to contemporary food and nutrition issues in Canada.

NUTR. 321.3  —  1(3L‑1.5P)  
Advanced Nutrition Macronutrients and Energy  
This is an advanced nutrition course designed to provide a scientific framework for the study of macronutrient nutrition and energy needs of humans. This course places emphasis on carbohydrate, fat, and protein metabolism and includes fibre, fatty acids, cholesterol, amino acids and energy. Foods sources and dietary recommendations are also discussed.  
Corequisite(s): NUTR. 120, BMSC. 230 and PHSI. 208.

NUTR. 322.3  —  1(3L)  
Nutrition Throughout Lifespan  
An application of the principles of nutrition to nutritional demands, nutrition assessment and nutrition education throughout the lifespan. The approach will focus on nutrition during pregnancy, lactation, infancy, childhood and adolescence as well as in the elderly.  
Prerequisite(s): NUTR. 221.
NUTR. 425.3 — 1(3L-2T)
Nutritional Assessment
Theory and methods of nutritional assessment for individuals and groups, including methods for assessment of dietary intake, biochemical, anthropometric and clinical evaluation.
Restriction(s): Minimum third-year standing in the B.Sc. (Nutr.) Program.
Corequisite(s): NUTR. 440.

NUTR. 430.3 — 1and2(1.5P/T)
Professional Practice III
Builds on NUTR. 330 by continuing the process of enabling students to articulate and document the required competencies for entry-level dietetic practice, based on experiences obtained in both formal learning and work/volunteer activities. Students are expected to complete a wide variety of increasingly challenging experiences, either through the N.R.V.C. or other agencies and organizations, aimed at meeting the specific objectives of the course.
Prerequisite(s): NUTR. 330 and third year standing in the B.Sc.(Nutr.) program.

NUTR. 440.6 — 1and2(3L-3.5P)
Clinical Nutrition
A discussion of the role of nutrition in the etiology, pathophysiology, treatment and prevention of human disease. Principles underlying nutritional care will be emphasized.
Prerequisite(s) or Corequisite(s): NUTR. 425.

NUTR. 450.3 — 2(3L/P)
Nutrition Program Planning and Evaluation
Provides an understanding of the theories, principles, and techniques involved in planning and evaluating nutrition programs. Students will work together to plan a nutrition program for a local agency or organization.
Prerequisite(s): NUTR. 350.

NUTR. 466.3 — 2(3L)
Organization and Management of Nutrition Services
A study of philosophy and functions of management as applied to food services, principles of organization, human resource management, work improvement, utilization of resources and labour-management relations.
Prerequisite(s) or Corequisite(s): NUTR. 365; COMM. 102; minimum third year standing in the B.Sc.(Nutr.) program.

NUTR. 480.3 — 1/2(6P/R) or 1and2(3P/R)
Directed Studies in Nutrition
Provides individual students with an opportunity to undertake independent and advanced study in nutrition. Projects may involve laboratory or field work and/or library research. The student must choose the project in consultation with a faculty member.
Permission of the course coordinator and supervising faculty member.
Note: Students with credit for NUTR. 481 may not take this course for credit.

NUTR. 531.30 — 1and2(C/T)
Professional Practice IV
Thirty-six week practice-based experience with either Saskatoon Health Region or Regina Qu’Appelle Health District (plus experiences in other health regions and Tribal Councils in the province). The course provides students with opportunities to acquire the knowledge, skills and behaviors required to practice as a diettian. All areas of entry-level practice will be experienced across the spectrum of nutritional care.
Prerequisite(s): Completion of all required courses from Years 1, 2, and 3; criminal records check.
Note: The 36-week practice-based experience includes a 2-week break.
Students with credit for NUTR. 530 will not receive credit for this course.

PATH — PATHOLOGY
College of Medicine
PATH. 205.3 — 1/2(3L)
Survey of Pathology
General and special pathology for pharmacists, physical therapists and other health sciences.
Permission of the Department required.
Restriction(s): Enrollment in Pharmacy and Nutrition or Physiology.

PBIO — PALAEOBIOLOGY
College of Arts and Science
PBIO. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PBIO. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PBIO. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PBIO. 489.6 — 1and2(15)
Palaeobiology Research
A field or laboratory research project conducted under the supervision of a faculty member. A written report will be submitted to the supervisor in the form of an honors thesis. The student will then present to an examining committee an oral account of the research.
Permission of the Chair of the Palaeobiology Administrative Committee required.

PHAR — PHARMACY
College of Pharmacy and Nutrition
PHAR. 200.1 — 1
Pharmacy Skills I
Provides an introduction to the profession of Pharmacy and the Pharmacy program with emphasis on necessary learning skills and the educational outcomes of the program. Students will also begin development of library (including online resources) and computer skills necessary for the pharmacist’s role as a drug information provider, as well as career paths available to Pharmacy graduates.
Restriction(s): Only open to students in the B.S.P program.
Prerequisite(s) or Corequisite(s): PHAR. 201, 203.
Corequisite(s): PHAR. 216 and 280.

Open to Palaeobiology students, normally in their fourth year of studies. PBIO. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PBIO. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
PHAR. 201.5 — 1(5L‑3P)
Foundations of Pharmacy I Physicochemical Principles of Drugs
One of three foundation courses in Pharmacy, this course provides a link between the principles of basic chemistry and those of pharmaceutical chemistry. Modules deal with the chemical properties of drugs, an introduction to pharmacokinetics (how drugs are handled in the body), analytical procedures used to determine drug levels in body fluids and to assess quality assurance of drugs, and the pharmaceutical calculations associated with these concepts.

Restriction(s): Only open to students in year one of the B.S.P. program.
Prerequisite(s) or Corequisite(s): CHEM. 112, 250 and 255.

PHAR. 203.5 — 2(6L‑3P)
Foundations of Pharmacy III Pharmaceutical Dosage Forms and Dispensing I
An introduction to the design and preparation of dosage forms for drugs, especially solutions, suspensions and solids such as tablets and capsules. This course will extend the discussions of the physicochemical principles of drugs introduced in PHAR. 201 as they relate to the development of dosage forms. Students will also begin to develop their skills in the dispensing of prescriptions including the application of appropriate laws and standards of practice, and in the extemporaneous compounding of drug products and relevant pharmaceutical calculations.

Restriction(s): Only open to students in year one of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR. 201 and 216.

PHAR. 216.2 — 1(3L‑1.5T alt weeks)
Foundations of Pharmacy II Introduction to Pharmacy and the Health Care System
An introduction to the profession of Pharmacy and the Canadian health care system, including the social, behavioural and economic aspects of pharmacy practice.

Restriction(s): Only open to students in year one of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR. 201, 203.
Corequisite(s): PHAR. 200 and 280.

PHAR. 250.3 — 1/2(3L‑1T)
Pharmacology for Nursing
Introduces scientific principles of pharmacology with inclusion of the effects of drugs on target issues and on pathophysiological processes.

Prerequisite(s) or Corequisite(s): PHSI. 208.6 Human Body Systems (or equivalent).
Note: This course may not be used for credit in the B.S.P. program.

PHAR. 280.2 — 1and2(75C)
Structured Practical Experience I
To gain an appreciation of what ‘care’ means to individuals, students will complete 60 hours of service-learning in a health care setting, or with a health care or service organization.

Restriction(s): Only open to students in year one of the B.S.P. program.
Corequisite(s): PHAR. 200 and 216.

PHAR. 300.1 — 2
Pharmacy Skills II
Will continue the development of necessary learning skills and those required for drug information retrieval and dissemination. Students will also develop skills in public speaking and in written communication.

Restriction(s): Only open to students in year two of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR. 303, 372, 365, 372, and 380.

PHAR. 303.4 — 1(6L‑3P)
Pharmaceutical Dosage Forms and Dispensing II
An extension of PHAR. 203, this course continues the discussion of the design and preparation of dosage forms for drugs, especially semi-solids and other topical dosage forms, devices and modified release dosage forms and includes discussion of bioequivalence. This course will also extend the discussions of the physicochemical principles of drugs introduced in PHAR. 201 as they relate to the development of dosage forms. Students will also continue to develop their skills in the dispensing of prescriptions including the application of appropriate laws and standards of practice, and in the extemporaneous compounding of drug products and relevant pharmaceutical calculations.

Restriction(s): Only open to students in year two of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR. 203, 216, 307, 365, and 372.

PHAR. 307.2 — 1(3L‑1.5)
Pharmacokinetics and Biopharmaceutics
A study of the physicochemical, pathologic and pharmacological factors affecting the absorption, distribution, and elimination of drugs from the body. The use of pharmacokinetic principles to design dosage regimens which optimize therapeutic effects and minimize toxicity will be discussed. The concepts of bioequivalence of drug products will also be covered.

Restriction(s): Only open to students in year two of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR. 201, 303, 372, 365 and MATH. 125.

PHAR. 310.3 — 2(3L)
Introduction to Drug Discovery and Design
The course is intended to introduce students to the fundamental concepts and processes of drug discovery especially how structural differences may result in different physicochemical or pharmacological effects. The students can then apply their learning to: designing new analogues with a better safety and/or therapeutic profile and to critically analyze new pharmaceutical agents.

Prerequisite(s): PHAR. 201.5 and registration in second year pharmacy

PHAR. 365.5 — 2(6L‑3P/1.5T alt weeks)
Patient Care I
An introductory course in patient care, especially the areas of health promotion, disease prevention and self-care, and the role of the pharmacist in these areas. The treatment or prevention of various self-limiting health problems will be discussed.

Students will begin to develop skills in patient care through interviewing and other communication skills activities.

Restriction(s): Only open to students in year two of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR. 303, 372, 307 and 380.

PHAR. 372.2 — 2(3L‑1.5T alt weeks)
Research Methods and Evidence Based Practice
An introduction to research design and the critical appraisal of published research results in the pharmacy and medical literature. It is expected that students will apply knowledge of statistics to the field of pharmacy and biomedical research.

Restriction(s): Only open to students in year two of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR. 200, STAT. 246, PHAR. 307 and 300.

PHAR. 380.4 — 3P/SU
Structured Practical Experience II
A structured practice experience after completion of second year which will provide an opportunity for students to apply their technical skills and introduce them to patient care activities.

Restriction(s): Only open to students in year three of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR. 280, 365, 300 and 303.
Note: 160 hours over 4 weeks after completion of all other second-year requirements.

PHAR. 400.1 — 1and2
Pharmacy Skills III
Continues the development of necessary learning skills and those required to provide drug information to consumers through introductory experiences in the Drug Information Centre. Students will also complete a first aid course and an in-depth workshop to further their skills in interviewing and assessing individual patients about their drug therapies.

Restriction(s): Only open to students in year three of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR. 408, 409, 417, 418, 472, 455, 456, 465 and. 480.

PHAR. 408.3 — 1(3L‑3P)
Pharmaceutical Dosage Forms and Dispensing III Sterile Dosage Forms
An introduction to the design and preparation of sterile dosage forms, including parenteral preparations. This course will also extend the discussions of the physicochemical principles of drugs introduced in PHAR. 201 as they relate to the development of sterile dosage forms. Students will develop their skills in the preparation and dispensing of sterile dosage forms including the application of standards of manufacture and practice and relevant pharmaceutical calculations.

Restriction(s): Only open to students in year three of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR. 203, 303 and 307.
PHAR. 409.3 — 2(3L-3P alt weeks)
Pharmaceutical Biotechnology

An introduction to the principles of biotechnology as they apply to the development of pharmaceutical products. Discussions will also focus on the uses of these products in the treatment of various conditions, the pharmacist's role in their provision, and the legal, ethical and economic issues associated with pharmaceutical biotechnology.

Restriction(s): Only open to students in year three of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR 201, 203, 303, 307 and 408.

PHAR. 415.3 — 1(3L)
Community Pharmacy Management

A study of the problems which must be met in the successful operation of a community pharmacy practice including: selection of organizational structures, location, analysis, purchasing and financing a community pharmacy, risk management and insurance, inventory purchasing procedures and inventory management, pricing decisions, advertising, sales promotion and salesmanship, security and general business policies.

PHAR. 417.4 — 1and2(3L-1.5T alt weeks)
Management in Pharmacy

An introduction to management principles and how they apply to practice management in pharmacy, and to the principles and issues associated with safe and appropriate drug distribution in various practice settings.

Restriction(s): Only open to students in year three of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR 300, 303, 365, 380 and 418.

PHAR. 418.2 — 1and2(1.5L/T)
Issues in Pharmacy I

A study of the ethical aspects of pharmacy practice and issues related to the professional responsibilities of the pharmacist including drug misuse and abuse and an introduction to toxicology.

Restriction(s): Only open to students in year three of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR 417, 472 and 465.

PHAR. 455.7 — 1(8L-3P/1.5T alt weeks)
Pharmacotherapeutics I

The second of three courses discussing the clinical application of drug therapy in various disease states, including discussion of relevant principles of medicinal chemistry, applied pharmacokinetics, adverse effects or interactions, and toxicology.

Restriction(s): Only open to students in year three of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR 400, 455, 465 and 472.

PHAR. 462.3 — 1(3L-3T)
Hospital Pharmacy Practice

Introduction to the role of the pharmacist as a member of the health care team in the provision of health services in the hospital. Emphasis will be placed on the elements of hospital pharmacy practice and the skills required to work as a pharmacist in the hospital setting. Students will have the opportunity to observe and practice various hospital pharmacy activities in a Saskatoon hospital.

PHAR. 465.2 — 1and2(1.5L-2P)
Patient Care II

The second of three courses dealing with Patient Care activities, including discussion of alternative or complimentary health care practices and the development of skills in providing pharmaceutical care to patients.

Restriction(s): Only open to students in year three of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR 365, PHAR 455, PHAR 456.
Note: Lab taken with PHAR 455 and 456.

PHAR. 472.2 — 1(3L-1.5T alt weeks)
Evidence Based Practice

An extension of PHAR 372, continuing the development of skills in drug literature evaluation and the application of research findings to patient care situations or the development of standards of care.

Restriction(s): Only open to students in year three of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR 200, 300, 372, 455, 456, 465 and 400.

PHAR. 480.4 — SP/SU
Pharmaceutical Care in General Practice

A structured practical experience after completion of third year which will provide an opportunity for students to expand their technical, professional, and patient care skills in a practice setting.

Restriction(s): Only open to students in year three of the B.S.P. program.
Prerequisite(s) or Corequisite(s): PHAR 280, 380, 455, 456, 465 and 418.
Note: 160 hours in 4 weeks after completion of all other third year requirements.
PHIL. 575.3 — 1/3(L/T)
Complex Cases in Pharmacy Practice
This course provides students with the opportunity to use their knowledge of advanced pharmacotherapy to determine how to approach and manage complex clinical cases involving patients in both ambulatory and acute care settings. The ability to work effectively in a group and active participation are both critical elements in this intensive course.

Note: Fourth year Pharmacy students only.

PHAR. 580.16 — 2(C)
Structured Practical Experience IV
Structured practice experiences will provide an opportunity for students to expand their technical, professional and patient care skills in practice settings, including both a community pharmacy and hospital. Students will also have the opportunity to select an additional practice site to gain further professional experience.

Restriction(s): Only open to students in year four of the B.S.P. program.

Note: 16 weeks or 640 hours of structured practical experiences.

PHAR. 591.3 — 1/2(6R) or 1and2(3R)
Directed Thesis
On the basis of library research, the student will prepare a 40-60 page thesis on a subject related to pharmacy. The subject is chosen in consultation with a faculty member who will also supervise preparation of the manuscript. The thesis will be graded by two faculty members.

Prerequisite(s): Permission of the supervising faculty member.

PHAR. 592.3 — 1/2(6P) or 1and2(3P)
Directed Research
The student will complete a research project under the supervision of a faculty member. A report to be submitted at the completion of the project, will be graded by two faculty members. The report should include a suitable literature review, a description of research methodology and a discussion of the results of the project.

Prerequisite(s): Permission of the supervising faculty member.

PHIL. 598.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PHIL — PHILOSOPHY

PHIL. 110.6 — 1and2(3L)
Introduction to Philosophy
An introduction to the perennial issues in Western philosophy which arise out of the search for truth and meaning in life: good and evil, appearance and reality, the rational grounds for belief in God, scepticism and knowledge, social justice. Emphasizes critical thinking and the development of understanding through reasoned argument.

PHIL. 115.3 — 1/2(3L)
Introductory Indigenous Philosophy
This course introduces students to key concepts in indigenous philosophy, covering the main areas of philosophy such as value theory, the nature and limits of human knowledge, and the fundamental nature of existence. Sample topics include the unique character of Indigenous moral systems, Aboriginal ways of knowing, and the differences between Indigenous and Western European philosophies.

Note: This course may be used in partial fulfillment of the Humanities and General Requirements in most Arts and Science programs. Students may contact the Undergraduate Student Office (student-advice@artsandscience.usask.ca) to ensure the course may be used in their program.

PHIL. 120.3 — 1/2(3L)
Knowledge Mind and Existence as Introductory Topics in Philosophical Problems
Introduces students to philosophy by exploring fundamental problems about reality, the limits of human knowledge, and the nature of the mind. Topics include whether we have free will, whether there are grounds for doubt about the basic beliefs about other people or the world, and the nature and role of cognition in the construction of a human being. Essay writing is an integral part of this course. In their essays students are expected to demonstrate an understanding of major philosophical questions, define key terms, mount arguments for and respond to arguments against, positions on philosophical issues, develop research and argumentation skills, and improve their command of written English. Students are encouraged to make use of the Philosophy Department’s Essay Clinic.

Note: Students with credit for PHIL. 110 may not take this course for credit.

PHIL. 133.3 — 1/2(3L)
Introduction to Ethics and Values
Introduces students to value theory by exploring fundamental problems about morality, justice, beauty, and the problems posed by the purported relativity of value to personal taste and cultural context. Will include topics such as what makes a society just, whether we have any moral obligations, and whether humour is objective. Essay writing is an integral part of this course. In their essays students are expected to demonstrate an understanding of major philosophical questions, define key terms, mount arguments for and respond to arguments against, positions on philosophical issues, develop research and argumentation skills, and improve their command of written English. Students are encouraged to make use of the Philosophy Department’s Essay Clinic.

Note: Students with credit for PHIL. 110 may not take this course for credit.

PHIL. 140.3 — 1/2(3L)
Critical Thinking
An introduction to essential principles of reasoning and critical thinking, designed to introduce the students to the analysis of concepts, to enhance their ability to evaluate various forms of reasoning and to examine critically beliefs, conventions and theories, and to develop sound arguments. Topics include fundamentals of logic and analysis, definition, logical fallacies, and conceptual analysis.

Note: Students with credit for PHIL. 240, 241, 243 or CMPT. 260 may not take this course for credit. To receive credit for PHIL. 140, 240, 241, 243, or CMPT. 260, students must take PHIL. 140 prior to the above mentioned courses.

PHIL. 202.3 — 1/2(3L)
Philosophy of Religion Introduction
The concept of religion; different theories explaining the origin of religion; the philosophical conception of religion in contrast to mythology, ideology, magic, superstition and theology; God: mystery or problem; different ways to approach the mystery of God, the meaning of religious terms and language, varieties of atheism and unbelief; the problem of evil.

Prerequisite(s): 6 credit units in philosophy or completion of 24 credit units at the university.

PHIL. 206.3 — 1/2(3L)
Early Modern Philosophy
A critical examination of key works of selected figures of the 17th and 18th centuries, the period which inaugurated the epistemological turn in philosophy, the emergence of science and the enlightenment. Included are the major continental “rationalists,” Descartes, Spinoza, Leibniz, and the British “empiricists,” Locke, Berkeley and Hume.

Prerequisite(s): 6 credit units in philosophy or PHIL. 120.

Note: PHIL. 206 is required for all Philosophy major programs.

PHIL. 208.3 — 1/2(3L)
Ancient Philosophy Presocratics to Plato
A study of the origins of philosophical reasoning in ancient Greece to its most extensive development in the philosophy of Plato. Classical views of the ultimate nature of reality, the scope and limits of human knowledge, and the grounds for aesthetic and moral evaluations will be examined.

Prerequisite(s): 6 credit units in philosophy or completion of 24 credit units at the university.

PHIL. 209.3 — 1/2(3L)
Ancient Philosophy Aristotle to Plotinus
The development of philosophy in ancient Greece and Rome from the time of Aristotle to the emergence of Christianity. In addition to a survey of several of the most important aspects of Aristotle's philosophy, this course will examine such schools of thought as Stoicism, Epicureanism, and Neoplatonism.

Prerequisite(s): 6 credit units in philosophy or completion of 24 credits at the university.
PHIL. 210.3 — 1(3L)
Medieval Philosophy I
The study of major thinkers of the early middle ages, including Augustine, Boethius, Erigena, Anselm, and Abelard. Background will be provided to Neoplatonic themes that shape this period. Topics include free will, happiness, the existence of God, theories of truth, and the problem of universals.
Prerequisite(s): 6 credit units in philosophy.

PHIL. 211.3 — 2(3L)
Medieval Philosophy II
The study of major Jewish, Muslim, and Christian thinkers of the high middle ages, including Moses Maimonides, Avicenna, Averroes, Bonaventure, Thomas Aquinas, Duns Scotus, and William of Ockham. Background to Aristotle and his tradition will be provided. Topics include the relation of faith and reason, existence and nature of God, human nature, voluntarism, and the critique of metaphysics.
Prerequisite(s): 6 credit units in philosophy.

PHIL. 212.3 — 1/2(3L)
Medieval Intellectuals
An interdisciplinary examination of major intellectual figures in their historical and philosophical contexts from late antiquity to the end of the middle ages. Themes include the liberal arts tradition, the relation of faith and reason, the emergence of mediaeval science, the rise of Scholasticism, the mystical tradition, and the classical revival.
Prerequisite(s): 6 credit units of 100-level History or Philosophy.

PHIL. 215.3 — 1/2(3L)
19th Century European Philosophy
A survey of authors or themes central in the development of modern philosophy in Continental Europe and Britain in the 19th Century, including Hegel and Marx, and topics such as the theory of the state, the nature of human will, moral theory, and the origins of sociological thought.
Prerequisite(s): 6 credit units in philosophy or PHIL. 120.

PHIL. 218.3 — 1/2(3L)
Existentialism
An introduction to 19th and 20th Century existentialist thought from Kierkegaard and Nietzsche to Sartre. Issues to be explored concern the human quest for meaning in existence and include the nature of the human self, truth, freedom, mortality, the significance of God, and the possibility of interpersonal relations.
Prerequisite(s): 6 credit units in philosophy or completion of 24 credit units at the university.

PHIL. 219.3 — 1/2(3L)
Phenomenology
A survey of phenomenological thought, primarily of the early 20th C. This course will include authors such as Husserl, Heidegger, and Merleau-Ponty.
Prerequisite(s): 6 credit units in philosophy.

PHIL. 224.3 — 1/2(3L)
Philosophy of Sexuality
A philosophical examination of the fundamental assumptions about the nature of sexuality.

PHIL. 226.3 — 1/2(3L)
Environmental Philosophy
A philosophical study of moral, social and political issues concerning the environment, whether natural or constructed. Topics may include the nature of Nature, nonanthropocentric ethics, animal rights, political and cultural roots of environmental abuse, evolutionary perspectives, the Gaian hypothesis, ecotopias, environmental aesthetics, the place of environment in the Good Life.
Prerequisite(s): 6 credit units in philosophy or completion of 24 credit units at the university.

PHIL. 227.3 — 1/2(3L)
Introduction to Feminist Philosophy
Examines ways feminist philosophers have critiqued traditional western philosophy. Looks at feminist criticism of major positions in recent philosophy as well as the rich variety of constructive responses to these critiques. Introduces students to a number of feminist positions.
Prerequisite(s): 6 credit units in philosophy or completion of 24 credit units at the university.

PHIL. 231.3 — 1/2(3L)
Ethical Problems
Contemporary ethical problems such as the morality of human sexuality, abortion, euthanasia, manipulation of human beings, war and revolution, environmental ethics, prejudice and discrimination.
Prerequisite(s): 6 credit units in philosophy or completion of 24 credit units at the university.

PHIL. 233.3 — 1/2(3L)
Ethical Theory
An introduction to the meta-ethical issues important to an understanding of historically important ethical theories, together with an examination of those theories. Philosophers studied may include Socrates, Aristotle, Aquinas, Hobbes, Kant, and Mill, among others.
Prerequisite(s): 6 credit units in philosophy or PHIL. 133.

PHIL. 234.3 — 1/2(3L)
Biomedical Ethics
An examination of contemporary biomedical ethical issues such as the definition of a person, determination of life and death, euthanasia, abortion, prenatal diagnosis and intervention, problems in the physician-patient relationship, reproductive technologies, genetic engineering and accessibility to health care.
Prerequisite(s): 6 credit units in philosophy or completion of 24 credit units at the university.

PHIL. 235.3 — 1/2(3L)
Ethical Issues in Business and Professions
Introduces ethical issues that are related to business enterprises and professional practices such as the questions of striking and advertising; preferential hiring; responsibility to society; the organization and the profession. It will also consider theoretical questions about free enterprise, socialist politics, and government controls and regulations.
Prerequisite(s): 6 credit units in philosophy or completion of 24 credit units at the university.

PHIL. 236.3 — 1/2(3L)
Ethics and Technology
An overview of ethical issues related to the impact of modern technology on scientific research and the activities of corporations and professionals. Topics include: moral responsibility in the age of technology, genetic engineering of plants and animals, environmental ethics, privacy in the computer age, and ethical issues in international markets.
Prerequisite(s): 6 credit units in philosophy or completion of 24 credit units at the university.

PHIL. 237.3 — 1/2(3L)
Law and Morality
An introduction to philosophical issues regarding law and its relation to morality. Issues to be explored concern the nature and validity of law and the law’s proper limits in relation to topics such as freedom of expression, pornography, the definition of family and marriage, civil disobedience, abortion and capital punishment.
Prerequisite(s): 6 credit units in philosophy or completion of 24 credit units at the university.

PHIL. 238.3 — 1/2(2L-1T)
Ethical Issues in Scientific Research
Introduction to ethical issues related to scientific research requiring institutional ethics review and approval. Theoretical approaches in ethics and their relationship to national and institutional guidelines governing research protocol compliance are considered. Topics include Aristotelian, Kantian and Utilitarian ethics, ethical standards in designing research protocols, and protection of research subjects.
Prerequisite(s): 6 credit units in philosophy or completion of 24 credit units at the university.

PHIL. 240.3 — 1(3L)
Aristotelian Logic
The meaning of concept, term, judgement and proposition, categorical and hypothetical reasoning and induction; mathematical logic (Venn diagrams, truth trees, elementary deductions, syllogism). Frequent exercises will be assigned.
Prerequisite(s): 6 credit units in philosophy or completion of 24 credit units at the university.
PHIL. 241.3 — 1/2(3L)  
Introduction to Symbolic Logic I  
Prerequisite(s): 6 credit units in philosophy or completion of 24 credit units at the university.  
Note: Students with credit for PHIL. 242 or 243 may not take this course for credit; nor may students take PHIL. 241 and 243 concurrently. To receive credit for both PHIL. 241 and 243 students must take PHIL. 241 prior to PHIL. 243.

PHIL. 242.3 — 1/2(3L)  
Introduction to Symbolic Logic II  
A continuation of the propositional and monadic logic covered in PHIL. 241. A brief review, followed by polyadic predicate logic with identity and various operators; definite descriptions, adverbial modifications, quantification over properties; introduction to modal logics and their philosophical significance.  
Prerequisite(s): PHIL. 241 or CMPT. 260.  
Note: Students with credit for PHIL. 242 may not take this course for credit.

PHIL. 251.3 — 1/2(3L)  
Philosophy of Science  
An introduction to the nature, extent and significance of scientific knowledge. Problems about the nature of scientific theories and models, scientific explanation and prediction, scientific growth, and issues about the relationship between science, religion and morality will be discussed.  
Prerequisite(s): 6 credit units in philosophy or 12 credit units in science.

PHIL. 262.3 — 1/2(3L)  
Social and Political Philosophy  
An examination of philosophical theories of political organization. Such issues as justice and power, rights, freedom and the public good will be discussed.  
Prerequisite(s): 6 credit units in philosophy, history or a social science.

PHIL. 265.3 — 1/2(3L)  
Decision and Choice Theory  
An examination of rational choice in individual and collective decision-making. Topics include: decisions under uncertainty, risk and uncertainty, and probability, belief and value as utilized in choice principles. The course will explore maximization of expected utility, minimal loss/regret, optimism-pessimism, basic game theory and applications in moral, social and political decision-making.  
Prerequisite(s): 6 credit units in philosophy or completion of 24 credit units at the university.

PHIL. 267.3 — 1/2(3L-1P)  
Philosophy in Education Introduction to Philosophy for Children  
This course encourages students to study and reflect on the critical, creative, and caring thinking skills involved in doing philosophy. Through a study of the influence of American Pragmatism on educational theories (which has led to the introduction of philosophy in grade school classrooms around the world) students will develop the skills required to effectively participate in and lead philosophical discussion. Students will learn how to facilitate thoughtful philosophical discussions with elementary school children, using learning techniques including: thought experiments, reasoning games, and reflections on childrenís literature.  
Prerequisite(s): 6 credit units in PHIL courses.

PHIL. 271.3 — 1/2(3L)  
Aesthetics  
An introduction to philosophical problems related to the arts; such as the nature of art, meaning, expression, and the nature of critical and evaluative judgments.  
Prerequisite(s): 6 credit units in philosophy, fine arts or literature.

PHIL. 281.3 — 1/2(3L)  
Theory of Knowledge  
Examines the status and extent of our knowledge of the world, of ourselves, and other people. Problems about the nature of knowledge, the justification of claims of knowledge, the relationship of knowledge to belief and truth, perception, and the viability of scepticism will be discussed.  
Prerequisite(s): 6 credit units in philosophy or PHIL. 120.

PHIL. 285.3 — 1/2(3L)  
Persons Minds and Bodies  
An introduction to the Philosophy of Mind. Topics include: consciousness, thought, intentionality, emotions, action and the will, other minds (human and artificial), the concept of the self and theories about the nature of the mind.  
Prerequisite(s): 6 credit units in philosophy or completion of 24 credit units at the university.

PHIL. 292.3 — 1/2(3L)  
Introduction to Metaphysics  
Surveys the principal types of theories of reality that have been produced in western philosophy, e.g., materialism, idealism, dualism, monism, atomism, and investigates major problems and concepts in metaphysics, e.g., time, space, substance, essence, free will and determinism, causality, the nature of the self and the problem of universals.  
Prerequisite(s): 6 credit units in philosophy or PHIL. 120.

PHIL. 294.3 — 2(3L)  
Philosophy of Human Nature  
A philosophical examination of whether there is a human nature, through both historical and contemporary discussions. Will include topics such as the importance of narrative, biology and evolution, selfishness, gender, race, freedom, and personhood.  
Prerequisite(s): 6 credit units in philosophy or completion of 24 credit units at the university.

PHIL. 296.3 — 1/2(3L)  
Nature of Material Reality  
A study of the philosophy of nature which examines ancient and modern views on the material constitution of bodies, organisms, and persons. Major topics include the nature of substance, the distinction between properties and substances, artifacts and natural things, and the mind-body problems.  
Prerequisite(s): 6 credit units in philosophy or 12 credit units in science.

PHIL. 298.3 — 1/2(3L)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PHIL. 299.6 — 1and2(3S)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PHIL. 302.3 — 1/2(3L)  
Contemporary Philosophy of Religion  
A study of major topics in recent analytic and/or continental philosophy of religion. Topics include the rationality of religious belief, the nature of God, religious language, the problem of evil, critiques of religion, and the interface of major world religions.  
Prerequisite(s): 12 credit units philosophy.

PHIL. 306.3 — 3L  
Topics in Early Modern Philosophy  
A seminar on philosophical problems discussed in the writings of the rationalists and empiricists of the early modern period (Descartes to Hume). Topics will vary from year to year and may include issues such as the origin of ideas, identity, substance, causality and the problem of other minds.  
Prerequisite(s): 12 credit units in philosophy.  
Note: Historical and Topical content will vary from year to year. See department for latest details. Students may take this course more than once for credit, provided the topic or period covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

PHIL. 312.3 — 1/2(3S)  
Great Philosophers I Historical Figures  
Detailed reading in the work of a major philosopher such as Aristotle, Descartes, or Hume.  
Prerequisite(s): 12 credit units in philosophy.  
Note: Historical and Topical content will vary from year to year. See department for latest details. Students may take this course more than once for credit, provided the topic or period covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

PHIL. 313.3 — 1/2(3S)  
Great Philosophers II Contemporary Figures  
Consists of detailed reading in the work of some major philosopher.  
Prerequisite(s): 12 credit units in philosophy.  
Note: Historical and Topical content will vary from year to year. See department for latest details. Students may take this course more than once for credit, provided the topic or period covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

PHIL. 314.3 — 1/2(3S)  
Kant  
A study of Kant’s Critical Philosophy, with emphasis on the Critique of Pure Reason.  
Prerequisite(s): 12 credit units philosophy.
PHIL. 315.3 — 1/2(3S)
Hegel
A study of Hegel's approach and contributions to philosophy through a detailed reading of some of his major works.
Prerequisite(s): 12 credit units in philosophy.

PHIL. 319.3 — 1/2(3S)
Topics in Recent Continental Philosophy
Examines specific issues or authors in current continental philosophy. Areas of discussion might include critical theory, aesthetics, or hermeneutics, and authors such as Foucault, Habermas, Derrida, or Gadamer.
Prerequisite(s): 12 credit units in philosophy.
Note: Historical and Topical content will vary from year to year. See department for latest details. Students may take this course more than once for credit, provided the topic or period covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

PHIL. 320.3 — 1/2(3S)
Studies in Philosophy
The topic, movement or philosophers studied will vary from year to year.
Prerequisite(s): 12 credit units in philosophy.
Note: Historical and Topical content will vary from year to year. See department for latest details. Students may take this course more than once for credit, provided the topic or period covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

PHIL. 333.3 — 1/2(3L)
Metaethics
Concerned with topics such as the cognitive status of judgements about what is right and good, about the grounds of ethical judgement and the logic of ethical argument, and about the role of rules and principles in ethical dispute.
Prerequisite(s): 12 credit units in philosophy including one of 231, 233, 234 or 235.

PHIL. 337.3 — 1/2(3S)
Philosophy of Law
A critical examination of attempts to provide theories of the nature of law. This course will examine the debate between legal positivists and natural law theorists, as well as the reaction to this debate (e.g. Dworkin, legal realists, critical legal theorists, and feminists).
Prerequisite(s): 12 credit units in philosophy.

PHIL. 343.3 — 1/2(3S)
Philosophical Logic
An introduction to basic topics in philosophical logic such as propositions and the problem of abstract entities, necessity, analyzity and the a priori, theories of truth, theories of meaning and reference, existential commitment and presupposition, essentialism, entailment.
Prerequisite(s): PHIL. 241 or CMPT. 260 and 9 credit units in philosophy.

PHIL. 362.3 — 1/2(3S)
Topics in Political Philosophy
The topic, political philosopher, movement or theories studied will vary from year to year.
Prerequisite(s): 12 credit units in Philosophy or PHIL. 262 or POLS. 237.
Note: Historical and Topical content will vary from year to year. See department for latest details. Students may take this course more than once for credit, provided the topic or period covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

PHIL. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty in and other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PHIL. 399.6 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty in and other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PHIL. 404.3 — 1/3(3L)
Advanced Problems in Philosophy and Theology
Philosophical aspects of contemporary psychological and theological problems treated at an advanced level. Selected readings in Freud, Jung, Ryle, Merleau-Ponty, Marcel, Ricoeur and others.
Prerequisite(s): 12 credit units in philosophy.

PHIL. 412.3 — 1/2(3S)
Philosophy of Thomas Aquinas I
The philosophy of Aquinas considered in the areas of philosophical theology, metaphysics, and philosophy of nature.
Prerequisite(s): 18 credit units in philosophy.

PHIL. 413.3 — 1/2(3S)
Philosophy of Thomas Aquinas II
The philosophy of Aquinas considered in the areas of human nature, epistemology, and ethics.
Prerequisite(s): 18 credit units in philosophy.

PHIL. 418.3 — 1/2(3S)
Advanced Analytic Philosophy
Studies developments in analytic philosophy examining representative works of the period including those of such philosophers as Russell and Moore, Carnap, Wittgenstein, Ryle, Austin, Ayer, Quine, Davidson, Nagel, Strawson, Dummett, Putnam, Kripke and Rorty.
Prerequisite(s): PHIL. 241 or CMPT. 260 and 9 credit units in philosophy.

PHIL. 420.3 — 1/2(3S)
Topics in Philosophy
An advanced seminar in contemporary philosophy primarily for honours students. Focuses on a recent important book or a set of related journal articles on a central philosophical subject. Emphasis will be on student presentations and discussion.
Prerequisite(s): 15 credit units in philosophy.
Note: Historical and Topical content will vary from year to year. See department for latest details. Students may take this course more than once for credit, provided the topic or period covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

PHIL. 433.3 — 1/2(3S)
Topics in Ethics
An advanced course in value theory. The topic, ethical philosopher, movement or theories studied will vary from year to year.
Prerequisite(s): 12 credit units in philosophy.
Note: Historical and Topical content will vary from year to year. See department for latest details. Students may take this course more than once for credit, provided the topic or period covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

PHIL. 446.3 — 1/2(3S)
Philosophy of Language
An introduction to philosophical problems about language and linguistic approaches to philosophy. How language represents reality; how language colours our thoughts about reality; language as a vehicle of communication. Traditional accounts of truth, meaning, reference, predication and expression will be discussed, as well as methodology in language study and linguistic philosophy.
Prerequisite(s): PHIL. 241 or CMPT. 260 and 9 credit units in philosophy.

PHIL. 451.3 — 1/2(3S)
Topics in History and Philosophy of Science
Examines current epistemological, ontological, methodological, conceptual and/or historical topics in the philosophy of the natural or biological sciences. Will treat issues such as the nature and extent of scientific rationality and objectivity, feminist critiques, social constructivism and sociology of knowledge, empiricism, scientific realism, explanation, prediction, and historical studies of science.
Prerequisite(s): PHIL. 251, or 12 credit units in philosophy, or 6 credit units in philosophy and 12 credit units in a science, social science or history.
Note: Historical and Topical content will vary from year to year. See department for latest details. Students may take this course more than once for credit, provided the topic or period covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

PHIL. 455.3 — 1/2(3S)
Philosophy of Social Science
Examines current conceptual, ontological, epistemological, and methodological issues in philosophy of social science; generalization and prediction in the social sciences, reasons vs. causes, interpretation and meaning of social phenomena, intentionality, explanation of action, reductionism, supervenience, individualism vs. holism, objectivity, realism, constructivism, relativism, facts vs. values, feminism, postmodernism, sociology of knowledge.
Prerequisite(s): PHIL. 251 or 12 credit units in philosophy, or 6 credit units in philosophy and 12 credit units in a social science or history.
PHIL 481.3 — 1/2(3S)
Topics in Epistemology
Advanced topics in Epistemology; topics such as the
nature of belief, perception, justification, truth and
knowledge.
Prerequisite(s): 12 credit units in philosophy.
Note: Historical and Topical content will vary from year
to year. See department for latest details. Students may take
this course more than once for credit, provided the topic
or period covered in each offering differs substantially.
Students must consult the Department to ensure that the
topics covered are different.

PHIL 485.3 — 1/2(3S)
Topics in Philosophy of Mind
Advanced Topics in the Philosophy of Mind: topic will
vary from year to year, and will include issues such as
meaning and mental representation, intentionality,
phenomenal consciousness and qualia, folk
psychology and propositional attitudes,
supervenience and reduction, mental imagery, other
minds and personal identity.
Prerequisite(s): 12 credit units in philosophy or PHIL 285.
Note: Historical and Topical content will vary from year
to year. See department for latest details. Students may take
this course more than once for credit, provided the topic
or period covered in each offering differs substantially.
Students must consult the Department to ensure that the
topics covered are different.

PHIL 492.3 — 1/2(3S)
Topics in Metaphysics
Advanced topics in Metaphysics; topics such as the
nature of metaphysics, personal identity, universals,
skepticism, substance, properties and relations, and
necessity and possibility.
Prerequisite(s): 12 credit units in philosophy.
Note: Historical and Topical content will vary from year
to year. See department for latest details. Students may take
this course more than once for credit, provided the topic
or period covered in each offering differs substantially.
Students must consult the Department to ensure that the
topics covered are different.

PHIL 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other
special situations to cover, in depth, topics that are
not thoroughly covered in regularly offered courses.

PHIL 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other
special situations to cover, in depth, topics that are
not thoroughly covered in regularly offered courses.

PHPHY — PHYSIOLOGY AND
PHARMACOLOGY

College of Medicine

PHPHY 301.3 — 1(3L)
Fundamental Neuroscience Inter cellular
Communication
Cell to cell communication is central to all
physiological systems. The focus of this course is on:
1) the ion channels that determine the electrical
behaviour of neurons, 2) the mechanisms by which
neurons and endocrine cells convert electrical
activity into chemical signals, and 3) how those
chemical signals act on neighbouring cells (ie. during
synaptic transmission), and on distant target cells (ie.
following endocrine release of hormones).
Prerequisite(s): BMSC 224.3 or BIOL 224.3 or permission
of the instructor.
Note: The course content is a reorganization and
condensation of what was previously offered in PHSI 337.3,
PHSI 336.3, and PHSI 348.3. Students with credit for
PHSI 336.3 cannot take this course for credit.

PHPHY 302.3 — 1(3L)
Human Physiology Transport Systems
This course begins with an introduction to the
physiology of the muscle types powering the respiratory
pump, the heart and controlling the distribution of
blood, before moving to a study of the physiology of the
respiratory, cardiovascular and renal systems.
Prerequisite(s): BMSC 224.3 or BIOL 224.3 or permission
of the instructor.
Note: The course content is a reorganization and
condensation of what was previously offered in PHSI 336.3,
PHSI 346.3, and PHSI 347.3. Students with credit for
PHSI 346 or PHSI 347 cannot take this course for credit.

PHPHY 303.3 — 2(3L)
Human Physiology Reproduction Growth and
Energy Homeostasis
Begins with a review of the physiology of reproductive
systems and the establishment of the uterine
environment. This is followed by a review of the
gastrointestinal tract, the liver and the kidney as
playing essential roles in the supply of nutrients and
the maintenance of electrolyte and energy balance.
Environmental, neural and hormonal signals affecting
growth, energy intake and expenditure are reviewed.
Prerequisite(s): BMSC 224.3 or BIOL 224.3 or permission
of the instructor.
Note: The course content is a reorganization and
condensation of what was previously offered in PHSI 337.3,
PHSI 348.3, and PHSI 434.3. Students with credit for
PHSI 348.3 cannot take this course for credit.

PHPHY 304.3 — 1(3L)
Pharmacology I
Pharmacology is the scientific study of the
interaction of chemicals and living organisms. This
course provides an introduction to the principles and
concepts of pharmacology and the effects and mode
of action of drugs that modify the functions of the
autonomic nervous system, the cardiovascular
system and the respiratory system.
Prerequisite(s): BMSC 224.3 or BIOL 224.3 or permission
of the instructor.
Note: Part of PCOL 350.6. Students with credit for
PCOL 350.6 cannot take this course for credit.

PHPHY 305.3 — 2(3L)
Pharmacology II
This course provides theoretical knowledge in
Pharmacology at a fundamental level and an
introduction of the effects and mode of action of
drugs that influence blood coagulation, that regulate
or assist the immune system, that modify
the functions of the central nervous system, the
endocrine system and the gastrointestinal system.
Prerequisite(s): PPHY 304.3 or permission of the
instructor.
Note: Students with credit for PCOL 350.6 cannot take this
course for credit.

PHPHY 306.3 — 2(3P)
Physiology Laboratory
Physiological knowledge is largely acquired by
application of the experimental method to living
organisms, or organs, tissues or cells derived from
living organisms. This course introduces the student
to the skills required for experimentation. These
include an understanding of hypothesis formation,
experimental design and use of the most appropriate
methods, instrumentation and data analysis.
Prerequisite(s): BMSC 224.3 or BIOL 224.3 and
BMSC 240.3 or permission of the instructor.
Note: This course has been redesigned from what was
previously PHSI 334.6. Students with credit for PHSI 334.6
cannot take this course for credit.

PHPHY 307.3 — 1(3P)
Pharmacology Laboratory
This course is the application of basic mechanisms by
which drugs interact with specific receptors at
distinct sites to modify physiological functions. It gives
a hands-on experience in the in vitro experiment and
analysis of several important parameters often
discussed in pharmacology literature.
Prerequisite(s): BMSC 240
Prerequisite(s) or Corequisite(s): PPHY 304

PHPHY 401.3 — 1(3P)
Animal Surgery and Experimentation
The primary objective is to provide students with
skills in designing experiments, collecting and
interpreting data. Students will acquire skills in small
animal surgery and the use of instrumentation to
record a number of physiological measures of
importance in Physiology and Pharmacology.
Prerequisite(s): PPHY 306.3 and PPHY 307.3 or permission
of the instructor.
Note: This course is optional, but recommended for
undergraduate students in the Honours program
considering the possibility of a career in physiological or
pharmacological research and for graduate students
in need of hands-on skills in animal surgical techniques
and experimentation. Students with credit for PHSI 334.6
cannot take this course for credit.

PHPHY 402.3 — 2(3L)
Therapeutics Herbal Compounds and Evidence
Based Medicine
Using case studies, this course provides an
introduction to evidence based practices in the
Health Sciences. The types and components of
clinical studies and related issues of scientific validity,
reliability and safety are discussed in relation to the
development and use of drugs and herbal compounds.
Prerequisite(s): PPHY 304.3 and 305.3, or permission of
the Instructor.
PHPY. 403.3 — 1(3L)
Physiological Genomics and Pharmacogenetics
This course reviews various studies linking genomic information to functional changes occurring at the cellular, organ and whole organism levels. Genetic differences responsible or predisposing an individual for a trait or disease in a particular environment are discussed. Attention is given to the translation of the new knowledge to novel therapeutic approaches.
Prerequisite(s): PHY 302.3, PHY 303.3, PHY 304.3 and BMSC 2203 or BIOL 2263, or permission of the instructor.
Note: The former PHY 436.3 has been re-organized to include a pharmacogenomic component. Students with credit for PHY 436.3 cannot take this course for credit.

PHPY. 404.3 — 1(3L)
Advances in Neurophysiology and Neuropharmacology
Technical advancements have allowed significant progress towards an understanding of the brain function and how drugs affect brain function. This course will discuss advances in neurophysiology and neuropharmacology within the context of a central theme. Examples of such themes are the neurobiology of pain, of psychiatric disorders, of neurodegenerative disorders, etc.
Prerequisite(s): HSC 350.3, PHY 301.3, PHY 304.3, and PHY 305.3, or permission of the instructor.

PHPY. 405.3 — 2(3L)
Advances in Cardio Respiratory Physiology and Pharmacology
Advances in cardio-respiratory physiology and pharmacology will be discussed. Students will analyze and present current research literature. Examples of disorders such as tissue hypoxia or hypertension will be used to illustrate alterations in neural regulation, signal transduction pathways and to identify current and future therapeutic interventions.
Prerequisite(s): PHY 302.3 and PHY 304.3 or permission of the instructor.

PHPY. 432.6 — 1and2(10P)
Research Project in Physiology and Pharmacology
Advanced work in a selected area of physiology and pharmacology. This normally consists of a laboratory research project done under the direct supervision of a Faculty Advisor.
Formerly: PHSI 432.6
Prerequisite(s): PHY 306.3 and PHY 307.3, or permission of the instructor.
Note: Students with credit for PHSI 432.6 cannot take this course for credit.

PHPY. 490.0
Seminar and Undergraduate Journal Club
Students in the fourth year of the Four-year or Honours program are required to attend departmental seminars and to participate in the presentation and discussion of papers in the departmental journal club.
Formerly: PHSI 490
Restriction(s): Restricted to undergraduate students majoring Physiology and Pharmacology.
Note: Students with credit for PHSI 490 will not receive credit for this course.

PHSI — PHYSIOLOGY

PHSI. 208.6 — 1and2(3L)
Human Body Systems
Introduces the major organ systems of the human body and how they work.
Formerly: HSC 208, PHSI 212.
Restriction(s): Restricted to students in the College of Pharmacy and Nutrition and in the College of Nursing.
Prerequisite(s): BIOL 120.3 and CHEM 112.3.
Note: BMI. 2003 is recommended. Students with credit for HSC 208.6 will not receive credit for this course.

PHYS — PHYSICS

PHYS. 115.3 — 1(3L-1.5P-1T)
Physics and the Universe
Provides the first part of an introduction to physics. Topics include force, energy, momentum and collisions, torque and angular momentum, electric and magnetic fields, electric currents and circuits. Some applications of physics in technology and the health sciences are also discussed.
Prerequisite(s): Physics 30 and (Mathematics B30 or C30, or Foundations of Mathematics 30, or Pre-Calculus 30).
Note: Students with credit for PHYS. 111 or 121 may not take this course for credit. Students may only obtain credit for one of PHYS. 115 or 155.

PHYS. 117.3 — 2(3L-1.5P-1T)
Physics for the Life Sciences
Introduces students to aspects of physics which are of particular relevance for the health and life sciences. This course can be used as the second part of an introduction to physics. Topics include fluid mechanics, oscillations and waves, thermal physics, optics, quantum physics, and nuclear physics. Emphasis is placed on bio-medical applications of physics.
Prerequisite(s): PHYS. 115.
Note: Students with credit for PHYS. 111 or 121 may not take this course for credit. Students may only obtain credit for one of PHYS. 117 or PHYS. 125.

PHYS. 125.3 — 2(3L-1.5P-1T)
Physics and Technology
Introduces students to aspects of physics with an emphasis on applications in technology and the physical sciences. This course can be used as the second part of an introduction to physics for students in the physical sciences or as a science elective for engineering students. Topics include fluid mechanics, oscillations and waves, temperature and ideal gas law, optics, special relativity, quantum physics, and nuclear physics.
Prerequisite(s): MATH. 110 or 123; PHYS. 115 or GE 124.
Note: Students with credit for PHYS. 111 or 121 may not take this course for credit. Students may only obtain credit for one of PHYS. 117 or PHYS. 125.

PHYS. 127.3 — 2(3L-3P-1T)
Introduction to Quantum and Relativistic Phenomena
An introduction to relativistic and quantum systems, including the physics of atoms, molecules, solids, nuclei, and elementary particles.
Formerly: PHYS. 128.
Prerequisite(s): Physics 30, 3 credit units. 100-level calculus courses from MATH. 101, 110, 112, 116, 121, 123, 124 and. 125, 3 credit units. 100-level Type C Science courses or Engineering courses from GE 101, 111, 121, 124, 125.
Note: Students with credit for PHYS. 128 cannot take this course for credit.

PHYS. 155.3 — 2(3L-1.5P)
Introduction to Electricity and Magnetism
Introduces the student to electricity; elementary electric charge, Coulomb’s law, concepts of electric field and electrostatic potential, work, energy and capacitance, and dielectrics. The second part of the course is devoted to circuit analysis: voltage, current, resistance, power, Ohm’s law, DC series/parallel circuits, Kirchoff’s laws, circuits with capacitors and R-C transients. The third part of the class focuses on concepts of electromagnetism: magnetic field and magnetic flux, forces acting on a charge and current carrying conductor, and analysis of series magnetic circuits.
Prerequisite(s): GE 124 (taken) and MATH. 123 (taken).
Note: Students can have credit for only one of PHYS. 115 or PHYS. 155. Students with credit for EP 155 may not take PHYS. 155 for credit. EP 155 was last offered in 2004.

PHYS. 223.3 — 2(3L)
Mechanics I
An introduction to classical mechanics of single-particle systems using Newtonian, Lagrangian, and Hamiltonian methods. Applications include linear and non-linear oscillations and gravitation.
Prerequisite(s): PHYS. 115 (formerly. 111 or 121) or GE 124; MATH. 223 or 225 or 276.
Prerequisite(s) or Corequisite(s): MATH. 224 or 226 or 238.

PHYS. 230.1 — 2(0.4L-0.6P)
Electricity and Magnetism Laboratory
This laboratory course explores basic elements of electric circuits and electronics through experiments. Students will also learn how to measure magnetic fields through inductance and Hall probes. There will be five experiments and students will need 1.5 hours per experiment. For each experiment there will also be 1 hour lecture.
Prerequisite(s): PHYS. 117 or PHYS. 125.
Note: Students with credit for EP 229 may not take this course for credit.

PHYS. 231.1 — 2(0.4L-0.6P)
Optics Laboratory
A laboratory course that explores geometric optics and wave optics through experiments. Topics include image formation with mirrors and lenses, diffraction and interference patterns, and polarization. There will be five experiments and students will need 1.5 hours per experiment. For each experiment there will also be a 1 hour lecture.
Prerequisite(s): PHYS. 117 or PHYS. 125.
Note: Students with credit for EP 225 may not take this course for credit.
PHYS. 252.3 — 1(3L)
Foundations of Modern Physics
Introduces Special Relativity and the foundations of Quantum Mechanics. Topics in relativity include Lorentz transformations, time dilation, length contraction, space-time diagrams, relativistic addition of velocities, and the relativistic definitions of energy and momentum. Topics in Quantum Mechanics include quantization of energy levels, wave-particle duality, and the tunnel effect.
Prerequisite(s): PHYS. 115 or GE 124
Prerequisite(s) or Corequisite(s): MATH. 104, MATH. 110, MATH. 121, MATH. 123, or MATH. 125.
Note: Students can have credit for only one of PHYS. 251 and 252.

PHYS. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

PHYS. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

PHYS. 322.3 — 2(3L)
Introduction to Atmospheric Science and Meteorology
An introduction to the processes underlying observed weather phenomena. Topics include thermodynamic processes; stability and convection; radiation and heat budget. The dynamics of the atmosphere and its circulation are described, and related to synoptic meteorology. Weather forecasting is discussed. There are projects on weather observation and forecasting.
Prerequisite(s): MATH. 225 or 225 or 276; PHYS. 115 and 117 (formerly PHYS. 111), or PHYS. 115 and 125 (formerly PHYS. 121) or GE 125 and PHYS. 155.

PHYS. 323.3 — 2(3L)
Mechanics II
Continues the study of the classical mechanics of single-particle, multi-particle, and continuous systems in Newtonian, Lagrangian, and Hamiltonian methods. Applications include motion in a central force, non-inertial reference frames, rigid bodies, coupled oscillations, and fluids.
Prerequisite(s): PHYS. 223 or GE 226.

PHYS. 352.3 — 2(3L-1T)
Concepts of Radiation Physics
Introduces the essential radiation physics concepts of relevance for nuclear energy, radiation therapy, radiation protection and medical imaging professionals. Topics include basic constituents of matter; mass-energy equivalence; atomic mass unit; relativistic mass; de Broglie wavelength; Compton wavelength; excited states and radiation; nuclear stability and radioactive decay; radioactive disintegration laws; activation analysis; energetics of nuclear decays and reactions; binding energy and separation energies; nuclear fission and nuclear fusion; interaction of radiation with matter; charged particle interactions: range and stopping power; photon attenuation: photoelectric effect, Compton scattering and pair production; neutron interactions: elastic and inelastic scattering, capture, nuclear fission; neutron attenuation. Further topics include the physics of nuclear reactors; chain reactions; criticality of a reactor; elements of radiation protection: radiation units, quality factor and equivalent dose.
Prerequisite(s): 60 credit units at the university level, with at least 6 credit units in MATH and 3 credit units in PHYS.

PHYS. 356.3 — 1/2(3L)
Intermediate Electromagnetism
Prerequisite(s): PHYS. 202 or PHYS. 229 or PHYS. 230.
Prerequisite(s) or Corequisite(s): MATH. 331.
Note: Students with credit for PHYS. 356 may not take PHYS. 356 for credit. PHYS. 356 was last offered in 2003.

PHYS. 371.3 — 1/2(3L)
Statistical and Thermal Physics
Following a brief introduction to basic probability concepts the course applies statistical ideas to systems of particles in equilibrium so as to develop the basic notions of statistical mechanics. Macroscopic and microscopic aspects are discussed and illustrated in detail. Topics covered include partition functions, specific heats of molecules, effusion, quantum statistics of ideal gases, systems of interacting particles and chemical equilibrium.
Prerequisite(s) or Corequisite(s): PHYS. 383.

PHYS. 383.3 — 1(3L)
Quantum Mechanics I
The Schrodinger equation and its implications are discussed for several important quantum systems, including the quantum harmonic oscillator and one-electron atoms. Further topics include barrier-penetration, angular momentum in quantum mechanics, spin, and time-independent perturbation theory.
Prerequisite(s): PHYS. 252
Prerequisite(s) or Corequisite(s): MATH. 331.
Note: Students with credit for PHYS. 381 will not receive credit for this course.

PHYS. 391.3 — 2-Jan
CaNoRock Canada Norway Student Sounding Rocket Course
A field course held at the Andøya Rocket Range in Andenes, Norway. Students will assemble scientific instruments, test these instruments, collect the data remotely from the rocket’s telemetry systems during the rocket’s flight, and analyse and present the interpreted data.
Prerequisite(s): Successful completion of 45 credit units and permission of the department.
Note: This course has costs in addition to tuition fees.

PHYS. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PHYS. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PHYS. 402.3 — 1(3L)
Techniques of Theoretical Physics I
Designed to develop those mathematical skills which are required for solving physical problems. Emphasis is placed on the various initial value and boundary value problems occurring in physics and engineering. This course requires that students do a large number of homework problems.
Prerequisite(s): PHYS. 383, PHYS. 356; MATH. 331, MATH. 339 and MATH. 379.

PHYS. 404.3 — 2(1L-7P)
Techniques of Experimental Physics
Intended to make the student familiar with a variety of modern techniques in Experimental Physics including physical properties of materials and their use in the laboratory, radiation sources and radiation detection, vacuum techniques and cryogenics.
Prerequisite(s): STAT. 241 or 245 or GE 210.

PHYS. 452.3 — 2(3L)
Introduction to Nuclear and Particle Physics
An introduction to the physics of the nucleus and of the fundamental particles and their interactions. Topics in nuclear physics include nuclear phenomenology, radioactive decay, nuclear reactions; nuclear models; semi-empirical mass formula, shell model, collective models, the deuteron and the nucleon-nucleon interaction. Topics in particle physics include strong and electroweak interactions; global and local symmetries of the weak and strong interactions; the neutral Kaons and CP violation; Feynman diagrams; the Standard Model: quarks, gluons and colour; decay and reaction probabilities; hadron production; meson and baryon masses; charmonium; asymptotic freedom; neutrino oscillations.
Prerequisite(s): PHYS. 383.

PHYS. 453.2 — 1(0.8L-1.2P)
Modern Physics Laboratory IV
This laboratory course focuses on advanced nuclear techniques, including coincidence measurements and neutron activation analysis. There will be five experiments and students will need 3 hours per experiment. For each experiment there will also be a 2 hour lecture.
Prerequisite(s): PHYS. 353 or PHYS. 383.

PHYS. 456.3 — 1(3L)
Electricity and Magnetism II
This course provides an advanced treatment of electromagnetic waves in matter, electromagnetic radiation, and relativistic electrodynamics.
Prerequisite(s): PHYS. 356.
Note: First offered in 2014-2015. Students may receive credit for only one of PHYS. 816 or PHYS. 456.
PHYS. 461.3 — 1(3L)  
Physics of Plasmas and Fluids  
Provides students with an exposure to basic ideas of fluid and plasma dynamics as used in various applications, including ocean and atmosphere motions, space and laboratory plasmas, and controlled thermonuclear fusion. A unified discussion of neutral fluids and plasmas is emphasized whenever possible. Topics include fluid (moment) models, motion of charged particles in electric and magnetic fields, oscillations and waves in neutral fluids and plasmas, plasma properties and equilibria.  
Prerequisite(s): PHYS. 356; PHYS. 371.

PHYS. 470.3 — 2(3L)  
Solid State Physics  
Covers perturbation theory, crystal structure and binding of solids, lattice vibrations, electrons in crystalline lattices, magnetic and transport properties of solids, and superconductivity.  
Prerequisite(s): PHYS. 371; PHYS. 383.

PHYS. 471.3 — 1/2(3L)  
Synchrotron Physics  
Provides an introduction to the physics of synchrotrons and their applications. The first part introduces accelerator physics, synchrotron radiation and its sources, and beamline optics. The second part discusses X-ray spectroscopy with synchrotrons as well as elastic and inelastic scattering.  
Prerequisite(s): PHYS. 356; PHYS. 383.

PHYS. 481.3 — 1(3L)  
Quantum Mechanics II  
Linear vector spaces and quantum mechanics; hermitian and unitary linear operators; Schrödinger equation in various representations; the operator method as applied to the harmonic oscillator and to angular momentum eigenvalues; the spin statistics theorem; minimal coupling of electromagnetic fields; time independent perturbation theory and applications.  
Prerequisite(s): PHYS. 383; MATH. 264 or MATH. 266; MATH. 331 and MATH. 339.

PHYS. 482.3 — 2(3L)  
Quantum Mechanics III  
Continues PHYS. 481 and begins with an extensive discussion of time dependence in quantum mechanics. Exactly solvable problems such as spin-magnetic resonance are used to illustrate the time-dependent perturbation series. Applications include emission and absorption of radiation, multipole selection rules, and electron scattering from atoms and nuclei; Further topics discussed in detail are symmetry in quantum mechanics, rotation matrices and applications, many particle systems, collision theory, and variational methods including Hartree-Fock theory.  
Prerequisite(s): PHYS. 481.  
Note(s): Students may receive credit for only one of PHYS. 886 or PHYS. 482.

PHYS. 490.0 — 1and2(15)  
Physics Seminars  
Students are required to attend both Departmental seminars and special student seminars. In each case the seminar material is intended to introduce students to some of the new developments in Physics and Engineering Physics.  
Prerequisite(s): Minimum 9 credit units of 300-level PHYS or EP courses.  
Note: Required for Engineering Physics, Physics Honours and Physics Four-year programs.

PHYS. 491.3 — 1/2(6P)  
Physics Research Project  
The student will work on an advanced research project in Physics under the supervision of a faculty member in the department specializing in the selected area. The project will be evaluated by a committee (including the supervisor) on the basis of oral and written reports.  
Permission of the department required.  
Prerequisite(s): Registration in the final-year Physics Honours program.  
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

PHYS. 493.6 — 1and2(6P)  
Extended Research Project in Physics  
The student will work on a research project in physics under the supervision of a faculty member. The project will be evaluated by a committee (including the supervisor) on the basis of two oral and two written reports.  
Permission of the department required.  
PHYS. 497.15 — 15P  
Research Term in Physics  
Course allows students to get credit for spending a term as a member of a research group, or for participation in international exchange programs with a strong research component. The student is expected to engage full time in a physics research project at a research facility or a university under the supervision of a faculty member or a research scientist from the host institution. The time frame for participation in the research project should be 12-16 weeks, including special skills training where required. The student’s contribution to the research project must be significant enough to justify co-authorship in a journal or conference paper on the research project. The student will be asked to provide a written outline of scientific foundations and motivations for the research six weeks after the start of the project.  
Prerequisite(s): 75 credit units at the university level, with at least 21 credit units in Physics, Engineering Physics or Astronomy courses. Students must be at High Honours standing and have permission from the department.  
Note(s): Students can also receive permission to register for this course during the summer. Students should not register for this course in term 2 of their final year. Students who would like to make use of this option would normally register for this course in term 2 of their penultimate year, during the summer, or in term 1 of their final year. Students should not register in other courses at the same time.

PHYS. 498.3 — 1/2(3S)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PLAN — PLANNING  
College of Arts and Science

PLAN. 298.3 — 1/2(3L)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PLAN. 329.3 — 1/2(3L)  
Watershed Planning and Management  
The process and practice of planning and management for watersheds in a North American context. A focus on water and land use policy and watershed governance structures. Institutional arrangements affecting water management in Canada will be investigated. Topics will include integrated watershed management, watershed plan preparation, and barriers to source water protection.  
Prerequisite(s): 6 credit units in Geography, or permission of the instructor.  
Note: Students with credit for GEOG 329 will not receive credit for this course. This course was labeled GEOG. 329 until 2014.

PLAN. 341.3 — 1/2(3L)  
Urban Planning  
The course examines 21st century approaches and frameworks in urban planning, situating these briefly in the evolutionary context of planning movements from the late-19th and 20th centuries. Examples of topics engaged with include: zoning, pricing and urban form; infrastructure asset management; development; culture planning. The course combines experiential and class-based learning. Individual and group field-based projects form a significant part of the course assessment. A field trip is incorporated into the course.  
Prerequisite(s): GEOG. 240.  
Note: Students with credit for GEOG. 246 or GEOG. 341 may not take this course for credit. This course was labeled GEOG. 341 until 2014.
PLAN. 342.3 — 1/2(3L)
Community Planning in Canada
Detailed investigation of community planning methodology and applications, with emphasis on population and housing analysis. The causes, impacts and proposed planning solutions for major community planning problems in Canadian urban or rural areas are discussed. Computer applications and the use of statistical information in addressing problems of inner-city neighbourhoods in Saskatoon are studied.
Prerequisite(s): GEOG 240.
Note: Students with credit for GEOG 247 or GEOG 342 may not take this course for credit.
This course was labeled GEOG 342 until 2014.

PLAN. 343.3 — 1/2(3L)
Legal Issues in Planning
Designed for students interested in urban studies and planning, this course reviews legal concepts and issues associated with the functions of municipalities, and especially with their powers for controlling and planning land use. The focus wherever possible, is on Saskatchewan urban and rural areas, and on Saskatchewan legislation and case law.
Prerequisite(s): 12 credit units in GEOG.
Note: Students with credit for GEOG 343 will not receive credit for this course. This course was labeled GEOG 343 until 2014.

PLAN. 346.3 — 1/2(3L)
Introduction to Urban Design
A lecture/seminar on the history, context and elements of the built urban environment. Function and form, and aspects of urban aesthetics are discussed in relation to streetscapes, open spaces and heritage conservation. The relationship of urban design with trends in social thought and with cultural patterns is addressed. The studio consists of design exercises including graphic presentations and applications in computer-aided design.
Prerequisite(s): GEOG 240.
Note: Students with credit for GEOG 346 will not receive credit for this course. This course was labeled GEOG 346 until 2014.

PLAN. 350.3 — 1/2(3L)
Transportation Planning and Geography
Introduces the geographical aspects of transportation theory and planning. Major topical areas that are emphasized are: travel, behaviour, network design, and planning and policy for the future.
Prerequisite(s): GEOG 240.
Note: Students with credit for GEOG 265 or GEOG 350 may not take this course for credit. This course was labeled GEOG 350 until 2014.

PLAN. 390.3 — 1/2(1L-2P)
Research and Field Methods in Planning
Applies quantitative and qualitative research methods to selected case study projects. Students will design a research framework, design any needed instruments, gather their data, and present results. Working in small groups, students will collect data using methods such as written surveys, content analysis, focus groups, and participant observation.
Prerequisite(s): GEOG 240 or GEOG 280.
Restriction(s): Enrollment in the RUP or GEOG programs.
Note: Students with credit for RUP 390 will not receive credit for this course. This course was labeled RUP 390 until 2014.

PLAN. 395.3 — 1/2(3S)
Planning History and Theory
This course examines several important aspects of planning history and theory in the urban and rural contexts. Notable topics include the evolution of both planning and planning theory in light of evolving community forms, infrastructure systems, and social economic and environmental conditions; comprehensive, incrementalist, and advocacy planning.
Prerequisite(s): GEOG 240.
Restriction(s): Enrollment in the RUP program.
Note: Students with credit for RUP 395 may not take this course for credit. This course was labeled RUP 395 until 2014.

PLAN. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PLAN. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PLAN. 413.0 — (P)
Practicum in Planning
An applied course that provides students with professional experience and the ability to critique urban, rural, regional or community planning standards and procedures. The course must include a work program consisting of 40 hours approved by the Practicum Supervisor.
Prerequisite(s): Two of PLAN. 341, 342 or 346.
Restriction(s): Enrollment in the RUP program.
Note: A Pass/Fail grade is awarded on completion of the Practicum. Graduation in the RUP program is based on the overall average only, which does not include the P/F grade awarded in RUP 413. Students with credit for RUP 413 or RUP 413 may not take this course for credit. This course was labeled RUP 413 until 2014.

PLAN. 441.3 — 2(3L)
Regional Planning
Over the past century a regional approach to planning has shaped and informed the Canadian landscape as reflected in provincial programs directed at agricultural land protection, watershed conservation, and metropolitan growth strategies. This course examines the historical and present-day context for regional planning in Canada from its origins in agricultural assistance to its current manifestation in sustainable development and bioregionalism. Regional planning as a governance structure and institutional framework will be a common thread through the course. Emphasis will be placed on the interpretation and function of rural and urban landscapes from a regional perspective. Upon completion of this course students will have an appreciation for the dynamic forces shaping Canadian regions, awareness of regional governance structures, as well as an understanding of current trends in regional planning in Canada.
Prerequisite(s): PLAN 341 or PLAN 342 or permission of the instructor.
Note: Students with credit for GEOG 442 will not receive credit for this course. This course was labeled GEOG 442 until 2014.

PLAN. 445.3 — 1/2(3L)
Planning with Indigenous Communities
The course focuses on the application of the theory and methods of Indigenous planning and planning with Indigenous communities in reserve, rural, urban, northern, and international contexts. Emphasis is on project-based and experiential learning through group and individual projects, guest lectures and a field trip.
Prerequisite(s): 72 credit units at the University and one of PLAN. 329, PLAN. 341, PLAN. 342, NRTH 331, NRTH 332, or NS 210.
Note: Students with credit for GEOG 445 will not receive credit for this course. This course was labeled GEOG 445 until 2014.

PLAN. 446.3 — 1/2(3L)
Advanced Urban Design
A lecture/seminar on advanced topics of the built urban environment through the study of theory, history, site context and case studies. The evolution of urban design will be considered through detailed analysis of urban form, streetscapes, open spaces and architecture. Local and global examples will be studied. The course engages students through graphic analysis, design exercises and discussion sessions. Exercises and assignments involve the use of computer-aided design software tools and techniques.
Prerequisite(s): PLAN. 346.
Note: Students with credit for GEOG 446 will not receive credit for this course. This course was labeled GEOG 446 until 2014.
PLSC. 213.3 — 1(3L-3P)
Principles of Plant Ecology
Designed for students in the College of Agriculture. It considers the nature of ecosystems and of processes associated with energy flow and material cycling within them. Particular attention is given to ecosystems of Western Canada and the effect that man exerts on them, especially through agricultural practices.
Note: Students with credit for BIOL. 253 or 228 may not take this course for credit.
PLSC. 214.3 — 1/2(3L-2P)
Statistical Methods
An introduction to statistical methods and their application to experiments. Includes probability, means and variances, "t" tests, analysis of variance, experimental designs, simple regression and correlation, and chi-square tests. The lab component provides an introduction to the data analysis functions of spreadsheet software. This class is designed for students in the biological sciences.
Formerly: PLSC. 314
Note: Students wishing to use this course for Arts and Science credit should refer to Statistics Course Regulations in the Arts and Science section of the Calendar. Students with credit for PLSC. 314 will not receive credit for this course.

PLSC. 220.3 — 1(3L-2P)
Fundamentals of Horticulture
An introduction to the economic, nutritional and aesthetic value of horticulture emphasizing its importance and impact. Consideration is given to vegetable, fruit, turf grasses, nursery, and greenhouse production as well as landscaping, herbs, and medicinal plants. Emphasis is placed on Saskatchewan production in relation to regional, national and international markets. Laboratories consist of field trips and hands-on exercises.
Prerequisite(s): AGRC. 111.3 and BIOL. 120.3
Note: There are additional non-refundable costs in addition to tuition fees.
PLSC. 222.3 — 2(3L-3P)
Introduction to Field Crops
Introduction to field crops from the perspectives of resource availability, management of the crop life cycle and field environment. Prairie crops are used to establish main principles, supplemented with examples from other areas of the world. Laboratories combine trips to local grower and industry sites with exercises on crop morphology and quality.
Prerequisite(s): AGRC. 111 or permission of the instructor.
Note: Students can receive credit for only one of PLSC. 201.3 or PLSC. 222.3. There are additional non-refundable costs in addition to tuition fees.
PLSC. 234.3
Weed Control in Organic Agriculture
The principals 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.
Note: This course is only available in web distance format.
PLSC. 235.3 — 1(3L)
Urban Food Production
This multi-disciplinary course introduces students to the concept of producing food in an urban setting and takes a more in-depth look at our evolving food system. In addition to learning how to grow fruits and vegetables, students will learn about the nutritional aspects, storage requirements and utilization of crops. Topics including urban livestock, aquaculture, apiculture, rooftop gardening, hobby greenhouse production, and environment modification will be briefly discussed. Students will learn how the urban food production movement has influenced urban design and utilization of land within urban settings. Environmentally friendly practices including water harvesting, composting, organic production, and integrated pest management will be discussed.
Prerequisite(s): 30 credit units or permission from the instructor.

PLSC. 240.3 — 1(3L)
Plant Metabolism
An introductory plant biochemistry course focusing on photosynthetic and mitochondrial metabolism, with emphasis given to interaction between these processes. The integration of amino acid and lipid biosynthesis, as well as nitrogen and sulfur metabolism, is also examined. This course will be conducted online, with some limited face-to-face instruction.
Prerequisite(s): BIOL. 120 and one of CHEM. 250 or BMSC. 200.
Note: Students with credit for BIOL. 220 may not take this course for credit.
PLSC. 298.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PLSC. 300.3 — 1(3L-2P)
Introduction to the science and practice of beekeeping. Subjects include the morphology and physiology of the honey bee, beekeeping equipment, manipulation of bees, swarm control, increase, honey production, bee diseases and wintering.
PLSC. 330.3 — 1(3L-2P)
Ornamental Plants
Studies the identification of ornamental trees, shrubs, perennials, biennials, and annuals commonly grown in Saskatchewan. Consideration is also given to culture, propagation and use.
Note: Offered in even years.
PLSC. 333.3 — 1(3L)
Tropical Crops of the World
For students interested in learning about tropical crop production systems and the origin, evolution and historical significance of tropical crop plants. Students will gain a global perspective on biological, social and economic constraints to crop production in the tropics. Students with future career interests in international development and renewal resource management will benefit from taking this course.
Prerequisite(s): BIOL. 120.3

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PLSC. 335.3 — 1(3L)
Integrated Pest Management
The principles of Integrated Pest Management (IPM) and their application to pest control (plant pathology and entomology) in agricultural crops will be examined. Integration of strategies will be illustrated using various diseases and insect pests of a range of field crops grown in Western Canada. The course is supplemented with occasional guest lecturers, who are professionals working in the pathology and entomology disciplines.
Prerequisite(s): BIOL. 222 or permission of the instructor

PLSC. 340.3 — 2(3L‑2P)
Weed Biology and Ecology
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.
Prerequisite(s): AGRC. 111 or one of BIOL. 202, 222 or 205.

PLSC. 345.3 — 2(3L‑2P)
Pesticides and Crop Protection
The use of pesticides for crop protection, factors affecting pesticide activity and fate of pesticides in the environment are discussed. Includes the biological activity of soil and foliar applied pesticides, pesticide modes of action and resistance, and dissipation in soil. Registration, environmental legislation and residue tolerance levels in various products are also discussed.
Prerequisite(s): BIOL. 120 and PLSC. 335.
Note: Students with credit for PLSC. 50 will not receive credit for this course.

PLSC. 398.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PLSC. 401.3 — 1(3L‑3P)
Sustainable Crop Production
Components of sustainable crop production systems will be examined from an ecological perspective. Students will evaluate the sustainability of cropping systems and develop crop production systems with greater ecological and economic sustainability. Laboratories will teach techniques used in crop scouting and diagnostics.
Prerequisite(s): PLSC. 335, SLSC. 312 and successful completion of 75 credit units of university core course work.
Note: There are additional non-refundable costs in addition to tuition fees.

PLSC. 405.3 — 1(3L‑2P)
Genetics of Plant Populations
Application of the principles of Mendelian, population and quantitative genetics to plant evolution and improvement, and conservation of genetic resources. The role of genetic mechanisms in the micro-evolutionary process and their relevance to natural and directed plant evolution and conservation of plant genetic resources is examined.
Prerequisite(s): BIOL. 226

PLSC. 408.3 — 2(3L)
Global Plant Genetic Resources
Students will be provided with basic concepts of the nature, conservation, and utilization of the world's plant genetic resources. Both in situ and ex situ conservation strategies will be covered with emphasis on gene banks. Methods of characterizing and evaluating plant germplasm and its utilization will be emphasized.
Formerly: PLSC. 308
Prerequisite(s): BIOL. 120.3 and one of BIOL. 121.3, 222.3 or EVSC. 110.3.
Note: Offered in odd numbered years. Students with credit for PLSC. 308 will not receive credit for this course.

PLSC. 411.3 — 2(3L‑3P)
Plant Breeding
Familiarizes students with the fundamental aspects of plant breeding, including applied plant genetics, breeding objectives and methods, selection theory and practice, and modern genetic techniques. Labs involve hands-on plant breeding activities.
Prerequisite(s): BIOL. 226 or permission of the instructor.
Note: PLSC. 405 is strongly recommended.

PLSC. 413.3 — 2(3L‑1P)
Advanced Plant Ecology
In-depth examination of recent developments in plant ecology. Current and emerging research interests in plant population, community, and ecosystem ecology will be studied. Use and practical application of analytical tools for synthesis of research results will be emphasized.
Prerequisite(s): Completion of at least 75 credit units including PLSC. 214.3 (Statistical Methods or STAT. 245.3 and one of PLSC. 213.3 (Principles of Plant Ecology) or BIOL. 228.3 (Introduction to Ecology and Ecosystems), or permission of instructor.
Note: Students cannot receive credit for both PLSC. 833 and PLSC. 413.

PLSC. 416.3 — 2(3L‑2P)
Applied Plant Biotechnology
Introduces techniques of biotechnology which have the potential to be utilized in plant improvement. Includes wide hybridization, cytoplasmic male sterility, tissue and cell culture, protoplast fusion and gene transfer at the DNA level.
Prerequisite(s): PLSC. 240, BIOL. 222 and 226.
Note: Offered in even numbered years.

PLSC. 417.3 — 1(3L‑3P)
Crop Physiology
An outline of interrelationships between physiological activity and crop growth with emphasis on energy conversion and analysis of autotrophic growth in an agronomic environment. Germination, growth integration, flowering and senescence are also to be considered. Physiological responses to environmental stresses such as water, temperature, salinity, nutrients and disease are related to crop productivity.
Prerequisite(s): One of PLSC. 240 or BIOL. 331 and successful completion of 84 credit units.

PLSC. 418.3 — 2(3L)
Management of Arable Grassland
Will familiarize students with the ecology, quality, physiology and production of temperate forage species used in arable grassland production, focusing on those adapted to a semi-arid climate. The scientific basis of modern management and utilization practices will be examined.

PLSC. 420.3 — 1(3L)
Grain Chemistry and Technology
Structure, composition, processing and utilization of the principal starch, oil, and protein crops of the world. The effects of variations in grain and seed characteristics and composition on the quality of the final food, feed and industrial products are emphasized.

PLSC. 422.3 — 1(3L‑2P)
Rangeland Ecology and Management
Principles of managing rangeland to ensure sustained productivity and multiple-uses. Inventory, evaluation and planning for multiple-use management. Plant morphology and physiology, palatability, energy flow, nutrient cycling and the hydrologic cycle are integrated and discussed in relation to impacts of grazing on the soil-plant-animal system and development of grazing systems.
Prerequisite(s): BIOL. 228 or PLSC. 213.
Note: Students with credit for PLSC. 322 may not take this course for credit.
There are additional non-refundable costs in addition to tuition fees.

PLSC. 423.3 — 2(3L‑2P)
Landscape Ecology and Vegetation Management
Current theories relating to structure, functioning, and composition of landscapes and human impacts on natural ecosystems, landscape-level processes and patterns, and succession. Developing management plans for natural and remnant landscape elements, and inducing successional changes, and monitoring impacts will be covered. Field trips will be required.
Prerequisite(s): One of BIOL. 228, GEOG. 270 or PLSC. 213 or permission of the instructor

PLSC. 425.3 — 2(3L‑3P)
Forest Ecology
Study of tree physiology, the forest environment, dynamics of the composition, structure and functioning of forest ecosystems at multiple spatial and temporal scales. Emphasis is placed on forest ecosystems of Canada.
Prerequisite(s): One of PLSC. 213, BIOL. 228 or GEOG. 270.
Note: Offered in odd numbered years.

PLSC. 433.3 — 2(3L‑2P)
Greenhouse Structures and Crops
Review of greenhouse construction and plant operation. The commercial production, timing, harvesting, diseases and pests of vegetable and floriculture crops are discussed.
Prerequisite(s): PLSC. 220
Note: Offered in odd-numbered years
PLSC. 435.3 — 2(2L-2P)
Landscape Design
An introduction to the principles and practices of landscape design. A variety of landscape settings are considered with emphasis on residential properties.
Prerequisite(s): PLSC. 220 and 330 or permission of the instructor

PLSC. 441.3 — 1(3L-2P)
Fruit Science
Fundamentals of commercial fruit production including environmental adaptation, breeding, site development, marketing, cultural management, tree fruits, small fruits, tropical fruits, harvesting, diseases and pests.
Prerequisite(s): PLSC. 220.
Note: Offered in even years.

PLSC. 445.3 — 1(3T)
Experiential Learning Internship
This employment internship will enable students to apply their academic knowledge while acquiring and expanding employability skills through work experience. A self-directed learning agreement completed by the student, with input from the employer and approved by the course facilitator, will detail the learning outcomes and how proof of learning will be verified. Journal entries, reflection, online discussion, an oral presentation, a term paper, self- and employer evaluation and completion of a final product are required. Examples of the final product may include a manual, website, e-newsletter, or workbook.
Restriction(s): Open to students enrolled in the College of Agriculture and Bioresources.
Prerequisite(s): Completion of 60 credit units at the university level.
Note: There are additional non-refundable costs in addition to tuition fees.

PLSC. 451.3 — 1(3L-2P)
Vegetable Science
Principles of production and management of vegetable crops are reviewed with illustrations from contemporary research literature. The content is focused on crops, production situations and limitations encountered in Saskatchewan. Local field trips are planned.
Prerequisite(s): PLSC. 220.
Note: Offered in odd years.

PLSC. 461.3 — 2(3L)
Post Harvest Management of Horticultural Crops
Principles of storage and handling of horticultural crops are reviewed with illustrations from contemporary research literature. Physiological processes underlying management practices are examined. The focus is on commodities and practices of local importance.
Prerequisite(s): PLSC. 220 or permission of the department.
Note: Offered in even numbered years.

PLSC. 470.3 — 2(3L-2P)
Plant Propagation and Nursery Management
The principles and the commercial practices of multiplication of plants by seeds and asexual methods, cultural practices, storage and sale station operation. Local field trips are planned.
Prerequisite(s): PLSC. 220 or BIOL. 222
Note: Offered in even numbered years

PLSC. 492.3 — 1and2
Literature Thesis in Plant Sciences
Students will investigate a problem or issue in Plant Sciences and present their findings as a written thesis and as a seminar. Technical writing and thesis preparation skills will be addressed in a series of lectures at the beginning of term 1.
Prerequisite(s): Successful completion of 81 credit units of university level courses.

PLSC. 494.6 — 1and2
Research Thesis in Plant Sciences
Provides students with an opportunity to conduct original research in plant sciences in association with a research supervisor. Students will be given guidance on hypothesis development, experimental design, research, analysis and presentation. Students will present their results in a written thesis and in a conference format.
Prerequisite(s): Completion of 81 credit units toward the B.S.A. Plant Sciences major and a cumulative average of at least 70%.

PLSC. 498
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

POLS — POLITICAL STUDIES

POLS. 111.3 — 1(2L)
Democracy in Canada and the United States
An introduction to the study of politics through an examination of contemporary issues and ideas that arise in and between the democratic systems of Canada and the United States, including democracy, sovereignty, aboriginal issues, NAFTA, globalization, identity, rights, representation and political participation.
Formerly: POLS. 203
Prerequisite(s): POLS. 111 and POLS. 112; or 60 credit units at university level.
Note: Students with credit for POLS. 203 may not take this course for credit.

POLS. 204.3 — 1/2(3L)
Governance of Canada
Introduces students to the main structures and processes of Canada’s national government, including the Constitution and federalism, the Crown, the Prime Minister, the Cabinet, Parliament and the courts.
Formerly: POLS. 203
Prerequisite(s): POLS. 111 and POLS. 112; or 60 credit units at university level.
Note: Students with credit for POLS. 203 may not take this course for credit.

POLS. 205.3 — 1/2(3L)
Politics in Canada
Introduces students to the societal context of, and individual and group participation in, Canadian political life. Covers the Canadian political culture, the politics of regionalism, language, ethnicity and federalism, and the main processes of political participation, including political parties, elections, pressure groups, and the mass media.

POLS. 222.3 — 1/2(3L)
Aboriginal Governance and Politics
An analysis of existing and emerging systems of Aboriginal governance and politics at the local, regional, provincial and national levels in Canada.
Prerequisite(s): POLS. 111 and POLS. 112; or 60 credit units at university level.

POLS. 225.3 — 1/2(3L)
Canadian Public Administration
An introduction to the basic structures, processes, and principles of public administration at the national and sub-national level within the Canadian political system. Special attention is devoted to the various policy-making, regulatory, management, and administrative components of the various public administrative systems. Students will learn why the various components of the administrative system exist, how they operate, and what implications they have both for governmental and non-governmental agencies and actors within the political system.

POLS. 226.3 — 1/2(3L)
Canadian Public Policy
An introduction to the basic conceptual frameworks for describing and analyzing the nature, determinants, and effects of public policy within the Canadian political system at the national and sub-national levels. Special attention is devoted to the fundamental nature of policies such as health, education, welfare, family, immigration, intercultural relations, language, environmental, and Aboriginal, as well as other policies of interest and importance at the time the course is offered.

POLS. 227.3 — 1/2(3L)
Canadian Health Policy
An introduction to the basic conceptual frameworks for describing and analyzing the nature, determinants, and effects of public policy within the Canadian political system at the national and sub-national levels. Special attention is devoted to the fundamental nature of policies such as health, education, welfare, family, immigration, intercultural relations, language, environmental, and Aboriginal, as well as other policies of interest and importance at the time the course is offered.

POLS. 228.3 — 1/2(3L)
Comparative Politics
An introduction to the basic conceptual frameworks for describing and analyzing the nature, determinants, and effects of public policy within the Canadian political system at the national and sub-national levels. Special attention is devoted to the fundamental nature of policies such as health, education, welfare, family, immigration, intercultural relations, language, environmental, and Aboriginal, as well as other policies of interest and importance at the time the course is offered.

POLS. 229.3 — 1/2(3L)
International Relations
An introduction to the basic conceptual frameworks for describing and analyzing the nature, determinants, and effects of public policy within the Canadian political system at the national and sub-national levels. Special attention is devoted to the fundamental nature of policies such as health, education, welfare, family, immigration, intercultural relations, language, environmental, and Aboriginal, as well as other policies of interest and importance at the time the course is offered.

POLS. 230.3 — 1/2(3L)
Comparative Government
An introduction to the basic conceptual frameworks for describing and analyzing the nature, determinants, and effects of public policy within the Canadian political system at the national and sub-national levels. Special attention is devoted to the fundamental nature of policies such as health, education, welfare, family, immigration, intercultural relations, language, environmental, and Aboriginal, as well as other policies of interest and importance at the time the course is offered.

POLS. 231.3 — 1/2(3L)
Comparative Political Systems
An introduction to the basic conceptual frameworks for describing and analyzing the nature, determinants, and effects of public policy within the Canadian political system at the national and sub-national levels. Special attention is devoted to the fundamental nature of policies such as health, education, welfare, family, immigration, intercultural relations, language, environmental, and Aboriginal, as well as other policies of interest and importance at the time the course is offered.
POLS. 236.3 — 2(3L)
Classical Medieval and Renaissance Political Thought
Examines the political theories of such classical, medieval and renaissance philosophers as Socrates, Plato, Aristotle, Cicero, Augustine, Aquinas and Machiavelli.
Formerly: POLS. 235.
Prerequisite(s): POLS. 111 and POLS. 112, or 60 credit units at university level.
Note: Students with credit for POLS. 235 may not take this course for credit.

POLS. 237.3 — 2(3L)
Modern Political Theory
Examines the works of such modern political theorists as Hobbes, Locke, Jefferson, Smith, Bentham, Kant, Marx and Mill.
Formerly: POLS. 235.
Prerequisite(s): POLS. 111 and POLS. 112, or 60 credit units at university level.
Note: Students with credit for POLS. 235 may not take this course for credit.

POLS. 246.6 — 1and2(3L)
Politics of Third World
An examination of the political processes and structures within developing countries with primary emphasis on states in sub-Saharan Africa and the South Pacific. Topics covered include the colonial period, the rise of nationalistic parties, ideology and political leadership, the roles of traditional and modern groups, and problems of development and underdevelopment.
Prerequisite(s): POLS. 111 and POLS. 112, or 60 credit units at university level.

POLS. 248.3 — 1(3L)
Foundations of American Government
Will offer an introduction to the constitutional foundations of American Government. Topics studied will include the origins and basic structure of the Constitution and its amendments, the role of the Courts, civil liberties, federalism, political culture and elections.
Formerly: POLS. 242.
Prerequisite(s): POLS. 111 and POLS. 112, or 60 credit units at university level.
Note: Students with credit for POLS. 242 may not take this course for credit.

POLS. 249.3 — 1(3L)
Institutions and Processes of American Government
Will examine the formal and informal processes of the American system of government. Topics will include the institutions of the Presidency, the Congress, and the bureaucracy and their interaction, as well as the mass media, public opinion, political parties and interest groups.
Formerly: POLS. 242.
Prerequisite(s): POLS. 111 and POLS. 112, or 60 credit units at university level.
Note: Students with credit for POLS. 242 may not take this course for credit.

POLS. 250.3 — 1/2(3L)
State and Society
This course examines various political and sociological approaches to understanding the state and its relationship to society including liberalism, pluralism, functionalism, elite theory, Marxism and Neo-Marxism.
Formerly: POLS. 252.
Prerequisite(s): POLS. 111 and POLS. 112; or SOC. 111 and SOC. 112; or 60 credit units at the university level.
Note: Students with credit for POLS. 252 may not take this course for credit.

POLS. 251.3 — 1/2(3L)
Social Movements and Change
This course focuses on the study of social movements as they contribute to political change and stability and offers various theoretical approaches and concepts relevant to the study of social movements and collective behaviour.
Prerequisite(s): POLS. 111 and POLS. 112; or SOC. 111 and SOC. 112; or 60 credit units at the university level.
Note: Students with credit for POLS. 252 may not take this course for credit.

POLS. 253.3 — 1/2(3L)
Conquest and Revolution in Latin America
This course is a comparative analysis of Latin American politics at the introductory level and it has three main objectives: Firstly, it aims to introduce students to the key issues and concepts of politics in the region. Secondly, it intends to study critically the roots of the revolutionary upheavals that engulfed the region in the latter part of the 20th century, the legacies of these revolutions, and the factors that led to evisceration of democratic transitions by century’s end. Finally, the course seeks to develop students’ research, writing and analytical skills.
Prerequisite(s): POLS. 111.3 and POLS. 112.3; or 60 credit units at the university level.
Note: Students with credit for POLS. 247.6 may not take POLS. 253.3 for credit.

POLS. 254.3 — 1/2(3L)
Democratization and Development in Latin America
This course is a comparative analysis of Latin American politics at the introductory level and it has three main objectives: Firstly, it aims to introduce students to the key issues and concepts of politics in the region. Secondly, it intends to study critically two major developments which have marked Latin American recent history (since the end of the 20th century), the twin developments of democratization and neoliberalism, which some have referred to as the silent revolutions. Finally, the course seeks to develop students’ research, writing and analytical skills.
Prerequisite(s): POLS. 111.3 and POLS. 112.3; or 60 credit units at the university level.
Note: Students with credit for POLS. 247.6 may not take POLS. 254.3 for credit.

POLS. 256.3 — 1/2(3L)
Methods of Political Research
An introduction to selected methods of conducting political science research. Course investigates logical and systematic strategies for analyzing political phenomena.
Prerequisite(s): POLS. 111 and POLS. 112; or 60 credit units at university level.
Note: Students with credit for POLS. 255 may not take this course for credit.

POLS. 261.3 — 1/2(3L)
Introduction to International Politics
An introduction to the dynamics of international politics. It introduces students to the evolution of international politics with a focus on major events and ideas in the development of the modern international system, with particular emphasis on political concepts, ideologies and theories regarding the nature, meaning and development of the international system.
Prerequisite(s): POLS. 111 and POLS. 112; or 60 credit units at university level.
Note: Students with credit for POLS. 260 will not receive credit for this course.

POLS. 262.3 — 1/2(3L)
Introduction to Global Governance
Examines major international institutions - such as the United Nations, the European Union, NATO and others to understand how they work and to assess their success in dealing with various issues that challenge the international community for example, in the promotion of human rights, assisting economic development, ameliorating violent conflicts, and promoting nuclear nonproliferation.
Prerequisite(s): POLS. 111 and POLS. 112; or 60 credit units at university level.
Note: Students with credit for POLS. 260 will not receive credit for this course.

POLS. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

POLS. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

POLS. 303.3 — 1/2(3L)
Public Law and the Courts in Canada
Will introduce students to Canada’s constitution, with special emphasis on the judicial system. It will also examine Canada’s constitutional debates, with specific emphasis on the judicial role in shaping federal/provincial division of powers since Confederation.
Prerequisite(s): 6 credit units. 100-level POLS.
POLS. 304.3 — 1/2(3L)
Democracy and the Charter of Rights and Freedoms
Will introduce students to the Canadian Charter of Rights and Freedoms. Special attention is devoted to the intersection between law and politics, including debates surrounding the introduction of the Charter, ongoing debates concerning judicial power and extensive case reviews.
Prerequisite(s): 6 credit units. 100-level POLS (Students are encouraged to take POLS 303 before taking POLS 304).
Note: Students with credit for POLS. 307 topics in Canadian Politics: Law, Politics and the Charter of Rights and Freedoms offered in 2010-11 and 2011-12 may not take this course for credit.

POLS. 305.3 — 1/2(3L)
Provincial Politics
An examination of the institutions and processes of Canadian provincial political systems with particular emphasis on Saskatchewan.
Prerequisite(s): 6 credit units. 100-level POLS.

POLS. 306.3 — 1/2(3L)
Local Government
An examination of various aspects of local government in Canada, including the evolution of the structures, functions, finances and powers of local government, and the purposes and politics of various contemporary reform issues.
Prerequisite(s): 6 credit units. 100-level POLS.

POLS. 307.3 — 1/2(3L)
Topics in Canadian Politics
An examination of major issues of contemporary concern in Canadian politics, such as constitutional and environmental issues and issues affecting women. The content of the course varies from year to year, but is announced in advance of registration deadlines.
Prerequisite(s): 6 credit units of 100-level POLS, or 60 credit units at university level.

POLS. 322.3 — 1/2(3L)
Aboriginal Management and Administrative Systems
An examination of current and emerging systems of management and administration at the local, regional, provincial and national levels within the Aboriginal sector in Canada.
Prerequisite(s): 6 credit units. 100-level POLS.

POLS. 323.3 — 1/2(3L)
Aboriginal Policies and Programs
An examination of government policies and programs within the Aboriginal sector in Canada, including those established by the federal and provincial governments as well as those developed by Aboriginal communities themselves.
Prerequisite(s): 6 credit units. 100-level POLS.

POLS. 326.3 — 1/2(3L)
Introduction to Comparative Public Policy
Introduction to the approaches and methods for comparing the public policies of various countries. Introduction to the nature and determinants of the similarities/differences in the substance of their respective policies, and the structures and processes used to produce them.
Prerequisite(s): 6 credit units. 100-level POLS and 30 credit units at the university level.

POLS. 328.3 — 1/2(3L)
Public Policy Analysis
An introduction to the purposes, approaches, methods, ethics and politics of public policy analysis. It is designed to provide an understanding of how to produce and analyze documents needed for policy-making and decision making purposes in various organizational settings both in the governmental sector and in the non-governmental sector.
Prerequisite(s): 6 credit units. 100-level POLS and 30 credit units at university level.
Note: Students with credit for POLS. 327 may not take this course for credit.

POLS. 329.3 — 1/2(3L)
Governance of Nonprofit Organizations
Introduces students to the subject of governance in nonprofit organizations today. It assesses: the role of governing boards in nonprofits; the nature of governance structures and processes in nonprofits; the relationship between boards and management in nonprofits; the key external and internal influences that affect how nonprofits are governed; and the impact of partnering with government on the role and authority of nonprofit boards.
Prerequisite(s): 6 credit units of 100-level POLS, or 60 credit units of undergraduate courses, or by permission of the instructor.

POLS. 336.3 — 1/2(3L)
Justice Freedom and Democracy
Democracy implies both justice and liberty as preconditions and goals while justice requires and strives for democracy and liberty. Further, there can be no liberty without justice and democracy. This course examines the ways in which the three concepts of justice, freedom and democracy are linked to one another both theoretically and in practice. Reference will be made to some classical theorists, but the focus will be on contemporary thinkers and writers.
Prerequisite(s): POLS. 236 and. 237 or (formerly POLS. 235) or PHIL. 262.

POLS. 337.3 — 1/2(3L)
Canadian Ideologies and the Pursuit of the Common Good
This course will examine all of the major ideological currents in Canada such as Toryism, conservatism, liberalism, social democracy, feminism, environmentalism, English Canadian nationalism, Québécois nationalism, and Indigenous nationalism. Focusing on the various political parties and actors that represent these traditions, the course will further explore how these conflicting ideologies purport to pursue the common good.
Prerequisite(s): POLS. 236 and. 237 (formerly POLS. 235); or PHIL. 262.

POLS. 341.3 — 1/2(3L)
Asian Governance and Politics
The course provides an introduction to the government, politics and issues that face the countries of the Asia Pacific region, and seeks to provide students with a foundation for a lifelong engagement with a fascinating and increasingly important part of the world.
Prerequisite(s): POLS. 111.3 and (POLS. 112.3 or IS 100.3).

POLS. 343.3 — 1/2(3L)
Ukraine Processes and Problems of Nation and State Building
This course examines the historical as well as contemporary political, social and cultural processes that have shaped Ukrainians national identity while exploring their impact on current state-building efforts.
Prerequisite(s): 6 credit units. 100-level POLS.

POLS. 346.3 — 1/2(3L)
Topics in Governance of the Developing World
An analysis of governance in the developing world, focussing on topics such as leadership, democratization, ethnicity and women, and institution-building.
Prerequisite(s): POLS. 246 or POLS. 253 and POLS. 254 or permission of the department.

POLS. 349.3 — 1/3L
The Public Policy of Multiculturalism in Canada
As Canada becomes an increasingly multiethnic country and demands for the recognition of diversity multiply, the policy of multiculturalism will continue to gain importance within the Canadian polity. This course is intended to introduce students to the study of the practice of multiculturalism in Canada. It will examine how the management of ethnic diversity is integrated into Canadian public policy. As such, it explores the relationship between multiculturalism and public policy areas such as immigration, employment equity, anti-racist education, the welfare state, and federal-provincial-municipal relations. Further, it attempts to put Canadian multicultural policy within the perspective of nation-building. English Canadian nationalism, Québécois nationalism, partisan politics, and globalization.
Prerequisite(s): 6 credit units. 100-level POLS.

POLS. 362.3 — 1/2(3L)
Global Political Economy
This course will introduce students to the foundations and theory of political economy including Classicism, Neo-Classicism, Marxism, Keynesianism, and Neoliberalism. The course will further introduce students to the concept of globalization, exploring how recent shifts in the global political economy have challenged the legitimacy of liberal democratic states.
Prerequisite(s): 12 credit units POLS or 60 credit units at university level.

POLS. 364.3 — 1/2(3L)
International Terrorism
Examines the goals, strategies and actions of international terrorist groups, the efforts of governments to combat terrorism, and the effect of international terrorism on contemporary international relations. Special attention is given to philosophies of violence and to ethical issues surrounding terrorist and counter-terrorist actions.
Prerequisite(s): POLS. 112.3 or permission of the instructor.
POLS. 368.3 — 1/2(3L)
Ideology and American Foreign Policy
An examination of American foreign policy since 1945, with an emphasis on how American ideological perspectives affect American political, economic, and military objectives and strategies. Major attention is given to imagery in the post-Cold War period and to American efforts to promote democracy and human rights.
Prerequisite(s): POLS. 261.3 or permission of the instructor.

POLS. 370.3 — 1(3L)
War Peace and International Order
Seeks to identify and assess those issues that historically have generated conflict and examines the various political and diplomatic efforts that followed epochal wars to create international orders and mechanisms that would manage, control or prevent future international conflicts.
Prerequisite(s): 6 credit units. 100-level POLS.

POLS. 372.3 — 2(3L)
War Peace and Political Reconciliation
This course examines various approaches to peace-building in the aftermath of conflict, focusing on the restorative role of political reconciliation.
Prerequisite(s): 6 credit units. 100-level POLS.

POLS. 375.3 — 1/2(3L)
Canada and the World
Introduction to Canada's role in the world, studying the factors that continue to shape Canada's position on global issues and the processes by which Canadian foreign policy is made.
Prerequisite(s): 6 credit units. 100-level POLS.

POLS. 376.3 — 1/2(3L)
Issues in Canadian Foreign Policy
Introduces students to contemporary themes and issues in Canadian foreign policy, including the future of multilateralism in Canadian foreign policy, the relevance of the Middle Power concept for Canada, public influences on foreign policy, and the evolving dynamics of Canada-US relations.
Prerequisite(s): POLS. 375.
Note: Students with credit for POLS. 365 may not take this course for credit.

POLS. 379.3
Washington Center Topics in Political Studies
Prerequisite(s): 60 credit units of university level study including 6 credit units senior POLS.
Note: Registration in this course is restricted to students selected for the Washington Center Term Abroad program.

POLS. 383.3 — 1/2(9P)
Career Internship
Designed to provide students with an opportunity to study policy, management, and administrative matters of importance to organizations in Saskatchewan through a combination of direct observations, directed readings, and research and analysis.
Prerequisite(s): 60 credit units at university level and permission of the department.

POLS. 384.3 — 1/2(1.5S-5P)
Aboriginal Administrative Internship
Provides an opportunity for students involved in the Aboriginal Administrative Internship to deepen their understanding of various governance, policy, management and administrative issues in the Aboriginal sector, through a combination of direct observations, directed readings and research and analysis.
Prerequisite(s): 60 credit units at university level and permission of the department.

POLS. 385.3 — 2(3L)
Topics in Central American Politics
Part of the La Antigua, Guatemala Study Term Abroad. An analysis of the contemporary politics of Central America. Topics include democracy, development, integration, inter-American relations, and political processes. Includes guest lecturers from the region and field trips within Guatemala.
Prerequisite(s): 6 credit units. 100-level POLS.
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

POLS. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
Prerequisite(s): 6 credit units. 100-level POLS.

POLS. 403.3 — 1/2(3S)
Issues in Canadian Federalism
An examination of Canadian federalism that deals with enduring and contemporary issues such as the constitutional division of powers, intergovernmental relations, fiscal federalism, the federal spending power, regionalism, the role of Quebec in the federal system, and constitutional change.
Permission of the department required.
Prerequisite(s): 6 credit units. 100-level POLS.

POLS. 405.3 — 1/2(3S)
Political Representation in Canada
An examination of issues relating to the institutions and processes of political representation in Canada such as Parliament, political parties, interest groups, social movements, courts, and the electoral process.
Permission of the department required.
Prerequisite(s): 6 credit units. 100-level POLS.

POLS. 422.3 — 1/2(3S)
Aboriginal Development Strategies
Examines Aboriginal development strategies in Canada with particular attention to Aboriginal Nations in Saskatchewan. Attention is devoted to cultural, economic and political development. The course examines the various factors that foster or inhibit the various types of development within Aboriginal communities. It is designed to provide students with an academic basis for analyzing existing development strategies in Aboriginal communities.
Permission of the department required.
Prerequisite(s): POLS. 111 and 112.

POLS. 424.3 — 1/2(3S)
New Public Management in Canada
An analysis of recent developments in public management, administration and policy through an examination of the development and implementation of various public programs, services, and the utilization of human and financial resources of the federal, provincial, territorial, and municipal governments in Canada.
Permission of the department required.
Prerequisite(s): 6 credit units. 100-level POLS.

POLS. 431.3 — 1/2(3S)
Contemporary Problems in Political Philosophy
An analysis of particular contemporary problems in political philosophy.
Permission of the department required.
Prerequisite(s): 6 credit units. 100-level POLS.

POLS. 434.3 — 1/2(3S)
Politics and Literature
An introduction to the role of literature and other art in the appreciation and understanding of the nature and dilemmas of politics. The course first examines theoretical issues concerning the place of politics in literature and the place of literature in politics and then examines some classic works of literature.
Permission of the department required.
Prerequisite(s): 6 credit units. 100-level POLS.
POLS. 446.3 — 1/2(35)
Democracy in Africa Challenges and Prospects
An assessment of the prospects for multi-party democracy in Africa. Special attention is given to issues of re-democratization since 1989 and to the setbacks which have resulted from military interventions or from autocratic rulers manipulating their instruments of power to block a successful political transition.
Permission of the department required.
Prerequisite(s): POLS. 246, or POLS. 253 and POLS. 254, or IS 211 and IS 212.

POLS. 447.3 — 1/2(35)
Ethnicity and Governance in Selected Third World Countries
An examination of ethnicity and politics in the Third World, with an emphasis on the role of political and ethnic leadership, party formation and competition, policy formation and implementation, electoral competition, government formation and multi-ethnic relations.
Permission of the department required.
Prerequisite(s): POLS. 246, POLS. 253 and POLS. 254, or IS 211 and IS 212.

POLS. 448.3 — 1/2(35)
Development Implementation at the Base Monitoring and Evaluation
Is designed to introduce students and practitioners to Monitoring and Evaluation models and techniques that can be applied to governmental programs and projects at the national, provincial/regional and local levels, to donor country development assistance programs, as well as to international and national non-governmental organizations’ projects and assistance offered by international institutions such as the United Nations Development Program. The focus is on developing countries in an effort to sensitize students to the challenges of MandE in different cultural settings. This course will draw on extensive field-based research to offer a more appropriate Monitoring and Evaluation model for development.
Prerequisite(s): IS 211 and IS 212 or POLS. 246 or POLS. 253 and POLS. 254.

POLS. 456.3 — 1/2(1.5L-1.5P)
Quantitative Political Analysis
This course provides students with an applied introduction to quantitative analysis in political science. Building on students’ prior understanding of social science data collection research methods (through the completion of POLS. 256 Methods of Political Research or an equivalent course), POLS 456 introduces students to a variety of univariate and bivariate quantitative techniques, up to but not including regression analysis.
Prerequisite(s): POLS. 256 or an equivalent social science research methods course; and 60 credit units at university level.

POLS. 460.3 — 1/2(35)
International Ethical Thought
An examination of major traditions and ideas concerning the nature and role of ethics in international relations, including, among others, Realism, Marxism, Feminism and Liberalism, as well as the Natural Rights, Just War, and International Law traditions. Attention is also given to terrorist justifications for their actions.
Prerequisite(s): POLS. 261.3 or permission of the instructor.

POLS. 461.3 — 1/35
Topics in International Studies
Designed as a selected topics seminar in international relations. Each offering will focus on one of the subfields— including Canadian Foreign Policy Processes, Ethical Issues in International Relations, International Terrorism, International Political Economy, International Trade and Globalization. The undergraduate students will investigate the methodology and applications of the theory and evidence related to that subfield.
Prerequisite(s): POLS. 246, or POLS. 261.3 and 262.3, or IS 211 and IS 212, or permission of the department.
Note: Students may take this course more than once for credit; provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

POLS. 462.3 — 1/2(35)
Ethical Issues in International Relations
An examination of specific issues in contemporary international politics about which difficult ethical choices have been made or about which there is ethical controversy, including international intervention, threatened use of weapons of mass destruction, terrorism, sanctions, and promotion of international human rights.
Permission of the department required.
Prerequisite(s): POLS. 460.

POLS. 465.3 — 1/2(35)
Nationalism and the International System
An introduction to the role of nationalism in the formation and development of the modern international system, both in shaping international society as well as in threatening its security. The future and continuing relevance of nationalism in the post-modern world is also considered.
Permission of the department required.
Prerequisite(s): POLS. 261.3 and 262.3.

POLS. 466.3 — 1/2(35)
Ethnic Conflict and Democracy
An introduction to the problem of ethnic conflict in international society, with emphasis on special challenges to democracy in ethnically divided societies, and on legal, political and moral issues associated with external efforts to resolving ethno-political conflicts and disputes.
Permission of the department required.
Prerequisite(s): POLS. 261.3 and 262.3.

POLS. 471.3 — 1/2(35)
Globalization and Challenges
An examination of the impact of globalization, with emphasis on groups such as labour, women, and the poor, and on the effects of particular transnational processes such as environmental degradation, refugee flows and the spread of ethnic conflicts.
Permission of the department required.
Prerequisite(s): POLS. 261.3 and 262.3.

POLS. 482.6 — 2
Saskatchewan Legislative Internship
The study of Saskatchewan’s provincial political institutions, politics, public policies, public management and public administration through a combination of direct observations, mentorship, comparative study and research analysis.
Note: Admission to the course is by application and selection through the Saskatchewan Legislative Internship Program.
Note: Students with credit for POLS. 382 will not receive credit for this course.

POLS. 498.3 — 1/2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

POLS. 499.6 — 1and2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PSY — PSYCHOLOGY

College of Arts and Science

PSY. 100.3 — 1/2(3L)
Introductory Psychology for Health Science Students
What is well-being? What is illness? What is healthy development? What is healthy personality? What are healthy social relationships? These are some of the questions that psychologists ask as they explore how much our psychological processes contribute to our experiences of illness and wellness. This course is designed for students in the various fields of health, including Kinesiology, Nursing, Nutrition, and Pharmacy. It offers an introduction to health-related issues from the perspective of psychology. You will be introduced to current viewpoints in psychology (as well as their history), some of the different methods by which psychologists perform their research, as well as (changing) assumptions that guide psychologists. This course may not be used toward a Psychology major and does not provide a prerequisite for upper year psychology courses.
Note: This course does not count towards the major requirements for a Bachelor’s degree in Psychology. PSY. 100 may not be used as a prerequisite for senior PSY courses. Students planning to take other PSY courses in the future are strongly advised to enroll in PSY. 120 and PSY. 121 as the prerequisite. Students may take all three of PSY. 100, PSY. 120, and PSY. 121 for credit.

PSY. 120.3 — 1/2(3L)
Biological and Cognitive Bases of Psychology
This course is designed to familiarize the student with the body of knowledge, scientific theory, and research related to the major biological and cognitive areas of psychology. The course focuses on the study of behavior dealing with the essential problems of psychology, the methods of investigation, and the advances that have been made in the fields of neuroscience, sensation and perception, consciousness, memory, learning, language, and motivation and emotion.
Note: Students with credit for PSY. 110 may not take this course for credit.
PSY. 120.3 — 1/2(3L)
Social Clinical Cultural and Developmental Bases of Psychology
This course is designed to familiarize the student with the body of knowledge, scientific theory, and research related to the major social, clinical, cultural and developmental areas of psychology. The course focuses on the study of behavior dealing with the essential problems of psychology, the methods of investigation, and the advances that have been made in the fields of intelligence, development, personality, social and cultural psychology, psychological disorders, treatment, and health, stress, and coping.
Prerequisite(s): PSY. 121.
Note: Students with credit for PSY. 110 may not take this course for credit.

PSY. 207.3 — (3L)
Psychology of Death and Dying
Focuses on the psychological issues relevant to death and dying. Topics to be examined: societal attitudes, cultural differences, coping with dying, dealing with loss and grief, memorialization and funerals, developmental issues across the life span, relevant legal issues, suicide and life threatening behaviour, AIDS and the psychological meaning of death.
Prerequisite(s): PSY. 121.

PSY. 213.3 — 1/2(3L)
Child Development
An examination of the social, emotional, moral, cognitive and physical development of typical children from conception to late childhood. Individual development is considered from a psychological perspective within the contexts of family and culture.
Prerequisite(s): PSY. 121.

PSY. 214.3 — 1/2(3L)
Adolescent Development
An introduction to theories and research methods in adolescent development. Attention is given to normative development in physical, cognitive, social and emotional domains. Students will obtain an understanding of factors that influence normative trajectories and processes; basic theory underlying adolescent research; and strengths and weaknesses of methods in this area.
Prerequisite(s): PSY. 121.

PSY. 216.3 — 1/2(3L)
Psychology of Aging
The study of normal psychological development through maturity to old age. Topics include: consideration of critical issues of research methods; problems of adjustment of the aged such as physical decline, retirement, loneliness, disengagement; the needs and care of the aged, antecedents of successful aging; the psychology of dying and death; theories of aging.
Prerequisite(s): PSY. 121.

PSY. 222.3 — 1/2(3L)
Personality
A systematic survey of basic principles of motivation, learning, conflict and problem solving as applied to the study of personality. Major problem areas and contemporary theories of personality are reviewed.
Prerequisite(s): PSY. 121.

PSY. 223.3 — 1/2(3L)
Abnormal Psychology
Major patterns of abnormal behaviour are reviewed and studied with respect to origins, course and treatment. The focus is upon understanding abnormal behaviour with an integrated knowledge of basic principles of general psychology.
Prerequisite(s): PSY. 121.
Note: PSY. 222 recommended.

PSY. 224.3 — 1/2(3L)
Introduction to Culture and Psychology
A survey of theory and research on cultural issues in psychology, including developmental, cognitive and social psychology. By the end of the course, the student will be able to demonstrate an understanding of fundamental concepts and theoretical perspectives pertinent to the study of culture and human behaviour, knowledge of the findings of relevant classic and contemporary empirical studies, and familiarity with methodological issues pertaining to research in this area.
Prerequisite(s): PSY. 121.

PSY. 225.3 — 1/2(3L)
Group Dynamics and Intergroup Relations
Designed to give the student a broad overview of an important area of social psychology. Group dynamics and inter-group relations will be covered through lectures, readings, and assignments on topics such as group decision-making, leadership, conflict and cooperation, collective behaviour, prejudice, and minority-majority relations.
Formerly: PSY. 221
Prerequisite(s): PSY. 121.
Note: Students with credit for PSY. 221 cannot take PSY. 225 for credit.

PSY. 226.3 — 1/2(3L)
Individual Processes in Social Psychology
An examination of social psychological theories and research related to individual processes. Intrapersonal processes such as social cognition, the self, and attitudes, as well as interpersonal processes such as attraction, persuasion, altruism and aggression will be covered through lectures, readings, and assignments.
Formerly: PSY. 221
Prerequisite(s): PSY. 121.

PSY. 227.3 — 3L
Human Sexuality
Examines topics that fall under the rubric of human sexuality (e.g., sexual diversity, prostitution, and pornography). Through interdisciplinary readings and films, this course details how socio-cultural forces may shape individuals’ experiences as sexual beings and their interpretations of various sexual practices.
Prerequisite(s): PSY. 121 or permission of the instructor.

PSY. 230.3 — 1/2(3L)
Criminal Behaviour
The application of psychological theories to the understanding of criminal behaviour. An overview of assessment and treatment issues as these apply to specific types of criminals (e.g., sexual offenders, psychopathic offenders) will also be provided.
Prerequisite(s): PSY. 121.
Note: PSY. 222 or 223 or 257 is recommended.

PSY. 231.3 — 1/2(3L)
Psychology and Law
Examines the role psychology plays in promoting justice within the legal system. Theory, research, and methodology related to the psychology of evidence are reviewed. The focus is on the role psychologists play in obtaining and assessing witness evidence during the pre-trial and trial phases of the legal process.
Prerequisite(s): PSY. 121.

PSY. 233.3 — 1(3L-1P)
Statistical Methods in Behavioural Sciences
The role of statistics in research including: statistical concepts and models, estimation, simple tests of significance, linear regression and correlation, and introduction to analysis of variance. The laboratory component will consist of training in the utilization of statistical software.
Prerequisite(s): PSY. 120 or PSY. 121.
Note: Refer to Statistics Course Regulations in the Arts and Science section of the Calendar if intending to use for Arts and Science credit.

PSY. 234.3 — 2(3L-1P)
Statistical Methods in Behavioural Sciences
A continuation of the role of statistics in research covering methods of analysis of variance including cross-classification, introduction to multiple comparisons, factorials, multiple regression and covariance. The laboratory component will consist of training in the utilization of statistical software.
Prerequisite(s): PSY. 233.
Note: Four-year and Honours students should take PSY. 235 concurrently. Refer to Statistics Course Regulations in the Arts and Science section of the Calendar if intending to use for Arts and Science credit.

PSY. 235.3 — 2(3L-1P)
Research Methods and Design
Introduces students to both experimental and non-experimental research methods and designs used in psychology. The course focuses on the interplay between research questions, theory, the selection of appropriate research procedures and resulting conclusions. The laboratory component will consist of practical training and application of the concepts discussed in class.
Formerly: PSY. 372.6
Prerequisite(s): PSY. 233
Note: Four-year and Honours students should take PSY. 234 concurrently. Students with credit for PSY. 232 or 372 cannot take this course for credit.

PSY. 242.3 — 1/2(3L)
Physiological Psychology
An introduction to the language, techniques, concepts and general subject matter of physiological psychology. Topics will include: sensory processes, motor systems, the brain, memory and learning. This core knowledge will be useful to those wanting an exposure to the biological study of behaviour, or to those wanting a primer for more advanced study.
Prerequisite(s): PSY. 120.
PSY. 243.3 — 1/2(3L)
Evolutionary Psychology
The human mind and the behaviour that emerges as products of the mind, will be considered as the outcome of a large number of adaptations brought about by natural selection. The possibility of, and evidence for, a universal human nature at the level of evolved psychological mechanisms will be presented. The evolutionary significance of altruism, cooperation and conflict, morality, deceit, self-deception and illness will be examined.
Prerequisite(s): PSY. 244.
Formerly: PSY. 216.
Note: Students with credit for PSY. 244 cannot take this course for credit.

PSY. 246.3 — 1/2(3L)
Introduction to Human Neuropsychology
An introduction to research and theory on the topic of human brain function. Topics include research techniques and strategies, developmental neuropsychology, localization and lateralization of function, recovery of function, and deficits associated with lesions of the neocortex.
Prerequisite(s): PSY. 120.

PSY. 252.3 — 1/2(3L)
Perceptual Processes
A brief survey of the principles that have emerged from the empirical investigation of perception, with special reference to vision and hearing. An examination of the factors which underlie such fundamental features of behaviour as the perception of objects and of three-dimensional space and the maintenance of perceptual constancy.
Prerequisite(s): PSY. 120.

PSY. 253.3 — 1/2(3L)
Introduction to Cognitive Psychology
An introduction to research and theory on the topic of human cognitive functioning. The course will explore how humans attend to, encode and remember their experiences, communicate using both written and spoken language, and engage in higher order processes such as reasoning, problem solving, and decision making.
Prerequisite(s): PSY. 120.

PSY. 255.3 — 1/2(3L)
Human Memory
An introduction to research and theory on the structures and processes involved in human memory. Topics include the evidence for distinct sensory, short-term, and long-term memory stores, the format of representation in memory, and the determinants of effective memory performance.
Prerequisite(s): PSY. 120.

PSY. 256.3 — 1/2(3L)
Psychology of Language
Explores and evaluates theories and research involving the psychology of language. Broadly defined, the topics will include visual and auditory language issues regarding: encoding, representation, comprehension, production, acquisition, biological foundations, dysfunction, and cultural influences. Students will also learn about current research projects, and the preparation of research papers.
Prerequisite(s): PSY. 120.

PSY. 260.3 — 1/2(3L)
Health Psychology
Focuses on psychological theories and research related to the development, prevention and treatment of illness. Topics covered will include the effects of stress on health, coping with pain, the physician-patient relationship, patient non-compliance, and a variety of risky health behaviours such as substance abuse.
Prerequisite(s): PSY. 121.
Note: Students who have taken PSY. 360 may not take this course for credit.

PSY. 261.3 — 1/2(3L)
Community Psychology
Introduces psychological theories and research on the effects of the physical and social environments on human behaviour and on the design and evaluation of changes which might promote adaptive behaviour.
Prerequisite(s): PSY. 121.
Note: Students who have taken PSY. 360 may not take this course for credit.

PSY. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PSY. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PSY. 315.3 — 1/(1.5L-1.5P)
Advanced Development I Social and Emotional
Introduces students to the theoretical foundations, research designs, and methods used to study social and emotional development. The course will involve lectures and a lab component. In the lab component, students will participate in a collaborative research project.
Formerly: PSY. 314.
Permission of the department required.
Prerequisite(s): 12 credit units of 200-level Psychology including PSY. 233 and. 235 and one of PSY. 213, 214, or 216.

PSY. 316.3 — 2(3P)
Advanced Development II Social and Emotional Research
Students will develop independent research projects designed to answer an empirical question in the domain of social and emotional development. Each student will be responsible (either individually or as a member of a small group) for designing a study, testing participants, analyzing data, and writing up a research report.
Formerly: PSY. 314.
Permission of the department required.
Prerequisite(s): PSY. 234 and. 317.

PSY. 317.3 — 1/(1.5L-1.5P)
Cognitive Development I
Introduces students to an in-depth study of major content areas, theoretical orientations, and research methods which are necessary to advance knowledge in the study of cognitive development. Students will learn about the special features of the cognitive developmental perspective and will conduct research projects in the laboratory component of the course.
Formerly: PSY. 314.
Permission of the department required.
Prerequisite(s): 12 credit units of 200-level psychology, including PSY. 233 and. 235 one of PSY. 213, 214, or 216.

PSY. 318.3 — 2(3P)
Cognitive Development II Research
Students will develop independent research projects designed to answer an empirical question in the domain of cognitive development. Each student will be responsible (either individually or as a member of a small group) for designing a study, testing participants, analyzing data, and writing up a research report.
Formerly: PSY. 314.
Permission of the department required.
Prerequisite(s): PSY. 234 and. 317.

PSY. 323.3 — 1/(1.5L-1.5P)
Qualitative Study of Lives and Social Practices
Qualitative approaches to understanding lives and social practices will be introduced. Topics include: an overview of non-positivist epistemologies and methodologies and an introduction to methods such as narrative analysis, grounded theory, ethnography and discourse analysis.
Permission of the department required.
Prerequisite(s): PSY. 233 and. 235; and 3 credit units from Group 1; and an additional 9 credit units of 200-level Psychology.

PSY. 324.3 — 2(3P)
Research in Qualitative Study of Lives and Social Practices
A research course linked to Qualitative Study of Lives and Social Practices (PSY. 323). Students participate in the design, data collection, analysis and write up of one group research project. A variety of data gathering approaches (e.g. archival searches, interviewing, observational field work) and methods of analysis (e.g. thematic analysis, narrative analysis, grounded theory, ethnography, discourses analysis) are used.
Permission of the department required.
Prerequisite(s): PSY. 234 and. 323.

PSY. 325.3 — 1/(1.5L-1.5P)
Research Methods in Social Psychology
Students will be introduced to the variety of research methods used in social psychology through one or more content areas determined by the instructor (e.g., prejudice, discrimination, attitude change, interpersonal conflict, impression management, aggression, media violence, prosocial behaviour, conformity, group processes, attraction, applying social psychology to the law, workplace, health problems, etc.).
Formerly: PSY. 321.
Permission of the department required.
Prerequisite(s): 12 credit units of 200-level psychology, including PSY. 233 and. 235 and one of PSY. 225 or 226.
PSY. 326.3 — 2(3P)
Observation, Interview and Questionnaire Methods in Social Psychological Research
Students will research social interactions using observation, interview and/or questionnaire methods. Within a full-semester research project (conducted individually or in small groups), students will choose a research question, review the relevant literature, obtain ethical approval, design and conduct the study, analyze data and write a research report.
Formerly: PSY. 321.
Permission of the department required.
Prerequisite(s): PSY. 234 and 325.

PSY. 328.3 — 2(3P)
The Experimental Method in Social Psychological Research: An Independent Project
Provides an opportunity to research social psychological phenomena using the experimental method. Within a full-semester research project (conducted individually or in small groups), students will choose a research question, review the relevant literature, obtain ethical approval, design and conduct the study, analyze data and write a research report.
Formerly: PSY. 321.
Permission of the department required.
Prerequisite(s): PSY. 234 and 325.

PSY. 343.3 — 1(1.5L-1.5P)
Laboratory in Behavioural Neuroscience
An introduction to the techniques, theory and methods in behavioural neuroscience. The focus will be upon brain and behaviour and the techniques used to study nervous system function. The lab and seminar components will include a series of experiments to be carried out by the students.
Formerly: PSY. 342.
Permission of the department required.
Prerequisite(s): 12 credit units of 200-level psychology, including PSY. 233 and 235 and one of PSY. 242 or 246.

PSY. 344.3 — 2(3P)
Research in Behavioural Neuroscience
A laboratory course in behavioural neuroscience. The course will provide students with the opportunity to conceptualize, design, and implement an independent research project in the area of behavioural neuroscience. Emphasis will be placed on brain and behaviour and the techniques used to study nervous system function.
Formerly: PSY. 342.
Permission of the department required.
Prerequisite(s): PSY. 233, 234, and 235 and one of PSY. 242 or 246.

PSY. 347.3 — 1(1.5L-1.5P)
Advanced Human Neuropsychology
Introduces the student to the theoretical and methodological issues in the study of the structure and function of the human neocortex. The course will involve lectures, seminars, and a lab component in which a series of experiments will be carried out by the students.
Formerly: PSY. 346.
Permission of the department required.
Prerequisite(s): 12 credit units of 200-level psychology, including PSY. 233 and 235 and one of PSY. 242 or 246.

PSY. 348.3 — 2(3P)
Research in Human Neuropsychology
A laboratory course concerned with the concepts, theories, and experimental investigation of the structures and functions of the human neocortex. The course will provide the students with the opportunity to conceptualize, design, and implement an independent research project to answer an empirical question related to experimental neuropsychology.
Formerly: PSY. 346.
Permission of the department required.
Prerequisite(s): PSY. 234 and 347.

PSY. 355.3 — 1(1.5L-1.5P)
Research in Advanced Cognitive Science
This lecture and laboratory course exposes students to current theory and research methods in cognitive science. Students will be expected to review, design, conduct, analyze and report a series of class experiments. Topics may include perception, attention, memory, thinking, reasoning and problem solving.
Formerly: PSY. 352.
Permission of the department required.
Prerequisite(s): 12 credit units of 200-level psychology, including PSY. 233 and 235 and one of PSY. 252, 253, 255, or 256.

PSY. 356.3 — 2(3P)
Advanced Cognitive Science III Independent Research Projects
In this laboratory course students develop independent experimental research projects in some area of cognitive science. Each student (either individually or as a member of a small group) is responsible for designing a study, testing participants, analysing the data, and writing up a research report following American Psychological Association style conventions.
Formerly: PSY. 352.
Permission of the department required.
Prerequisite(s): PSY. 233, 234, 235, and one of PSY. 353 or 355.

PSY. 357.3 — 1/2(3L)
Clinical and Counselling Psychology
This course provides an introduction to activities central to the practice of clinical psychology (i.e., assessment, therapy, and research) and to several approaches to therapeutic change. The scientific foundations of clinical psychology and contemporary research and theory are emphasized.
Prerequisite(s): PSY. 235 and one of PSY. 222 or PSY. 223.
Note: Students with credit for PSY. 257 may not take this course for credit. This course was labeled PSY. 257 until 2014.

PSY. 379.3
Washington Center Topics in Psychology
Covers topics in Psychology, offered by the Washington Center, Washington D.C. Possible topics include The Rationality and Psychology of Conflict, Violence, and War, Citizenship in a Multicultural Society, Forensic Psychology or other topics approved by the Department of Psychology.
Prerequisite(s): 60 credit units of undergraduate level study including 6 credit units senior PSY.
Note: Registration in this course is restricted to students selected for the Washington Center Term Abroad program.

PSY. 380.3 — 1/2(1L-2S)
Culture and the Therapeutic Process
Exposes the student to critical scholarly perspectives on the role of culture in understanding the form, content and efficacy of various forms of therapy found in the global community. The course explores both mainstream as well as traditional/alternative and complimentary approaches.
Permission of the department required.
Prerequisite(s): PSY. 120 and PSY. 121 and 12 credit units at the 200-level in Psychology, Native Studies, Anthropology or Sociology.

PSY. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PSY. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PSY. 418.3 — 1/2(3S)
Advanced Seminar in Developmental Psychology
An advanced seminar focussed on theoretical and empirical analyses of human development. A set of original research articles covering diverse areas of developmental psychology (e.g., behavioural genetics, development and psychopathology, cognitive development, social development, aging) will be assigned, read, and discussed by the class.
Permission of the department required.
Prerequisite(s): 6 credit units from PSY. 213, 214, 216, 315, 317.

PSY. 423.3 — 1/2(3S)
Disability Discourses and Social Practices
The goals of this Seminar course are two-fold: first, to provide knowledge about the interconnections between disability, discourses and social practices; second to provide students with the opportunity to pursue an issue of interest to them and to share their discoveries, thoughts and questions regarding this issue with their classmates. The course invites students to examine how cultural interpretations interact with biology or psychophysiology and social interactions to produce distinctive forms of disability.
Permission of the department required.
Prerequisite(s): 6 credit units of 300-level Psychology.
Note: Students who took PSY. 498.3 Disability, Discourses and Social Practices may not take this course for credit. The course endorses a multidisciplinary perspective. Materials from the fields of disability studies, anthropology, psychology, history, philosophy, psychiatry, literature, law and ethics are examined to provide an interdisciplinary perspective on disability.
PSY. 425.3 — 1/2(3S)
Advanced Group Dynamics and Intergroup Relations
Designed to give the student an in-depth knowledge of the social psychology of group dynamics and intergroup relations. Therefore, the course covers both the major theories and research in this area. Students will study important contemporary primary source articles. They will also give in-class presentations on selected topic areas. The course is designed to allow students to study this topic at an advanced level.
Formerly: PSY 420
Permission of the department required.
Prerequisite(s): PSY 225 and one of PSY 226, 323, or 325.

PSY. 426.3 — 1/2(3S)
Advanced Seminar in Intrapersonal and Interpersonal Processes
This advanced seminar examines social psychological phenomena internal to the individual, such as social cognition, motivation, emotion, the self, and attitudes and attitude change. It also considers issues associated with relations between individuals such as altruism, aggression, affiliation and social influence processes.
Formerly: PSY 420
Permission of the department required.
Prerequisite(s): 6 credit units from PSY 242, 246, 343, 347.

PSY. 448.3 — 1/2(3S)
Advanced Seminar in Neuroscience
Using a seminar format, this course will survey selected topics in neuroscience. The topics covered may include neuropsychopharmacology, the neural bases of: memory, language, emotion, attention, consciousness, plasticity phenomena, spatial abilities; or other topics of interest to the faculty and students.
Formerly: PSY 440
Permission of the department required.
Prerequisite(s): 6 credit units from PSY. 252, 253, 255, 256, 353, 335.

PSY. 456.3 — 1/2(3S)
Advanced Seminar in Cognitive Science
An advanced seminar focussed on theoretical and experimental analyses of human perception, cognition, and performance. A set of original research articles covering diverse areas of cognitive science (e.g., basic perception, memory, language comprehension, human reasoning) will be assigned, read, and discussed by the class.
Permission of the department required.
Prerequisite(s): 6 credit units from PSY. 252, 253, 255, 256, 353, 335.

PSY. 472.6 — 1and2(1L-2P)
BA Honours Thesis
Students will carry out a major project under the supervision of a faculty member, and report the project in the form of an honours thesis. The project will usually involve empirical research.
Prerequisite(s): At least one 3 credit unit. 300-level PSY A and one 3 credit unit. 300-level PSY B course.
Restriction(s): Enrolment in honours program or written permission of the department.

PSY. 473.6 — 1/2(1L-2P)
BSc Honours Thesis
Students will complete an honours thesis research project with a faculty member, on a topic that falls clearly within Natural Science (see Calendar under Psychology for a complete listing of the courses and areas of Psychology that are in Group 2: Natural Science).
Prerequisite(s): Students must be enrolled in the Honours program or have written permission of the department and at least one 3 credit unit. 300-level PSY A and one 3 credit unit. 300-level PSY B course.

PSY. 480.3 — 1/2(3S)
Aboriginal Mental Health and Illness
The goals of this seminar course are twofold: first, to provide detailed knowledge about contemporary Aboriginal mental health issues; second, to develop a critical perspective on the theoretical and methodological issues pertaining to research in Aboriginal mental health. Material from the fields of psychology, psychiatry and anthropology will be in integrated to provide an interdisciplinary perspective. Examples will be drawn from both the United States and Canada.
Permission of the department required.
Prerequisite(s): 6 credit units in a 300-level Psychology, Anthropology, Native Studies or Sociology.

PSY. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

PSY. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

RCM — RHETORICAL COMMUNICATION

College of Engineering

RCM. 300.3 — 1/2(3L)
Effective Professional Communication
Aims to prepare students to negotiate the political, rhetorical, ethical and interpersonal challenges of communicating in a professional environment. Addresses the practical demands of writing technical correspondence and reports. The primary focus of the course is on developing students' communicative judgement through case studies and analysis. The course also provides a foundation for further study in communication.
Prerequisite(s): 24 credit units from the institution.
Note: Students with credit for GE 300 may not take this course for credit.

RCM. 400.3 — 1/2(3L)
Rhetorical Theory and Practice of Persuasion
A survey of the aims and scope of rhetoric, the art of persuasion, as it is currently understood and practised. Develops skill in the use and detection of rhetorical devices and methods, including understanding how rhetors adapt to the demands of various audiences; what makes messages effective, engaging and convincing; how situation influences the positioning of a message; and how credibility is established.
Prerequisite(s): (RCM. 300 or 24 credit units from RCM Non-EN Alternatives).
Note: Students with credit for GE 400 may not take this course for credit.

RCM. 401.3 — 1/2(3L)
Oral Rhetoric
Focuses on application of the fundamentals of rhetoric to oral presentations. This is not primarily a course in performance; thus, in addition to developing skills in delivery, it will concentrate on applying theoretical understanding in four other areas: understanding and adapting to audience; using rhetorical strategies to develop a well-structured, engaging, and convincing message; accommodating to situational constraints; and establishing speaker credibility.
Prerequisite(s): (RCM. 300 or 24 credit units from RCM Non-EN Alternatives).
Note: Students with credit for GE 401 may not take this course for credit.

RCM. 402.3 — 1/2(3L)
Interpersonal Communication and Rhetoric
A survey of foundational concepts in interpersonal communication. Topics include the nature of communication, self-concept, face and politeness, ethics, listening, context and situation, human motivation, identity formation, and persuasion. The course will incorporate rhetorical as well as social-scientific theories, and its goal will be to encourage students to think about the dynamic and shifting nature of human interaction, and to develop strategies for managing their own interactions particularly in their professional relationships.
Prerequisite(s): (RCM. 300 or 24 credit units from RCM Non-EN Alternatives).
Note: Students with credit for GE 402 may not take this course for credit.

RCM. 403.3 — 1/2(3L)
Professional Document Design and Editing
An advanced course in the rhetorical, social, ethical, and political dimensions of professional writing. The course combines theoretical understanding with practical application through a series of position papers and realistic case studies. Through reading, discussion, and extensive writing exercises, students will be challenged to develop skills in analytical thinking, situational and task analysis, audience assessment, political and ethical discernment, and evaluation of rhetorical effects and effectiveness.
Prerequisite(s): (RCM. 300 or 24 credit units from RCM Non-EN Alternatives).
Note: Students with credit for GE 403 may not take this course for credit.
RCM. 404.3 — 1/2(3L)  
Leadership as Communication  
Examines leadership as communication, and in particular as a form of rhetorical activity. Drawing on both traditional and contemporary scholarship, it will combine theoretical understanding with practical strategies for improving skill across several dimensions of the leadership dynamic: interpersonal, rhetorical, social, ethical, and political. Through reading, discussion, and a variety of practical case studies and exercises, students will be challenged to develop their ability to guide, motivate, and support others toward common goals. Topics include leadership as rhetoric; the ethics of leadership; face-saving, conflict resolution, and listening; community- and teambuilding; group loyalty and identity formation; and persuasion.  
Prerequisite(s): RCM. 300 or 24 credit units from RCM Non-EN Alternatives.

RCM. 405.3 — 1/2(3L)  
Communication Ethics  
As a social practice that affects the interests and well-being of others, communication is inescapably concerned with ethical decision-making, both in the content of our messages and in the strategies we use to exert influence over our audiences. Communication ethics therefore considers the relationship among character, social values, and professional practices in human communication, both public and private. Using a case-study approach, this course focuses on the ethical imperatives involved in the conduct of human communication, particularly in the workplace; it will offer an ethical code for communicators, and will help students to distinguish between ethical considerations and those that are merely expedient.  
Prerequisite(s): RCM. 300 or 24 credit units from RCM Non-EN Alternatives.

RCM. 406.3 — 1/2(3L)  
Studies in Communication Series  
The series will comprise a collection of specialized courses in specific branches or areas of communication, which will vary with each offering. Some possible topics include: Negotiation Skills, Communication Theory, Nonverbal Communication, Propaganda Analysis, Advanced Grammar, Persuasion in Popular Culture, Public Address, Media Critique, Communication and Identity. A unique course description will be created for each course offering.  
Prerequisite(s): RCM. 300 or 24 credit units from RCM Non-EN Alternatives.

RCM. 407.3 — 1/2(3L)  
Language Structure in Professional Communication  
Is an exploration of the structure of present-day English as spoken and written in contemporary Canada, with an emphasis on the idea of "standard" English in a professional context. Students will acquire the necessary technical vocabulary to discuss and critique issues of acceptable style and usage in their speech and writing, particularly with respect to word formation, sentence structure, and the often difficult relationship between sound and spelling. The course will provide students with an awareness of the linguistic options available to them in the practice of clear and effective communication.  
Prerequisite(s): 24 credit units of RCM non-EN alternatives  
Corequisite(s): RCM. 300

RCM. 408.3 — 1/2(3L)  
Rhetorical Composition  
The written word is the basic currency of both the academic and industrial economies. Not only must professionals write reports and proposals for communities of their peers, but they must also communicate often with non-specialist audiences. This course equips students with classical and contemporary rhetorical principles in order to help them appreciate the purpose, audience, and constraints of the rhetorical situation. It then provides them with various contexts for practicing descriptive, expository, narrative, and persuasive elements of academic, professional, and technical writing, all of which types they may expect to encounter during the course of their careers as students and professionals.  
Prerequisite(s): RCM. 300 or 24 credit units from RCM Non-EN alternatives.

RCM. 498.3 — 1/2(3L)  
Special Topics  
Offered occasionally to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

RLST — RELIGIOUS STUDIES

College of Arts and Science

RLST. 110.6 — 1/2(3L)  
World Religions  
A critical survey of the history, sources and chief characteristics of major world religions, including, in particular, Hinduism, Buddhism, Taoism, Confucianism, Islam, Judaism and Christianity. Particular attention will be given to an investigation of the phenomenon called religion, and to the relationships between religion and culture.  
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 111.3 — 1/2(3L)  
Asian Religions  
Main concepts, beliefs and practices in Asian religious societies are the subjects of this course. The course includes an overview of and consistent integration with academic approaches to the study of religion. The course covers beliefs and practices of religions in South Asia namely Hinduism, Jainism, Sikhism and Buddhism. The second half of the course examines religions and cultures in East Asia. These include Daoism and Confucianism in China and Korea, Shinto in Japan, and Buddhism in East Asia. The course concludes with an investigation of religion in contemporary world, specifically Asian religions in the United States and Canada.  
Note: Students with credit for RLST. 110.6 may not take RLST. 111 for credit.

RLST. 112.3 — 1/2(3L)  
Western Religions in Society and Culture  
This class is a critical survey of the history, sources and chief characteristics of major world religions, such as Judaism and Christianity, and includes brief introductions to Islam and New Religious Movements. The history, agency and practice of these religions are considered in the wider multicultural context. We will be attentive to the investigation into the phenomenon called religion, and to the relationships between religion, culture and society.  
Note: Students with credit for RLST. 110.6 may not take RLST. 112 for credit.

RLST. 113.3 — 1/2(3L)  
Islamic Civilization and Culture  
Islam is one of the most important members of the family of world religions with 1.25 billion adherents. Accordingly, this course serves as an introduction to Islam focusing on various and complex identities that have shaped human understandings of the religion of Islam throughout history. The course focuses on the origins and development of Islam, fundamental beliefs and practices, and its influence in defining Muslim cultures.  
Note: Students with credit for RLST. 110.6 may not take RLST. 113 for credit.

RLST. 210.3 — 1/2(3L)  
Religion and Ecology  
This course explores the interplay between a number of religious traditions and ecology by taking a cross-disciplinary approach to the evaluation of issues of complicity, responsibility, guilt, reconciliation and restoration in human-Earth relations.  
Prerequisite(s): 6 credit units RLST courses or 24 credit units at the university level.

RLST. 211.3 — 1/2(3L)  
Introduction to Hinduism  
A study of the historical, social, doctrinal, and ritual aspects of Hinduism.  
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 214.3 — 1/2(3L)  
Introduction to Philosophies of India  
An introduction to the philosophical thought of India with special reference to early speculations on the nature of human reality, God, world, and human destiny.  
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 215.3 — 2(3L)  
Indian Yoga Heritage  
Surveys the history, philosophy, texts, practices and systems of Yoga in traditional cultural settings and modern context.  
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 217.3 — 1/2(3L)  
Buddhist Religious Tradition  
An examination of Buddhist religious history with emphasis on its socio-cultural dimensions. Topics include early Buddhism and its Indian evolution; culture contact and the spread of Buddhism to southeast Asia, China, Japan and Tibet; Buddhism and change in modern Asia and the west.  
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 218.3 — 1/2(3L)  
Developments in Buddhist Thought  
An introduction to Buddhist philosophy and the development of its major schools of religious thought: Theravada, Mahayana and Vajrayana. Buddhist views of the interdependence of morality, knowledge and liberation will be studied in their historical and contemporary contexts.  
Prerequisite(s): RLST. 110 or 24 credit units at the university level.
RLST. 219.3 — 1/2(3L)  
Bible and Western Culture  
Explores the influence of the Bible on the culture of the west, ancient and modern, with a particular focus on the role of biblical themes, symbols and characters in art, literature, music and popular culture.  
Prerequisite(s): 6 credit units in RLST or 24 credit units at the university level.

RLST. 220.3 — 1/2(3L)  
Women in Western Religious Traditions  
Study of women in major western religious traditions: influence of conceptual systems and language; women's embodiment and religion, feminine spirituality, women's contributions to western faiths, and feminine aspects of divinity.  
Formerly: RLST. 325.  
Prerequisite(s): RLST. 110 or 24 credit units at the university level.  
Note: Students with credit for RLST. 325 may not take this course for credit.

RLST. 221.3 — 1/2(3L)  
Introduction to Christianity  
A systematic examination of the beliefs, practices and doctrinal debates in Christianity, with emphasis on diverging theories of revelation, incarnation, redemption and ritual efficacy that shift over time in response to surrounding political and socio-cultural forces.  
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 222.3 — 1/2(3L)  
Mystics Monks and Heretics  
Introduces Christianity from the perspective of the contemplative tradition. Commencing with the pre-Christian Greek heritage the course examines the early Christian period of the desert contemplative life in various mystical writings and subsequent expressions of Christian contemplation.  
Prerequisite(s): RLST. 110 or completion of 30 credit units at the university level.

RLST. 225.3 — 1/2(3L)  
Perspectives on Jesus  
The findings of modern biblical and historical research will be applied to the figure of Jesus as presented in the New Testament, and to the development of doctrine in Christianity.  
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 226.3 — 1/2(3L)  
Religion Globalization and Social Justice  
This course offers: 1) a preliminary survey of the destructive and constructive interplay between world religions and forces of globalization; 2) an introduction to ancient and contemporary elements/proponents of social justice within five religious traditions; 3) an elaboration of tentative, interreligious ethical criteria that might guide the evaluation of religio-political developments in our global context.  
Prerequisite(s): RLST. 110 or 24 credit units.

RLST. 227.3 — 1/2(3L)  
Introduction to Judaism  
An introduction to basic Jewish ideas, beliefs, and practices from the biblical times to the present.  
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 228.3 — 1/2(3L)  
Introduction to Jewish Thought  
An examination of Jewish theology and treatment of the concepts of God, Torah, Israel and related themes by major Jewish thinkers.  
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 230.3 — 1/2(3L)  
Magic Medicine and Metaphysics in Daoism  
A survey of the Daoist tradition in its various dimensions: mystical (meditation, inner alchemy, sexuality and immortality), metaphysics (the philosophy of the Way), and magical (the magical and medicinal powers of the Daoist priesthood). All these aspects will be studied in their own terms and related to the overall cultural heritage of China.  
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 231.3 — 1/2(3L)  
Confucianism Continuity and Change  
Explores the significance and changing role of the Confucian tradition by an introduction to ancient roots in China, historical elaboration and expansion, and relevance for personal and social vision today.  
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 232.3 — 1/2(3L)  
Women and Religion in Asia  
Starts with a social-historical introduction to the South, South-East, and East Asia. The second part continues exploring the meaning of ‘feminine’ in the main Asian religions, including Hinduism, Jainism, Sikhism, Islam, Buddhism, Confucianism, Daoism, Shinto and Shamanism. The course analyzes the past and present roles of women in those traditions, as well as women’s contributions to the development of religious institutions and rituals in Asia. The final part of the course focuses on reasons and modalities of the recent interest of Western women in Asian religions, and on the other hand on how Asian women practiced and propagated their native religions in the West.  
Prerequisite(s): RLST. 110 or 24 credit units at the university level; or permission of the department.

RLST. 233.3 — 1/2(3L)  
Peoples and Cultures of South Asia  
A general survey of the social, economic, political and religious institutions of the countries of South Asia from an interdisciplinary perspective. Both the traditional cultures and the changes which are taking place are considered. Although the primary emphasis in the course is on the peoples and cultures of India, comparative materials from Pakistan, Bangladesh, Sri Lanka, Nepal, and other areas of South Asia are also examined.  
Prerequisite(s): ANTH. 111  
Note: Students with credit for ANTH. 232 may not receive credit for this course.

RLST. 234.3 — 1/2(3L)  
Chinese Religions  
Study of the religious world views inherent in the religious world views inherent in the religions and culture of China and of popular religious concepts and practices including mythology, divination, magic, and communal worship.  
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 235.3 — 1/2(3L)  
Japanese Religions  
This course provides a historical and thematic overview of the principal religious traditions of Japan. We will initially focus upon the practices, rituals, world-views, institutions, and teachings related to Buddhism and the worship of the indigenous gods (kami) in early and medieval Japan. Next, we will explore how the people of Japan, from early modern to contemporary times, share a common awareness of religion that provides worldly benefits. This course will therefore place a particular emphasis on the understanding of religion as it has been, and continues to be practiced in everyday life for individuals, families, communities, and the state. This means we must consider religion and culture not as abstract, monolithic and ahistorical phenomena, but as expressions of the social realm. Class readings will center on primary materials in English translation and selected secondary scholarship so that each student will consider for themselves the sectarian categories of Buddhism, Confucianism, Shintoism, New Religions, and so forth.  
Permission of the Department.  
Prerequisite(s): RLST. 110 or 24 credits at the university level.

RLST. 240.3 — 1/2(3L)  
Introduction to Islam  
A study of Islam focusing on the religion’s origin and development, its basic beliefs and practices, and its influence in defining Muslim cultures.  
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 241.3 — 1/2(3L)  
Islam in the Modern World  
The objective of the course is to acquaint student with issues that Muslim peoples face under the impact of colonization, technicization and modernization, taking into consideration the global context of such a readjustment. This course will study Muslim societies in modern times to review their success and failure in restructuring their political, social and religious cultures in order to become integrated in the international order that is founded upon secularism and modernism. The course will evaluate the political goals of Muslim governments and whether these goals are harmonious with the developments of democratic institutions to further basic human rights. The course will attempt to answer the basic questions: What is happening to the Muslim community in the Modern age and how do Muslim intellectuals respond to the challenges posed by modernization and Westernization?  
Prerequisite(s): RLST. 110 or 24 credit units at the university level.
RLST. 253.3 — 1/2(3L)
Introduction to Old Testament
A basic introduction to the Old Testament, focussing on the historical, literary, and theological characteristics of the various writings. Scholarly methods by which they are studied, and their relationship to the history of Israel will also be examined.
Prerequisite(s): RLST. 110 or 24 credit units at the university level.
Note: Students with credit for RLST. 250 may not take this course for credit.

RLST. 254.3 — 1/2(3L)
Introduction to New Testament
A basic introduction to the New Testament, focussing on the historical, literary, and theological characteristics of the various writings. Scholarly methods by which they are studied, and their relationship to Christianity will also be examined.
Prerequisite(s): RLST. 110 or 24 credit units at the university level.
Note: Students with credit for RLST. 252 may not take this course for credit.

RLST. 258.3 — 1/2(3L-2P)
Bollywood and Popular Culture in India and the Diaspora
This course examines the extent to which the popular culture of India and of the Indian diaspora has been shaped by the films produced by the Bollywood film industry in Mumbai, India. Bollywood films are the most common form of entertainment for the masses in India as well as diasporic Indians in many parts of the world. Films of different genres and times will be seen, understood, and critiqued for their significance. The genres include: religious; historical; 7 social; action, crime and suspense films; art cinema; and diasporic films. Bollywood cinema will be examined as a form of entertainment, as a creator of national integration, as a moulder of popular culture, and as a form of ideological communication.
Prerequisite(s): Prerequisite(s): RLST. 110.6 or ANTH. 111.3.

RLST. 280.3 — 1/2(3L)
Methodologies and Approaches to Study of Religions
An introduction to theories and approaches in the academic study of religion. Origins and development of social scientific, historical, phenomenological and comparative approaches will be examined.
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 282.3 — 1/2(3L)
Religious Perspectives on Death and Dying
Examines how various world religions have understood the significance of death and dying.
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 283.3 — 1/2(3L)
Comparative Mysticism
An examination of the theoretical and methodological issues involved in a systematic study of mysticism in world religions. Topics include the nature, theories, and typologies of mysticism, and techniques of mystical experience.
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 284.3 — 1/2(3L)
Religions and Non Violence
An examination of the ideal of non-violence according to the scriptures of the world religions, with examples of historical and contemporary application in Asia and the west.
Prerequisite(s): RLST. 110 or 24 credit units at the university level.

RLST. 285.3 — 1/2(3L)
Religions and Ethnicity
A systematic exploration of the contribution of religion to ethnic identification and ethnic community organization.
Formerly: RLST. 381.
Prerequisite(s): RLST. 110 or 24 credit units at the university level.
Note: Students with credit for RLST. 381 cannot take this course for credit.

RLST. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

RLST. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

RLST. 303.3 — 1/2(3L)
Godesses in Myth and History
Investigates the role of goddesses in religion from prehistory to the present, east and west. Combines historical and thematic approaches, focussing on the many roles of the female divne. Ancient goddesses, goddess worship in world religions, and contemporary feminist goddess spirituality, including Wicca, will be examined.
Prerequisite(s): 6 credit units in RLST or 48 credit units at the university level.

RLST. 314.3 — 1/2(3L)
Issues in Contemporary Catholicism
An analysis of contemporary Roman Catholicism with emphasis on the second Vatican Council (1962-1965) and its effects. Themes include identity of and membership in the church, liturgical renewal, post-conciliar forms of spirituality and community, social doctrine, and moral issues.
Prerequisite(s): A 200-level RLST course or 48 credit units at the university level.

RLST. 319.3 — 1/2(3L)
Studies in Bhagavad Gita
Students will be reading the Bhagavad Gita in translation along with some of the commentarial literature to acquire a critical understanding of fundamental philosophical assumptions of Hinduism. Primary approach being textual study, the course will also attempt to draw upon the Hindu hermeneutical tools in search for the meaning structures in the Bhagavad Gita.
Prerequisite(s): 6 credit units in RLST or 48 credit units at the university level.

RLST. 328.3 — 1/2(3L)
Jewish Christian Relations in Historical Perspective
Christianity emerged out of Judaism, and this course examines the relationships that have existed between the two religions through the ages. Both Christian and Jewish sources will be examined to develop a critical perspective on this important aspect of western religious heritage.
Prerequisite(s): A 200-level RLST course or 48 credit units at the university level.

RLST. 329.3 — 1/2(3L)
Gender and God Talk
An overview of feminist theological perspectives, both as critiques of traditional culture and theology and as constructions of new visions and ways of religious life.
Prerequisite(s): A 200-level RLST course or 48 credit units at the university level.

RLST. 330.3 — 1/2(3L)
Daoism
Intensive reading and discussion of major texts (in translation) and religious practices of Daoism in China. Compares Daoism to other forms of religion in China: Confucianism, Buddhism, and Popular Religion.
Prerequisite(s): A 200-level RLST course or 48 credit units at the university level.

RLST. 331.3 — 1/2(3L)
Neo Confucianism in Context
Reading and discussion of major Neo-Confucian texts in translation. The focus will be on the late-imperial and early-modern interpretive communities in which Confucian classics were understood as living spiritual wisdom in dialogue with Buddhists and Daoists. Modern interpretations of Confucianism are also addressed, including Confucius Institutes outside China.
Prerequisite(s): A 200-level RLST course or 48 credit units at the university level.

RLST. 332.3 — 1(3L)
Rise of Fundamentalism in South Asia
Incorporating religious discourse and significant actual events, this course examines the rise of fundamentalism in South Asia. A brief discussion of sub-continenal history, especially British colonialism and India's partition, is followed by examining Hinduism, Islam, Sikhism, Buddhism and Christianity in the context of India, Pakistan, Bangladesh, Sri Lanka and Nepal.
Prerequisite(s): A 200-level RLST course or 48 credit units at the University.
RLST. 341.3 — 1/2(3S)
Bodhisattva Doctrine in Buddhism
The Buddhist view of human perfection is epitomized in the concept of the bodhisattva. Explores the origins and development of the bodhisattva ideal and examines its role in Asian cultural history.
Prerequisite(s): A 200-level RLST course or 48 credit units at the university level.

RLST. 342.3 — 1/2(3L)
Tibetan Buddhism
A survey of Tibetan Buddhism with a focus on its socio-cultural dimensions. Topics include characteristic features of Tibetan culture and Tantric Buddhism, the role of the monastery in religion and society, Buddhist folk religious traditions, and the condition of Tibetan Buddhism in the modern era.
Prerequisite(s): A 200-level RLST course or 48 credit units at the university level.

RLST. 359.3 — 1/2(3L)
Helpmates Harlots and Heroines
Examines historical, social and theological aspects of women's relationship to the Old and New Testament, the portrayal of women in biblical texts, the interpretation of biblical texts about women, biblical attributions of gender to the divine, the history of women as biblical interpreters, and feminist hermeneutics.
Prerequisite(s): A 200-level RLST or WGST course.

RLST. 361.3 — 1/2(3L)
Rabbinic Literature
A study of post-biblical Jewish religious literature, including legal, ethical and theological material. Emphasis will be placed on both methodology and content, with illustrative texts read in English.
Prerequisite(s): A 200-level RLST course or 48 credit units at the university.

RLST. 362.3 — 1/2(3L)
Monsters and Mischief Makers
This class will examine the construction of morality in religious texts by using the outsider/insider (or neighbor/stranger) question. We will investigate this question further by asking how do the people and things we consider to be like us or not like us help us to determine how to behave, and/or what to believe.

Permission of the Department.
Prerequisite(s): 3 credit units. 200-level RLST course or 48 credit units at the university courses
Note: Students who completed RLST. 398.3: Monsters and Mischief-makers may not take this course for credit.

RLST. 363.3 — 1/2(3L)
Early Christian Literature Text and Context
A study of extra-biblical Christian writings up to 150 CE with emphasis on the beliefs of early Christianity, relationship with paganism and Judaism, and the development of internal organizational structures.
Prerequisite(s): A 200-level RLST course or 48 credit units at the university.
Note: Students with credit for RLST. 309 or 311 may not take this course for credit.

RLST. 365.3 — 1/2(3L)
Bible and Film
An examination of the uses of the Bible in film, including epic films, contemporary retellings of biblical stories, and the use of biblical themes and motifs in cinema. Uncovers the many ways in which biblical-theological themes shape and are shaped by contemporary culture.
Prerequisite(s): RLST. 110, 253, 254, ENG. 298, or 30 credit units at the university level.

RLST. 375.3 — 1/2(3L)
Religion and Science
Investigates the historical and transcultural approach to the relationship between religion and science. Contemporary approaches to issues at the intersection of religion and science are also analyzed with emphasis on the influence of physics, evolutionary biology, ecology, non-Western science and cosmology.
Prerequisite(s): A 200-level RLST course or 48 credit units at the university level.

RLST. 382.3 — 1/2(3L)
Sex, God and Rock n’ Roll Re-Vamping the Sacred
This course on religion, music, and pop culture will investigate the intimate connections between human sexuality and music, and assess their impact on definitions of divinity and the sacred. Theoretical issues include the ideology of sacred/profane dichotomies, musical/sexual taboos, and the politics of gender, race and class as expressed in ritual and liturgy.
Prerequisite(s): 200-level RLST course or 48 credit units at the university level.

Note: Students with credit for RLST Special Topics: Sex, God and Rock n Roll: Re-Vamping the Sacred may not take RLST. 382 for credit.

RLST. 390.3 — 1/2(3S)
Readings in Eastern Religions
A reading course in primary writings in eastern religious traditions such as the Bhagavad Gita, Brahmasutrabhasya, Tao Te Ching, or the Analects of Confucius.
Prerequisite(s): A 200-level RLST course or 48 credit units at the university level.

RLST. 391.3 — 1/2(3S)
Readings in Western Religions
Exposes the student to primary source materials. Emphasis is placed on individual study and research.
Prerequisite(s): A 200-level RLST course or 48 credit units at the university level.

RLST. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

RLST. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

RLST. 412.3 — 1/2(3S)
Seminar in Religions and Culture
A critical examination of religious ideas, beliefs, and practices in varied cultural contexts.
Prerequisite(s): 3 credit units. 300-level RLST or 18 credit units RLST or permission of the department.
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

RLST. 413.3 — 1/2(3S)
Seminar in Religious Thought
An advanced seminar in contemporary religious thought focusing on an important theme such as the nature of religious belief, the problem of suffering and evil, or religious pluralism.
Prerequisite(s): 3 credit units. 300-level RLST or 18 credit units RLST or permission of the department.
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

RLST. 423.3 — 1/2(3S)
Comparative Approaches to Study of Religions
A survey of contemporary theories and methods in the comparative study of religion. Issues and problems in the application of the comparative approach will be examined. Selected readings in major figures in the discipline, including Canadian contributors.
Prerequisite(s): 3 credit units. 300-level RLST or 18 credit units RLST or permission of the department.

RLST. 426.0 — 1/2(1S)
Honours Colloquium
Offered occasionally by visiting faculty in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

RLST. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

RLST. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
RRM — RENEWABLE RESOURCE MANAGEMENT

College of Agriculture and Bioresources

RRM. 114.3 — 2(3L)
Introductory Resource Economics and Policy
Introduces students to the tools and approaches used to manage and govern renewable resources. The course will focus on economic tools and human dimensions of management and policy applied to land, water, wildlife and forest. The application of these tools in renewable resource management and policy will be demonstrated using examples of initiatives for renewable resources in Canada and other countries. Emphasis is on beginning to develop students' skill in applying an economic lens to renewable resource management and governance.

Formerly: RRM. 212
Note: Students with credit for RRM. 212 will not receive credit for this course.

RRM. 215.3 — 2(3L-3P)
Identification of Saskatchewan Plants and Soils
Will provide training in the identification of common plants and soils found in the major ecoregions of Saskatchewan. The principles of mapping plant communities and soil units will also be covered in each ecoregion along with the application of plant and soil information to wetland classification.

Prerequisite(s): BIOL. 120 and 121; GEOG. 120.

RRM. 301.9
Field Course in Renewable Resource Management
This 20-day field course provides training in the recognition of land forms, wetlands, plant communities, and soil units in the field. This will include the collection and identification of plant samples, description and classification of soils, and classification of wetlands. Students will also develop skills in the delineation of biophysical map units and geo-referencing of data.

Restriction(s): Restricted to students enrolled in the Bachelor of Science in Renewable Resource Management.

Prerequisite(s): RRM. 215.
Note: There are additional non-refundable costs in addition to tuition fees.

RRM. 312.3 — 2(3L)
Natural Resource Management and Indigenous Peoples
Explores the concepts, practices and issues associated with the management of land and resources by Canada's Aboriginal peoples. By examining the premises underlying varying approaches to resource management, this course will examine Aboriginal rights and management responsibility for fisheries, water resources, wildlife, forestry, parks and protected areas, and non-renewable resources. This course also examines the role of traditional/local ecological knowledge in resource management and impact assessment.

Prerequisite(s): 60 credit units or permission of the instructor.

RRM. 321.3 — 1(3L-3P)
Resource Data and Environmental Modeling
Provides an understanding of the sources, use, and interpretation of environmental data used in resource management. Basic modeling principles are covered and selected environmental models are used to illustrate the use of data in resource management and to provide skills in assessment of the interactions between resource management and the environment. Applied skills in the development of simple models will also be transferred using standard spreadsheet packages.

Restriction(s): Open to students in the Bachelor of Science in Renewable Resource Management Program.
Prerequisite(s): Successful completion of a minimum of 42 credit units university-level coursework.

RRM. 398.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

RRM. 421.6 — 1and2(2T)
Group Project in Renewable Resource Management
An independent group study that provides experience in the principles and practice of executing a project in renewable resource management from the development stage to the presentation of the final report. Student groups execute a real-world resource management project for a non-university organization under the mentorship of U of S faculty. Successful completion of the group project requires students to develop and exercise skills in group coordination, logistics, and liaising with external stakeholders.

Restriction(s): Open to students in the Bachelor of Science in Renewable Resource Management Program.
Prerequisite(s): RRM. 321.3

RRM. 494.6 — 1and2
Extended Research Project in Renewable Resource Management
This course will provide an opportunity for students of the Renewable Resource Management program who have demonstrated the interest and ability to pursue an undergraduate research experience in Renewable Resource Management. The student will conduct a laboratory and/or field project which includes a review of relevant literature, data collection, analysis, interpretation, and communication of results under the supervision of a member of faculty. The student must obtain cooperation of the member of faculty who supervises and mentors the student as she or he conducts their research. The supervisor also evaluates and reports on the student's interpretation, and communication of results under the supervision of a member of faculty.

Prerequisite(s): Completion of 81 credit units towards completion of the B.Sc. (RRM) degree and a minimum 70% cumulative average.

RRM. 498.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

RUSS — RUSSIAN

College of Arts and Science

RUSS. 114.3 — 1/2(3L-1T)
Elementary Russian I
Develops elementary proficiency in speaking, reading, understanding, and writing Russian. Basic grammatical structures, sound patterns, spelling and vocabulary will be studied. Students will be introduced to Russian life and culture, politics, geography, and society.

Formerly: RUSS. 115
Note: Students who have completed Russian 20 (Grade 11 Russian) in the past five years or have completed Russian 30 (Grade 12 Russian), regardless of when it was taken, may not take this course for credit. Students who have some background in Russian or who have taken any other courses in Russian and native speakers of Russian are not allowed to register in this course. Students with credit for RUSS. 115 may not take this course for credit.

RUSS. 117.3 — 1/2(3L-1T)
Elementary Russian II
A continuation of RUSS. 114. It develops elementary proficiency in speaking, reading, understanding, and writing Russian. Basic grammatical structures, sound patterns, spelling and vocabulary will be studied. Students will be introduced to Russian life and culture, politics, geography, and society. Students will develop the ability to understand spoken Russian and respond to it within certain everyday topics.

Formerly: RUSS. 115
Prerequisite(s): RUSS. 114.
Note: Students who have completed Russian 30 may not take this course for credit. Students who have a background in Russian or have taken any other Russian courses, must present themselves to the Department. Native speakers of Russian are not allowed to register in this course. Students with credit for RUSS. 115 may not take this course for credit.

RUSS. 214.3 — 1/2(3L-1T)
Intermediate Russian I
Develops the basic syntactic, morphological, lexical, and phonetic structure of modern Russian, by combining a study of the essentials of grammar with classroom practice in conversation and translation, and through selected readings.

Formerly: RUSS. 215
Prerequisite(s): RUSS. 117.
Note: Native speakers of Russian are not allowed to register in this course. Students with credit for RUSS. 215 may not take this course for credit.

RUSS. 217.3 — 1/2(3L-1T)
Intermediate Russian II
A continuation of RUSS. 214. Emphasis is placed on improving oral and written communication skills. Selected readings will be used to further develop the essentials of grammar and build vocabulary.

Formerly: RUSS. 215
Prerequisite(s): RUSS. 214.
Note: Native speakers of Russian are not allowed to register in this course. Students with credit for RUSS. 215 may not take this course for credit. This course is also offered as part of the St. Petersburg Russian Term Abroad Program.
RUSS. 298.3 — 1/2(3L)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

RUSS. 299.6 — 1and2(3L)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

RUSS. 314.3 — 1/2(3L-1T)  
Advanced Russian I  
This course will enable students to function independently within complete immersion in the Russian environment, conduct independent research and study literature in the language. It will continue developing oral and written proficiency. The cultural component will prepare students for complete immersion in the Russian milieu.

Formerly: RUSS. 315.  
Prerequisite(s): RUSS. 217 or permission of the department.  
Note: Students with credit for RUSS. 315 may not take this course for credit.

RUSS. 317.3 — 1/2(3L-1T)  
Advanced Russian II  
A continuation of RUSS. 314. It will concentrate on dramatic improvement of all four language skills: listening, speaking, reading, and writing. Students will be able to work independently with Russian texts, and will be able to sustain advanced conversation on a wide range of subjects.

Formerly: RUSS. 315.  
Prerequisite(s): RUSS. 314 or permission of the department.  
Note: Students with credit for RUSS. 315 may not take this course for credit. Also offered as part of the St. Petersburg Russian Term Abroad Program.

RUSS. 398.3 — 1/2(3S)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

RUSS. 399.6 — 1and2(3S)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

RUSS. 498.3 — 1/2(3S)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

RUSS. 499.6 — 1and2(3S)  
Special Topics  
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SC — SCIENCE  
College of Arts and Science  
SC 200.3 — 1/2(3L-2P)  
Culture and Physical Science  
The nature of the scientific endeavour in the cultural/historical context in which it occurs is investigated. Basic principles and some major discoveries of science are reviewed. Traditional (aboriginal) knowledge is examined where applicable. Aspects of popular and media science are also investigated.

Prerequisite(s): 24 credit units at the university level including BIOL. 108.6 or equivalent; or permission of the instructor. Restricted to students in the elementary education program at NORTOP College of Education.  
Note: Not acceptable for Arts and Science credit.

SC 312.3 — 1(3L-2P)  
Land Evaluation and Sustainable Management Practices  
The primary focus of this course is the examination of soil quality parameters and their application to land capability classification and sustainable production systems. Emphasis will be placed on management practices that enhance soil conservation and quality including special management practices that optimize production on problem soils. The environment impact(s) of various land management practices will also be discussed.

Prerequisite(s): SLSC 240 or permission of the department.  
Note: Students cannot obtain credit for both EVSC. 220 and SLSC. 273. Students with credit for SLSC 73 will not receive credit for this course.

SC 313.3 — 1(3L)  
Environmental Soil Chemistry  
The lectures and reading assignments cover the structural and chemical properties of major soil components and the principles of soil solution and surface chemistry. An emphasis is placed on environmentally relevant chemical reactions.

Prerequisite(s): CHEM. 112 and one of CHEM. 115 or CHEM. 250; and EVSC. 220 or SLSC. 240.

SLSC — SOIL SCIENCE  
College of Agriculture and Bioresources  
SLSC 14.6  
Soils for Horticulture  
This course provides an introduction to the fundamental principles of Soil Science with specific reference to the study of Horticulture. The components of soil, their physical and chemical properties, and soil-water relationships will be the theoretical basis on which soil management and fertility will be considered. Synthetic and natural fertilizers and amendments, which improve soil physical properties, will be investigated. Potting media for greenhouse production are examined; however, the course emphasis is on natural soils.

Note: It is recommended that students collect a sample of soil (the volume of an ice cream pail) from their garden or area for completion of course assignments. If soil cannot be collected, you may be able to purchase soil from a landscaping or greenhouse business.

SLSC 222.3 — 1(3L)  
Soil Genesis and Classification  
Deals with soil systems and their environments from the perspective of soil development and soil classification. Attention is given to the biotic, geological and physical factors that influence soil formation, and the response of soils to altered environments. The primary emphasis is on Canadian soils and classification, with significant attention to global soils.

Formerly: SLSC. 332.  
Prerequisite(s) or Corequisite(s): One of BLE. 212, EVSC. 220, SLSC. 240, GEOG. 235, or RRM. 215.  
Note: Only available in web format.

SLSC 240.3 — 2(3L-2P)  
Agricultural Soil Science  
Students are introduced to the major physical, chemical and biological properties of soil and the influence of those properties on soil productivity. The relationship of soil to its environment will be investigated as it relates to soil genesis, soil classification and cropping systems. The principles of soil fertility and fertilizer management will be explored with emphasis on cropping systems of Western Canada.

Prerequisite(s): AGRIC. 111.  
Note: Students with credit for SLSC 41 or EVSC. 220 will not receive credit for this course.

SLSC 273.3 — 1(3L-2P)  
Environmental Soil Physics  
Combines theoretical and experimental elements aimed at providing understanding of the fundamental soil physical properties and processes, as well as the ability to solve practical problems related to agricultural and environmental problems. Topics include a discussion of the solid, liquid, and gaseous phases of the soil and the interactions between the phases, the movement of water, chemicals, air, and heat in soils; and the effects of these on plant growth and the environment. The laboratory involves the measurement of selected properties and their interpretation.

Prerequisite(s): EVSC. 220 or SLSC. 240.

SLSC 312.3 — 1(3L-2P)  
Soil Fertility and Fertilizers  
The forms, flows, and transformations of plant nutrients in soils are examined, with emphasis on Western Canadian agricultural systems. The fate of applied nutrients as commercial fertilizers and manure is stressed, especially as to how agronomic practices affect the utilization of soil and fertilizer nutrients by plants. Techniques for soil fertility evaluation and the development of suitable fertilizer recommendations and nutrient management plans are covered.

Prerequisite(s): EVSC. 220 or SLSC. 240.  
Note: Students with credit for SLSC 52 will not receive credit for this course.

SLSC 313.3 — 1(3L)  
Environmental Soil Chemistry  
The lectures and reading assignments cover the structural and chemical properties of major soil components and the principles of soil solution and surface chemistry. An emphasis is placed on environmentally relevant chemical reactions.

Prerequisite(s): CHEM. 112 and one of CHEM. 115 or CHEM. 250; and EVSC. 220 or SLSC. 240.

SLSC 322.3 — 1(3L-3P)  
Environmental Soil Physics  
Combines theoretical and experimental elements aimed at providing understanding of the fundamental soil physical properties and processes, as well as the ability to solve practical problems related to agricultural and environmental problems. Topics include a discussion of the solid, liquid, and gaseous phases of the soil and the interactions between the phases, the movement of water, chemicals, air, and heat in soils; and the effects of these on plant growth and the environment. The laboratory involves the measurement of selected properties and their interpretation.

Prerequisite(s): EVSC. 220 or SLSC. 240.
SLSC. 343.3 — 2(3L)
The Living Soil Microbes and Humankind
Lectures and reading assignments stress microbial population dynamics and activity in soils. The role of soil microorganisms in nutrient cycling and their effects on plant growth are discussed. Contemporary research problems and issues in soil microbiology, including current environmental issues, are examined.
Prerequisite(s): One of FABS. 212.3, BMSC. 210.3, SLSC. 240.3, or EVEC. 220.3

SLSC. 398.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SLSC. 460.3 — 1(3L)
Forest Soils
Forest soils and forestry practices are discussed, with emphasis on boreal soils. Attention will be given to forest soil development, forest land capability and the effects of management practices (harvesting, fertilization, and site preparation) on soil properties. Interrelationships among natural occurrences (fire), nutrient and carbon cycling and environmental concerns will be examined. A required three-day field trip takes place early in the term.
Prerequisite(s): SLSC. 232 or permission of the instructor.
Note: There are additional non-refundable costs in addition to tuition fees.

SLSC. 480.3
Soils and Boreal Landscapes
A four day field course with a follow-up tutorial to study boreal soils and landscapes the week prior to the fall term. Focus will be on the examination, description and classification of northern soils within various landscapes. This course also provides an introduction to basic air photo interpretation, ecological classification and forest measurements, as well as an artistic interpretation of landscapes.
Prerequisite(s): SLSC. 232 or permission of the instructor.
Note: There are additional non-refundable costs in addition to tuition fees.

SLSC. 492.3 — 1and2
Research and Term Paper
A technical writing and communications course in which the student investigates a problem relevant to Soil Science. The focus will be on literature research using electronic and library resources, but original data may be included. A term paper will be written under the guidance of a faculty advisor and results presented in a seminar or as a poster. Communication skills will be addressed in a series of lectures early in the course.
Prerequisite(s): Successful completion of 75 credit units towards the B.S.A. Soil Science degree.

SLSC. 498.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SNSK — SANKRIT

College of Arts and Science

SNSK. 114.3 — 1/2(3L)
Introduction to Sanskrit I
Sanskrit, as one of the worldís ancient languages, belongs to the Aryan or Indo-Iranian language family. It has been the sacred language of a few Indian religions namely Hinduism, Jainism and Buddhism and many literatures of these religions flourished in Sanskrit. It has also been considered as one of the mother/source languages of many South Asian languages such as Hindi, Bengali, Gujarati, Marathi, and Sinhalese etc. This course is designed to provide basic familiarity with Sanskrit to students with no prior knowledge of this influential language. Throughout this course, the students will learn to write Devanagari scripts, pronounce and memorize Sanskrit words, and learn basic grammar so that they would be able to construct basic sentences in Sanskrit.
Permission of the Department.
Note: Students with credit for SNSK. 101.6 may not take SNSK. 114 for credit.

SNSK. 117.3 — 1/2(3L)
Introduction to Sanskrit II
Sanskrit, as one of the worldís ancient languages, belongs to the Aryan or Indo-Iranian language family. It has been the sacred language of a few Indian religions namely Hinduism, Jainism and Buddhism and many literatures of these religions flourished in Sanskrit. It has also been considered as one of the mother/source languages of many South Asian languages such as Hindi, Bengali, Gujarati, Marathi, and Sinhalese etc. This course is designed to improve studentsí basic familiarity with Sanskrit reading, writing and grammar. SNSK. 114.3 or equivalent is required to succeed in this course. In addition to basic Sanskrit grammar, students are expected to learn various declensions of nouns and conjugations of verbs. Knowledge of the past, present and future tenses will be enriched with imperative and potential moods. Students will be trained to read, comprehend and translate select hymns and passages from Sanskrit classical literature with the help of a dictionary.
Permission of the Department.
Prerequisite(s): SNSK. 114 or equivalent.
Note: Students with credit for SNSK. 101.6 may not take SNSK. 117 for credit.

SNSK. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SNSK. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SNSK. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SNSK. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SOC — SOCIOLOGY

College of Arts and Science

SOC. 111.3 — 1/2(3L)
Foundations in Sociology Society Structure Process
One part of a two-part introduction to the discipline of sociology, the study of society. It examines theories and methods for studying changes to the nature and organization of society from pre-modern, to modern and post-modern. Students will be introduced to core sociological concepts used to understand social inequality, social order, social change, and globalization.
Formerly: Part of SOC. 110.6.
Note: Students who have taken SOC. 110.6 may not take this course for credit.

SOC. 112.3 — 1/2(3L)
Foundations in Sociology Social Construction of Everyday Life
One part of a two-part introduction to the discipline of sociology, the study of society. It examines how we come to understand and experience ourselves and the world around us and how we create culture. Students will be introduced to the study of culture, socialization, social interaction, identity formation and self-fashioning, the social construction of class, gender and race, age, deviance, and other social phenomena.
Formerly: Part of SOC. 110.6.
Note: Students who have taken SOC. 110.6 may not take this course for credit.
SOC. 203.3 — 1/2(3L)
Race and Ethnic Relations in Canada
An introduction to and general overview of the various theoretical perspectives on race and ethnic relations and ethnicity. Addresses such issues as assimilation, racism, ethnic persistence, multiculturalism, and domination.
Prerequisite(s): 6 credit units of 100-level SOC.

SOC. 204.3 — 1/2(3L)
Social Control
An introduction to sociological analyses of gender in society. Emphasizes gender differentiation and stratification, and differences between traditional and feminist perspectives.
Prerequisite(s): 6 credit units of 100-level SOC.

SOC. 217.3 — 1/2(3L)
Sociology of Contemporary Religious Movements
A survey of contemporary religious movements with emphasis upon structural and functional similarities and differences.
Prerequisite(s): 6 credit units of 100-level SOC.

SOC. 219.3 — 1/2(3L)
Aboriginal Peoples and Justice in Canada
Examines the causes and consequences of the over- and under-representation of Aboriginal persons in the Canadian criminal justice system. Topics include prevention, policing, sentencing and courts, incarceration and accommodations. The particular impacts on Aboriginal youth and Aboriginal women are also considered.
Formerly: NS 219
Prerequisite(s): 6 credit units of 100-level SOC.
Note: Students with credit for NS 219 may not take this course for credit.

SOC. 220.6 — 1and2(3L)
Sociology and Social Welfare Organization
The development of organized social welfare as a component of an industrialized society; an investigation of the sociological forces that influenced each developmental stage, resulting in the present social welfare phenomena.
Prerequisite(s): 6 credit units of 100-level SOC.

SOC. 224.3 — 1/2(3L)
Collective Behaviour
The study of social movements, institutional formation, and other collective phenomena such as fads, crazes, manias, panic, rumors, riots and mob outbursts. Collective behaviour theory and related sociological approaches are surveyed and applied.
Prerequisite(s): 6 credit units of 100-level SOC.

SOC. 225.3 — 1/2(3L)
An Introduction to Survey Research and Data Analysis in Sociology
The study of research design and data analysis designed to familiarize the student with the logic and the mechanics of conducting survey research and with basic data analysis techniques applied to survey data.
Prerequisite(s): 6 credit units of 100-level SOC.
Note: Students with credit for Stat. 244 or equivalent may not take this course for credit.

SOC. 227.6 — 1and2(3L)
Critical Issues in Canadian Society
Canadian social structure and social change will be examined. The topics discussed will include: social class and inequality; elites; poverty; regionalism and separatism; labour; ethnicity; and other relevant social issues.
Prerequisite(s): 6 credit units of 100-level SOC.

SOC. 232.3 — 1/2(3L)
Methods of Social Research
This course provides an introduction to sociological research methods. The course will involve consideration of the relationship between social theory and research, as well as various features of both qualitative and quantitative research. Topics include ethical issues, techniques, and tasks associated with research design, data collections, data analysis and evaluation.
Prerequisite(s): 6 credit units of 100-level SOC.

SOC. 233.3 — 1/2(3L)
Introduction to Sociological Theory
An introduction to sociological theory from its early origins to the contributions of its main founders, Marx, Weber and Durkheim, as well as a selection of contemporary developments including feminism.
Prerequisite(s): 6 credit units of 100-level SOC.

SOC. 234.3 — 1/2(3L)
Sociology of Law
An introduction to the sociological study of law. Topics include the organization and processes of law and legal institutions; the legal profession; dispute resolutions; law and social control; law and social change.
Formerly: SOC 330
Prerequisite(s): 6 credit units of 100-level SOC.
Note: Students with credit for SOC 330 may not take SOC 234 for credit.

SOC. 235.3 — 1/2(3L)
Sociology of Aging
Provides an introductory sociological analysis of aging and old age. Issues will include demographic changes; theoretical approaches to old age; changing family systems and old age; work, leisure and retirement; socio-economic aspects and selected social policy issues. Course content will emphasize the Canadian situation.
Prerequisite(s): 6 credit units of 100-level SOC.

SOC. 238.3 — 1/2(3L)
Sociology of Health Illness and Health Care
Introduction to sociological perspectives on Canadian health care policy and practice, and an examination of various socio-structural determinants of health and illness.
Prerequisite(s): 6 credit units of 100-level SOC.

SOC. 242.3 — 1/2(3L)
Introduction to Sociology of Mens Studies
An introduction to sociological analyses of gender in traditional as well as feminist perspective. Emphasizes gender differentiation and stratification as social processes as well as critical assessment of the assumptions, evidence, and arguments within the various theoretical approaches.
Prerequisite(s): 6 credit units of 100-level SOC.

SOC. 244.3 — 1/2(3L)
Sociology of Mass Media in Canada
Introduction to the sociological study of mass media institutions in Canadian society. Primary focus on the theoretical and historical context of print, broadcast and film media. Issues of ownership, regulation and the socialization of media workers will also be discussed.
Prerequisite(s): 6 credit units of 100-level SOC.
SOC. 246.3 — 1/2(3L)
Ideology and Mass Communication
Introduction to the study of ways in which doctrines, opinions or ways of thinking of certain individuals or groups come to dominate the content of our mass media. Primary focus on the “manufacture of consent” in our society through an analysis of media messages about work, consumption and leisure in Canadian society.
Prerequisite(s): 6 credit units of 100-level SOC.

SOC. 260.3 — 1/2(3L)
Social Change and Global Solidarity
An examination of global inequality guided by theories of social stratification and social change. Special attention is devoted to the nature, causes, and consequences of socio-cultural changes in the contemporary world.
Prerequisite(s): 6 credit units of 100-level SOC or 12 credit units in the social sciences or special permission of the instructor.

SOC. 261.3 — SP/SU
Engaging Social Change and Global Solidarity
Brings students face to face with people, cultures, and struggles for justice in another region of the world. The course will give students hands-on opportunities to meet and discuss current issues with people at an everyday-life level. Finally, it will expand their world view and challenge them to think critically and concretely about global justice and solidarity within the framework provided by sociological perspectives.
Prerequisite(s): SOC. 260.3 and permission of instructor.

SOC. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SOC. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SOC. 303.6 — 1and2(3L)
History of Sociological Theory
The development of sociological thought in Europe and America since the 18th century. Description and criticism of principal historical and contemporary contributions to sociological theory.
Prerequisite(s): 12 credit units SOC including SOC 233.

SOC. 304.3 — 1/2(3L)
Contemporary Marxist Sociology
An introduction to the study of contemporary Marxist social thought. Focuses specifically on the ontological, conceptual and methodological issues, problems and implications inherent in the divergent schools of Marxist sociology.
Prerequisite(s): 12 credit units SOC including SOC 233.

SOC. 305.3 — 1/2(3L)
Ethnic Stratification
The study of the ideology and practice of ethnic inequality from a comparative perspective, and a critical review of theories and research in the area, including analyses of the stratification approach, colonial model, political economy, critical theory, and other models.
Prerequisite(s): 12 credit units SOC.

SOC. 306.3 — 1/2(3L)
Contemporary Class Structure
An examination of theoretical models and empirical studies of the structure of social class relations in advanced industrial society. The course will examine patterns of class relations in the western industrialized nations, and will also study selected dimensions of global class structure and inequality.
Prerequisite(s): 12 credit units SOC.

SOC. 309.3 — 1/2(3L)
Theories of Social Change
A study of classical and contemporary sociological approaches to social change. The consequences of rapid change in institutional structures.
Prerequisite(s): 12 credit units SOC.

SOC. 310.3 — 1/2(3L)
White Collar and Corporate Crime in the Global Context
This course examines the topic of white-collar and corporate crime in the global context. Through assigned readings, lectures, presentations, class discussion, and written assignments, this course will guide students in studying important international issues that shed light on how and why these offenses occur and how they are dealt with. We will begin with a general introduction to the field, including definitions, conceptual, and theoretical issues from the social sciences, law, and criminology regarding what has become known as white collar and corporate crime. Following this, we will discuss various forms of such crime including: unsafe products, unsafe working conditions, environmental crime, financial fraud, governmental crime, official corruption and so forth. Next, we will consider issues regarding globalization, regulation, enforcement, and sanctioning. Finally, we will examine the future of white collar and corporate criminality from both international and comparative perspectives.
Prerequisite(s): SOC. 212

SOC. 311.3 — 1/2(3L)
Youth Crime Justice and Social Control
Designed to provide students with conceptual and practical knowledge in the study of child and youth crime and deviance. The material focuses not only on issues of social justice, but also treatment by institutions of social control including the justice system.
Prerequisite(s): SOC. 212 or 214.

SOC. 312.3 — 1/2(3L)
Current Issues in Criminal Justice
Analysis of current developments in theories and research on criminogenesis, and the administration of criminal justice. Topics include inequalities of involvement and treatment in the justice system based upon race, class and gender. Developing a general theoretical structure of justice system operation and reform is a key concern.
Prerequisite(s): SOC. 212 and (234 or 329).

SOC. 313.6 — 1/2(P)
Practicum in Criminal Justice I
An applied course that provides students with professional experience and the ability to critique criminal justice processing and services for aboriginal people. Students are placed in a 12-week work program after consultation with the program coordinator.
Restriction(s): Enrolment in the Aboriginal Justice and Criminology Program.
Prerequisite(s): SOC. 212 and 233.
Note: Students with credit for SOC. 317 or 318 will not receive credit for this course.

SOC. 314.6 — 1/2(P)
Practicum in Criminal Justice II
An applied course that provides students with professional experience and the ability to critique criminal justice processing and services for aboriginal people. Students are placed in a 12-week work program after consultation with the program coordinator.
Restriction(s): Enrolment in the Aboriginal Justice and Criminology Program.
Prerequisite(s): SOC. 313.

SOC. 317.3
Criminology and Addictions Internship I
An applied course that provides students with professional experience and the opportunity to critique criminal and social justice processing, and addictions services. Students are placed in a 3 week work program after consultation with the program coordinator.
Restriction(s): Registration in this course is restricted to students enrolled in the Certificate in Criminology and Addictions.
Prerequisite(s): Two of SOC. 212, 232 or 347 and permission of the department.
Note: Students with credit for SOC. 313 will not receive credit for this course.

SOC. 318.3
Criminology and Addictions Internship II
A capstone practicum course that provides students with professional experience and the opportunity to critique criminal and social justice processing, and addictions services. Students are placed in a 3 week work program after consultation with the program coordinator.
Restriction(s): Registration in this course is restricted to students enrolled in the Certificate in Criminology and Addictions.
Prerequisite(s): SOC. 212, 232, 317, 347 and permission of the department.
Note: Students with credit for SOC. 313 will not receive credit for this course.

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SOC. 319.3 — 1/2(3L)
Aboriginal People in Urban Areas
Describes and analyzes the growth, distribution, and integration of the Aboriginal population in Canadian urban centres as well as the causes and consequences of the urbanization of Canadian Aboriginal people. Issues covered will include education, law, family life, and native-white relations.
Prerequisite(s): 12 credit units SOC.

SOC. 321.3 — 1/2(3L)
Sociology of Religion
An analysis of religion in terms of the processes (e.g., secularization and urbanization), which have affected the religious institutions of the West, and of the social and personality structures which, in interaction, shape religion and are shaped by it.
Prerequisite(s): 12 credit units SOC.

SOC. 325.3 — 1/2(3L)
Applied Quantitative Research in Sociology
Designed to review the basic analytical techniques in statistics as they are applied to Sociological questions, and to introduce analyses that logically follow from the basic techniques. The students will apply the techniques covered in the class to existing data sets using the SPSS program.
Prerequisite(s): SOC. 225 or PSY. 233 or STAT. 244.
Note: Students with credit for SOC. 240 or equivalent may not take this course for credit.

SOC. 328.3 — 1/2(3L)
Social Inequality and Health
Explores the inter-relationships between sociological theory, health and illness, and various dimensions of social inequality such as socio-economic security/ insecurity, gender, class, race and ethnicity, ability/disability, and access to health care services. Course objectives will be achieved through the integration of theoretical and experiential learning.
Prerequisite(s): 12 credit units Sociology

SOC. 329.3 — 1/2(3L)
Penology and Corrections
An overview of the correctional system; from police, through courts and sentencing, incarceration, release and post-release processes; a look at the key positions and principles involved in custody, punishment and rehabilitation, with an emphasis on the Canadian system, but in a comparative context.
Prerequisite(s): 12 credit units SOC including SOC 212.

SOC. 332.6 — 1and2(3L)
Principles of Research Design
Examination of a series of issues to be resolved in formulating a comprehensive research design. Topics include: formulating the problem; plan of data organization; defining and selecting cases; collection of data; organization, analysis, and interpretation of data. Each student is expected to develop a number of research projects during the year.
Prerequisite(s): 12 credit units SOC including SOC 232 and 325.

SOC. 334.3 — 1/2(3L)
Women and Law Historical and Comparative Perspectives
Locates law in specific socio-economic and political contexts (colonial, local/national and global); it explores the various ways law impacts women’s lives and experiences by focusing on women’s work and rights (economic, political, and human); and it provides a critical evaluation of feminist theories/practices and their engagement with law and legal processes.
Prerequisite(s): SOC. 234 and 12 credit units senior sociology; or minimum 48 credit units university courses.

SOC. 340.3 — 1/2(3L)
Marriage Family and Society
Emphasis will be placed on the analysis of changing patterns of marriage and the family within the contemporary social structure and on consequences and resulting trends from such structural changes.
Prerequisite(s): 12 credit units SOC including SOC. 207.

SOC. 341.3 — 1/2(3L)
Institutional Racism and Aboriginal People
A sociological analysis of various models of institutional racism will be examined, and their applications to Aboriginal experiences will be evaluated. Topics include: colonial domination, Aboriginal reserves, urban Aboriginals, resource development, and welfare services.
Prerequisite(s): 12 credit units SOC.

SOC. 344.3 — 1/2(3L)
Sociology of Women Gender and Development
Examines women’s place internationally but focuses on women in developing countries and critiques existing development theories, policies and practices. Themes including gender politics, productive and reproductive labour, population policies, sexuality and reproductive rights, environment and sustainable development, and health will be explored in view of globalization with an emphasis on the roles of international, transnational, and aid agencies.
Prerequisite(s): 12 credit units SOC plus two of any of SOC. 242, SOC. 260, POLS 246, POLS 261, POLS 262, ECON 231, IS 211 and IS 212, WS 212 and/or WS 250.

SOC. 347.3 — 2(3L)
Studies in Addictions
An introduction to the study of addictions, with a specific focus on problematic alcohol and illicit drug use. It introduces students to basic concepts and debates in the addictions field concerning causes, consequences and interventions. Each is examined from four standpoints: the user, society/culture, service providers, and decision/policy makers. Students are invited to question how we know what we know, with an emphasis on the Canadian context. The addictions field is fraught with controversies. This course is designed to assist students with integrating their existing and acquired knowledge and applying it to current debates in a sociologically informed, public health contextualized, and understanding manner.
Formerly: Has been offered as SOC. 398.

SOC. 350.3 — 1/2(3L)
Modern Society and Modern Thought
A comprehensive introduction to the history, sociology, and ideas of modern western society, which examines the formation and consolidation of modernity: the development of the modern state; the modern capitalist economy and the industrial revolution; and with an emphasis on the emergence of the Enlightenment and the social sciences.
Prerequisite(s): 12 credit units SOC.
Note: Students with credit for SOC. 296 may not take this course for credit.

SOC. 360.3 — 1/2(3L)
Globalization and Social Justice
Explores the major theories of globalization, global social stratification and social justice through issues of risks, challenges and opportunities of contemporary social life. Central concerns are the following three themes: what is globalization, what is happening; and what are people doing that is shaping the outcome of the process?
Prerequisite(s): 12 credit units in sociology, including SOC. 110.6 or SOC. 111.3 and SOC. 112.3 or permission of the instructor.

SOC. 379.3
Washington Center Topics in Sociology
Prerequisite(s): 60 credit units of university level study including 6 credit units senior SOC.
Note: Registration in this course is restricted to students selected for the Washington Center Term Abroad program.

SOC. 386.3 — (P)
Selected Topics in Caribbean Sociology Cuba Revolution and Social Change
A sociological overview of the Cuban Revolution as defined, described, and analyzed from comparative perspectives. Taught in Havana, this course provides an introduction to the sociology of Cuban politics, social change, and development. The course structure includes field trips and guest lectures from faculty at Cuban universities.
Formerly: SPAN. 298 (May. 2004), INTS. 298 (May. 2005).
Prerequisite(s): 12 credit units SOC or permission of the instructor.

SOC. 398.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
SOC. 399.6 — 1 and 2 (3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SOC. 402.3 — 1/2 (3S)
Advanced Seminar in Sociology of Agriculture
Theoretical and research approaches to the political and social economy of agriculture. Emphasis is given to contemporary works on agro-industrial reorganization, agro-food technology, sustainability, state intervention, international trade, aid, and agrarian reform.
Prerequisite(s): 18 credit units SOC including SOC. 204.

SOC. 409.3 — 1/2 (3S)
Sociology of Development
This seminar course entails sociological analyses of a range of dramatic national and international occurrences through critical reviews of competing theoretical perspectives and empirical evidences concerning the diverse trajectories of industrialization, economic development and globalization within and across nations with different political and economic systems.
Prerequisite(s): 12 credit units SOC plus two of any of SOC. 344, SOC. 360, HIST. 303, POLS. 341, POLS. 346, POLS. 362.

SOC. 411.3 — 1/2 (3S)
Family Development in Research and Theory
Selected topics concerning marriage and family behaviour: recent developments in research and theory.
Prerequisite(s): 18 credit units SOC including SOC. 207.

SOC. 412.3 — 1/2 (3S)
Advanced Seminar in Ethnic Relations
Theoretical aspects of inter-ethnic processes. Comparative analysis of empirical research on ethnic minorities within Canada and other selected societies.
Prerequisite(s): 18 credit units SOC.

SOC. 413.3 — 1/2 (3S)
Seminar in Sociology of Religion
An advanced seminar in sociological theories of religious behaviour.
Prerequisite(s): 18 credit units SOC including SOC. 217 or 321.

SOC. 415.3 — 1/2 (3S)
Selected Problems in Social Control
Theoretical analysis of and empirical research on selected problems in social deviance and social control.
Prerequisite(s): 18 credit units SOC.

SOC. 418.3 — 1/2 (3S)
Advanced Criminology
An analysis and critique of current developments in Canadian criminological discourse, with an emphasis on the specific research issues and their relation to theoretical and policy developments.
Prerequisite(s): 18 credit units SOC including SOC. 212, 234 or 329.

SOC. 420.3 — 1/2 (3S)
Medical Sociology
Examines both classic and newly-emerging perspectives. Students will engage with the assumptions commonly made about contemporary medical knowledge and practice, as well as its relationship to health and wellness. Drawing on theoretical issues, students will examine social inequalities and health status, alternative healing practices, experience of illness, professions, and new genetics in medicine.
Prerequisite(s): 18 credit units SOC including SOC. 238.

SOC. 421.3 — 1/2 (3S)
Interpretive Studies in Health
Will focus on interpretive studies of health and illness, with an emphasis on understanding social structure and theory via embodied experiences situated in everyday life. Reflexive scholarship will be a central area of inquiry.
Prerequisite(s): 18 credit units SOC including SOC. 238, or permission of instructor.

SOC. 426.3 — 1/2 (3S)
Social Policy: Issues and Analysis
Examines the formulation, development, management, and impact of social policies. Includes analysis and evaluation of social policies in income security, social services, employment, housing, and other areas.
Prerequisite(s): 18 credit units SOC.

SOC. 428.3 — 1/2 (3S)
Gender and Health
Will focus on selected issues emerging from the domains of sociology of gender and sociology of health and illness. An overview of key issues related to gender and health, as well as a discussion of sociological theory and methodology pertaining to these domains, will be followed by an in-depth focus on selected topics related to gender and health.
Formerly: SOC. 436.
Prerequisite(s): 18 credit units SOC including SOC. 238 and SOC. 328, or permission of instructor.
Note: Students with credit for SOC. 436 will not receive credit for SOC. 428.

SOC. 430.3 — 1/2 (3S)
Sociology of Science and Knowledge
The social conditions and consequences of the production, distribution and consumption of scientific and other forms of knowledge are examined in this course. Deploying classical and contemporary theories, specific institutional settings and ongoing debates over concepts and issues such as knowledge society, indigenous knowledge, corporatization of the university, gendered knowledge, etc., are examined.
Prerequisite(s): 18 credit units SOC.

SOC. 498.3 — 1/2 (3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SOC. 499.6 — 1 and 2 (3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SOC. 509.3 — 1/2 (3S)
Sociology of Religion and the Family
An advanced seminar in the social theory of religion and family within the concept of science and 科学.
Prerequisite(s): 18 credit units SOC including SOC. 217 or 321.

SOC. 510.3 — 1/2 (3S)
Ethnic Relations in Canada
The study of ethnic relations in Canada and the world, with an emphasis on the development of theoretical perspectives and empirical research.
Prerequisite(s): 18 credit units SOC including SOC. 238.

SOC. 511.3 — 1/2 (3S)
Selected Problems in Social Control
Theoretical analysis of and empirical research on selected problems in social deviance and social control.
Prerequisite(s): 18 credit units SOC.

SOC. 512.3 — 1/2 (3S)
Advanced Criminology
An analysis and critique of current developments in Canadian criminological discourse, with an emphasis on the specific research issues and their relation to theoretical and policy developments.
Prerequisite(s): 18 credit units SOC including SOC. 212, 234 or 329.
**SPAN — SPANISH**

**College of Arts and Science**

**SPAN. 114.3 — 1/2(3L-1T)**

**Elementary Spanish I**

Introduction to the study of the Spanish language, both oral and written, vocabulary building, essential structures, and basic grammar. The course also provides insight into Hispanic culture through a variety of activities such as readings, music, and videos.

**Formerly:** SPAN. 115.

**Prerequisite(s):** SPAN. 114.

**Note:** Students who have completed Spanish 20 (Grade 11 Spanish) or have completed Spanish 30 (Grade 12 Spanish), may not take this course for credit. Students who have some background in Spanish or who have taken any other courses in Spanish and native speakers of Spanish are not allowed to register in this course. Students with credit for SPAN. 115 may not take this course for credit.

**SPAN. 117.3 — 1/2(3L-1T)**

**Elementary Spanish II**

A Spanish language course that builds on skills acquired in SPAN. 114, completing the study of basic Spanish grammar, with emphasis on oral and written communication. The course aims to develop an appreciation of Hispanic culture.

**Formerly:** SPAN. 115.

**Prerequisite(s):** SPAN. 114.

**Note:** Students who have completed Spanish 30 may not take this course for credit. Students who have taken high school Spanish courses or any other Spanish courses and native speakers of Spanish are not allowed to register in this course. Students with credit for SPAN. 115 may not take this course for credit.

**SPAN. 202.3 — 1/2(4L-1T)**

**Intermediate Spanish I Oral Skills and Cultural Understanding**

Examines readings about Spanish and Latin American cultures, stressing oral composition. Students will have opportunities to develop their oral skills as well as to improve their knowledge of the language through a communicative approach. Regular attendance is required.

**Formerly:** SPAN. 210.

**Prerequisite(s):** SPAN. 117 or permission of the department.

**Note:** Native speakers of Spanish are not allowed to register in this course. Students with credit for SPAN. 200 may not take this course for credit.

**Students are encouraged to take SPAN. 202 and 217 concurrently.**

**SPAN. 204.3 — 1/2(4L-1T)**

**Intermediate Spanish II Oral Skills and Cultural Understanding**

A Spanish language course that builds on skills acquired in SPAN. 202 or equivalent. Students will continue to strengthen their language proficiency through a communicative approach by reading cultural texts, participating in dialogues, and making oral presentations. Regular attendance is required.

**Formerly:** SPAN. 200.

**Prerequisite(s):** SPAN. 202.

**Note:** Native speakers of Spanish are not allowed to register in this course. Students with credit for SPAN. 200 may not take this course for credit.

**Students are encouraged to take SPAN. 204 and 217 concurrently.**

**SPAN. 214.3 — 1/2(3L-1T)**

**Intermediate Spanish I Grammar Writing Literary Readings**

An intensive study of Spanish grammar, with emphasis on writing skills. Short reading passages will be used to allow students to expand vocabulary and develop oral proficiency.

**Formerly:** SPAN. 215.

**Prerequisite(s):** SPAN. 117 or permission of the department.

**Note:** Students with credit for SPAN. 215 may not take this course for credit.

**Students are encouraged to take SPAN. 202 and 217 concurrently.**

**Spanish native speakers of Spanish are allowed to take this course, but will need a prerequisite waiver in order to register, which can be obtained from the Department.**

**SPAN. 217.3 — 1/2(3L-1T)**

**Intermediate Spanish II Grammar Writing Literary Skills**

A Spanish language course that builds on skills acquired in SPAN. 214. This course continues with the study of intermediate-advanced Spanish grammar, with a focus on written composition and the study of short literary passages. This course will continue giving the opportunity for oral practice.

**Formerly:** SPAN. 215.

**Prerequisite(s):** SPAN. 214.

**Note:** Students with credit for SPAN. 215 may not take this course for credit.

**Students are encouraged to take SPAN. 204 and 217 concurrently.**

**SPAN. 235.3 — 2(3L)**

**Mexican Culture**

Offers the student a broad view of Mexican society and culture. Students will study topics such as Mexican history, society, politics, education, art, customs, traditions, and other expressions of spiritual and material life in Mexico.

**Prerequisite(s):** 12 credit units of SPAN courses.

**Note:** Offered only in Guadalajara, Mexico as part of the Guadalajara Spanish Term Abroad Program.

**SPAN. 250.3 — 1/2(3L)**

**Historical Trends of the Spanish Language**

Have you ever wondered where Spanish came from? What is the relationship between Spanish and other Romance languages? Why are some Spanish words similar to their French, Italian and Portuguese counterparts while others are completely different? Why does the Spanish accent vary so greatly across geographic boundaries? This course answers those questions by examining the evolution of Spanish from its Latin roots to the contemporary language we speak today. Special attention will be paid to the watershed political and historical events and social movements in Spain from the XII centur onwards, so as to illustrate how such factors are mirrored in the phonological, morphological, syntactic and semantic constructions of modern Spanish.

**Permission of the Department.**

**Prerequisite(s):** Completion of 18 credit units of university courses.

**Note:** SPAN. 114 is recommended. This course is taught in English.

**SPAN. 251.3 — 1/2(3L)**

**The Spanish of Latin Americans**

What is the difference between the Spanish spoken in Spain and the mother tongue of more than. 193 million speakers in Latin and South America? Are the distinctions merely an accent change due to geography or are there other social factors at play? The Spanish of Latin Americans provides an overview of the linguistic variation found in Latin American Spanish. Core topics include the concept of language variation, the fundamental dissimilarities between Peninsular and American Spanish (including the use of usted, voso, seceso and yelmo), the indigenous and African contributions and social variation within the continent.

**Permission of the Department.**

**Prerequisite(s):** Completion of 18 credit units of university courses.

**Note:** SPAN. 114 is recommended. This course is taught in English.

**SPAN. 275.3 — 2(3L)**

**Business Spanish**

Students will become familiar with the vocabulary and expressions used in the business environment. This course will help students to improve their ability to comprehend texts written in Spanish, as well as preparing them to write commercial documents.

**Prerequisite(s):** 12 credit units of SPAN courses.

**Note:** Offered only in Guadalajara, Mexico as part of the Guadalajara Spanish Term Abroad Program.
SPAN. 298.3 — 1/2(3L) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SPAN. 299.6 — 1and2(3L) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SPAN. 305.3 — 1(3L) Representative Works in Spanish Peninsular Literature
An introduction to the literary masterpieces of Spain, through the reading and study of Spanish texts from the medieval period to modern times.
Prerequisite(s): SPAN. 202, 204, 214, 217.

SPAN. 307.3 — 1/2(3L) Latin American Short Story El cuento latinoamericano
El cuento latinoamericano introduces students to an exemplary genre of Latin American literature: the short story. Includes a brief history of the development of the short story genre in Latin America and entails in-depth textual analysis of masterpieces of the short story from all parts of Spanish speaking Latin America: the Caribbean, Central America, Mexico, Chile, Argentina, Uruguay, Peru, Colombia, etc. All class lectures and readings are in Spanish. Selections will include works of internationally renowned authors such as Gabriel Garcia Marquez (Columbia), Carlos Fuentes (Mexico), Mario Benedetti (Uruguay), Jorge Luis Borges (Argentina), Alejo Carpentier (Cuba), Julio Cortazar (Argentina); as well as ten other authors chosen at the discretion of the individual instructor.
Prerequisite(s): SPAN. 204 and 217.

SPAN. 308.3 — 1/2(3L) Peninsular Spanish Novel from Generation of 1898 to 2000
Introduces students to masterpieces of the novelistic genre from twentieth century Spain. Includes a brief history of the development of the novel in Spain. All class lectures and readings are in Spanish. Selections may include works of internationally renowned authors such as Miguel de Unamuno, Camilo Jose Cela, Ana Maria Matute, Miguel Delibes, Luis Martin Santos, Juan Goytisolo, Ramon Sender, as well as other authors at the discretion of the individual instructor.
Prerequisite(s): SPAN. 204 and 217.

SPAN. 309.3 — 1/2(3L) From Che to Pinochet Tyrants and Revolutionaries
Studies the figure of the Latin American tyrant, based on an actual person or as a composite of several dictators. It also studies how political oppression inflicts suffering of different kinds on people, and how people resist and fight against the system. The narrative masterpieces analyzed in this course will be available in Spanish as well as in English. The class will be taught in English.
Prerequisite(s): LIT. 100, or 6 credit units ENG.

SPAN. 310.3 — 1/2(3L) Love and Revolution in the Latin American Novel
Studies the theme of love in the context of political revolution in several exemplary Latin American novels. All novels will be read in English translation, and all lectures will be in English.
Prerequisite(s): LIT. 100, or 6 credit units ENG.

SPAN. 314.3 — 1/2(3L-1T) Advanced Spanish I
Advanced grammar and vocabulary expansion with emphasis on idiomatic speech taken from real situations in everyday life in Spain and Latin America. The course focuses on written exercises, such as compositions and translations, as well as on the formal aspect of academic writing. A good portion of class time will be spent discussing literary passages.
Prerequisite(s): SPAN. 217.
Note: Native speakers of Spanish may take this course. Please contact the instructor for permission and prerequisite waiver.

SPAN. 317.3 — 1/2(3L-1T) Advanced Spanish II
A Spanish language course that builds on skills acquired in SPAN. 314, completing the study of advanced Spanish grammar and continuing with written and oral exercises, literary readings and formal writings.
Formerly: SPAN. 315.
Prerequisite(s): SPAN. 314 or permission of the department.
Note: Students with credit for SPAN. 315 may not take this course for credit.

SPAN. 325.3 — 2(3L) Advanced Spanish Writing I
To improve students’ skills in writing texts with clarity and accuracy, as well as developing and increasing their Spanish vocabulary. The course language is Spanish.
Prerequisite(s): SPAN. 217.
Note: Offered only in Guadalajara, Mexico as part of the Guadalajara Spanish Term Abroad Program.

SPAN. 330.3 — 1(3L) Spanish Film Through a Latin Lens
For the advanced student of Spanish, further engagement with Spanish-language culture and literature, emphasizing quintessentially Latin narrative themes. Designed to develop critical reading skills as well as to enhance communicative competence both orally and in writing.
Prerequisite(s): SPAN. 217.

SPAN. 335.3 — 2(3L) Mexican Cinema
Aims at understanding the history of movies in Mexico through cinematicographic genres. During the course, old and current movies will be reviewed in order to exemplify the topics presented. The course language is Spanish.
Prerequisite(s): SPAN. 314.
Note: Offered only in Guadalajara, Mexico as part of the Guadalajara Spanish Term Abroad Program.

SPAN. 375.3 — 2(3L) Contemporary Mexican Literature
Reading and analysis of 20th Century Mexican writers such as Octavio Paz, Jaime Sabines, Elena Poniatowska, Angeles Mastretta, Carlos Fuentes and Juan Rulfo. The course language is Spanish.
Prerequisite(s): SPAN. 317 and (SPAN. 306 or SPAN. 307).

SPAN. 385.3 — 2(3L) Hispanic American Literature Masters of the 20th Century
Reading and analysis of 20th Century Spanish American writers such as Borges, Rulfo, Cortazar, Fuentes, Garcia Mªrizuez, Benedetti, Mutis, Vallejo and Monterroso. The course language is Spanish.
Prerequisite(s): SPAN. 317 and (SPAN. 306 or SPAN. 307).
Note: Offered only in Guadalajara, Mexico as part of the Guadalajara Spanish Term Abroad Program.

SPAN. 398.3 — 1/2(3S) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SPAN. 399.6 — 1and2(3S) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SPAN. 498.3 — 1/2(3S) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SPAN. 499.6 — 1and2(3S) Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

SPST — SPECIAL STUDIES

SPST. 298.3 — 2-Jan Special Studies
Provides qualified students an opportunity to pursue independent studies on topics or projects not encompassed by standard courses and to receive academic credit for these studies, either as an elective or in a major. Special Studies courses are limited to study in a single discipline and students must plan the course in consultation with an instructor. Special Studies courses require departmental and college approval; the department must submit term 1 proposals by March 8 of the previous academic year, term 2 proposals by September 8.
SPST. 299.6 — 1and2
Special Studies
Provides qualified students an opportunity to pursue independent studies on topics or projects not encompassed by standard courses and to receive academic credit for these studies, either as an elective or in a major. Special Studies courses are limited to study in a single discipline and students must plan the course in consultation with an instructor. Special Studies courses require departmental and college approval; the department must submit term 1 proposals by March 8 of the previous academic year, term 2 proposals by September 8.

SPST. 398.3 — 2-Jan
Special Studies
Provides qualified students an opportunity to pursue independent studies on topics or projects not encompassed by standard courses and to receive academic credit for these studies, either as an elective or in a major. Special Studies courses are limited to study in a single discipline and students must plan the course in consultation with an instructor. Special Studies courses require departmental and college approval; the department must submit term 1 proposals by March 8 of the previous academic year, term 2 proposals by September 8.

SPST. 399.6 — 1and2
Special Studies
Provides qualified students an opportunity to pursue independent studies on topics or projects not encompassed by standard courses and to receive academic credit for these studies, either as an elective or in a major. Special Studies courses are limited to study in a single discipline and students must plan the course in consultation with an instructor. Special Studies courses require departmental and college approval; the department must submit term 1 proposals by March 8 of the previous academic year, term 2 proposals by September 8.

SP. 498.3 — 2-Jan
Special Studies
Provides qualified students an opportunity to pursue independent studies on topics or projects not encompassed by standard courses and to receive academic credit for these studies, either as an elective or in a major. Special Studies courses are limited to study in a single discipline and students must plan the course in consultation with an instructor. Special Studies courses require departmental and college approval; the department must submit term 1 proposals by March 8 of the previous academic year, term 2 proposals by September 8.

SP. 499.6 — 1and2
Special Studies
Provides qualified students an opportunity to pursue independent studies on topics or projects not encompassed by standard courses and to receive academic credit for these studies, either as an elective or in a major. Special Studies courses are limited to study in a single discipline and students must plan the course in consultation with an instructor. Special Studies courses require departmental and college approval; the department must submit term 1 proposals by March 8 of the previous academic year, term 2 proposals by September 8.

STAT — STATISTICS

College of Arts and Science

STAT. 103.3 — 1/2(3L)
Elementary Probability
An elementary introduction to the concepts of probability, including: sets, Venn diagrams, definition of probability, algebra of probabilities, counting principles, some discrete random variables and their distributions, graphical displays, expected values, the normal distribution, the Central Limit Theorem, applications, some statistical concepts.
Prerequisite(s): Mathematics 830 or Foundations of Mathematics 30 or Pre-Calculus 30.
Note: Credit will not be granted for STAT. 103 if it is taken concurrently with or after STAT. 241. Please refer to the Statistics Course Regulations in the Arts and Science section of the Course and Program Catalogue.

STAT. 241.3 — 1/2(3L-1P)
Probability Theory
Laws of probability, discrete and continuous random variables and their distributions, moments, functions of random variables and their distributions, Central Limit Theorem.
Prerequisite(s): MATH. 110 and 116.

STAT. 242.3 — 2(3L-1P)
Statistical Theory and Methodology
Sampling theory, estimation, confidence intervals, testing hypotheses, goodness of fit, analysis of variance, regression and correlation.
Prerequisite(s): MATH. 110, 116 and STAT. 241.
Note(s): Students may receive credit for only one of STAT. 242, 244, 245, or 246. Please refer to the Statistics Course Regulations in the Arts and Science section of the Course and Program Catalogue.

STAT. 244.3 — 1/2(3L-1P)
Elementary Statistical Concepts
Statistical concepts and techniques including graphing of distributions, measures of location and variability, measures of association, regression, probability, confidence intervals, hypothesis testing. Students should consult with their department before enrolling in this course to determine the status of this course in their program.
Prerequisite(s): A course in a social science or Mathematics A30 or Foundations of Mathematics 30 or Pre-Calculus 30.
Note(s): Students may receive credit for only one of STAT. 242, 244, 245, or 246. Please refer to the Statistics Course Regulations in the Arts and Science section of the Course and Program Catalogue.

STAT. 245.3 — 1/2(3L-1P)
Introduction to Statistical Methods
An introduction to basic statistical methods including frequency distributions, elementary probability, confidence intervals and tests of significance, analysis of variance, regression and correlation, contingency tables, goodness of fit.
Prerequisite(s): MATH. 100, 104 (formerly MATH. 101), 110 or STAT. 103.
Note(s): Students may receive credit for only one of STAT. 242, 244, 245, or 246. Please refer to the Statistics Course Regulations in the Arts and Science section of the Course and Program Catalogue.

STAT. 246.3 — 1/2(3L-2P)
Introduction to Biostatistics
An introduction to statistical techniques with emphasis on methods particularly applicable to biological and health sciences. Topics include: descriptive statistics, estimation and hypothesis testing, linear and logistic regression, contingency tables, life tables, and experimental design. Computerized data analysis will be an essential component of the labs.
Prerequisite(s): Mathematics 830 and BIOL. 120 and 121 (formerly BIOL. 110) or permission of the department.
Note: One of MATH. 104 (formerly MATH. 101), MATH. 110 or STAT. 103 is recommended but not essential. Students may receive credit for only one of STAT. 242, 244, 245, or 246. Please refer to the Statistics Course Regulations in the Arts and Science section of the Course and Program Catalogue.

STAT. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

STAT. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

STAT. 341.3 — 1/2(3L-1P)
Probability and Stochastic Processes
Random variables and their distributions; independence; moments and moment generating functions; conditional probability; Markov chains; stationary time-series.
Prerequisite(s): STAT. 241.

STAT. 342.3 — 1(3L-1P)
Mathematical Statistics
Probability spaces; conditional probability and independence; discrete and continuous random variables; standard probability models; expectations; moment generating functions; sums and functions of random variables; sampling distributions; asymptotic distributions. Deals with basic probability concepts at a moderately rigorous level.
Prerequisite(s): MATH. 225 or 276; STAT. 241 and 242.
Note: Students with credit for STAT. 340 may not take this course for credit.

STAT. 344.3 — 1/2(3L-1P)
Applied Regression Analysis
Applied regression analysis involving the extensive use of computer software. Includes: linear regression; multiple regression; stepwise methods; residual analysis; robustness considerations; multicollinearity; biased procedures; non-linear regression.
Prerequisite(s): STAT. 242 or STAT. 245 or STAT. 246.
Note: Students with credit for ECON. 404 may not take this course for credit.
STAT. 345.3 — 1/2(3L‑1P)
Design and Analysis of Experiments
An introduction to the principles of experimental design and analysis of variance. Includes: randomization, blocking, factorial experiments, confounding, random effects, analysis of covariance. Emphasis will be on fundamental principles and data analysis techniques rather than on mathematical theory.
Prerequisite(s): STAT. 242 or STAT. 245 or STAT. 246.

STAT. 346.3 — 1/2(3L‑1P)
Multivariate Analysis
The multivariate normal distribution, multivariate analysis of variance, discriminant analysis, classification procedures, multiple covariance analysis, factor analysis, computer applications.
Prerequisite(s): MATH. 266, STAT. 241, and one of STAT. 344 or STAT. 345.

STAT. 348.3 — 1/2(3L‑1P)
Sampling Techniques
Theory and applications of sampling from finite populations. Includes: simple random sampling, stratified random sampling, cluster sampling, systematic sampling, probability proportional to size sampling, and the difference, ratio and regression methods of estimation.
Prerequisite(s): STAT. 242 or STAT. 245 or STAT. 246.

STAT. 349.3 — 1/2(3L‑1P)
Time Series Analysis
An introduction to statistical time series analysis. Includes: trend analysis, seasonal variation, stationary and non-stationary time series models, serial correlation, forecasting and regression analysis of time series data.
Prerequisite(s): STAT. 241, and STAT. 344 or 345.

STAT. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

STAT. 399.6 — 1and2(3S)
Orthopaedic Surgery Anatomy and Basic Science
Seminars dealing with Orthopaedic Surgery. A study is made of basic sciences, including Anatomy, Physiology and Biochemistry as applied to Orthopaedic Surgery. A study of both basic science and clinical aspects of musculoskeletal disease. A presentation of orthopaedic clinical material with discussion of the fundamental principles involved. Each student assists in the preparation of material for presentation. A self-directed learning project will have to be completed and graded for completion of the course.
Formerly: SURG. 803.6
Prerequisite(s): Permission of the Division of Orthopaedic Surgery.
Note: Students with credit for SURG. 803 may not take this course for credit.

SWIT — STUDENT WELLNESS INITIATIVE TOWARD COMMUNITY HEALTH
College of Medicine
SWIT. 400.0
Student Wellness Initiative Toward Community Health
The Student Wellness Initiative Toward Community Health is an interdisciplinary service-learning project of health sciences students centering around a student-run clinic on Saskatoon’s West Side.

TECH — TECHNICAL VOCATIONAL EDUCATION
College of Education
TECH. 183.3 — 1/6P
Drafting
Graphics is presented as an essential communication skill in technical fields. The fundamental theory and skills of engineering drawing will involve the students in the proper use of instruments, the principles of applied geometry and the theory of orthographic projection so that they will be able to draw and read working drawings quickly and accurately.
Restriction(s): Only open to students in the Industrial Arts or Vocational Education program.

TECH. 187.3 — 1/2(1L‑3P)
Wood Fabrication
Provides essential background for Industrial Arts teachers to enable them to demonstrate and have students perform common hand- and machine-tool operations correctly and safely. Essential information about materials, layout, assembly and finishing is included.
Restriction(s): Only open to students in the Industrial Arts or Vocational Education program.

TECH. 283.3 — 2(2L‑4P)
Computer Assisted Drafting
Provides essential computer assisted design and drafting theory and related practice for PAA teacher candidates who choose to teach these or related modules from the Evergreen Curriculum or a similar source.
Restriction(s): Only open to students in the Industrial Arts or Vocational Education program.

TECH. 284.3 — 2(2L‑4P)
Electricity Electronics
Provides essential electrical and electronics theory and related practice for PAA teacher candidates who choose to teach these or related modules from the Evergreen Curriculum or a similar source.
Restriction(s): Only open to students in the Industrial Arts or Vocational Education program.

TECH. 285.3 — 3(3L‑3P)
Mechanics
Students will acquire knowledge and skills in the area of mechanics to enable them to teach in the Practical and Applied Arts programs in the province’s schools. Safety, hazardous materials, oils and lubricants, small engines and multi-cylinder engines will be among the topics presented.
Formerly: TECH. 298

TECH. 286.3 — 3(3L‑3P)
Welding
Students will acquire knowledge and develop skills in the areas of arc, oxyacetylene, and metal inert gas (MIG) welding.
Formerly: TECH. 498

TECH. 287.3 — 3(3L‑3P)
Building Construction
Students will develop skills and knowledge in the processes utilized in residential wood frame house construction. They will also gain knowledge in the areas of working with concrete and surveying, as related to the building construction field.
Formerly: ECUR. 498

TECH. 298.3
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.
TEFL — TEACHING ENGL AS FOREIGN LANG

College of Continuing and Distance Ed

TEFL 11 Communicative Language Teaching I
This course will introduce teachers of children, adolescents, and adults to the field of Teaching English as a Foreign Language. Participants will learn theory and apply it to real contexts. The following topics will be covered: teaching and learning styles; language acquisition; the teaching process; skills integration; teaching and learning style and pronunciation; teaching grammar and phonology.
Note: Access to English-language learners is recommended. TEFL 11 is a prerequisite to all courses in the TEFL stream.

Prerequisite(s) or Corequisite(s): TESL 21
Note: Students with credit for ECUR 291 may not take this course for credit.

TESL 32 Material Selection and Development in Language Teaching
Students will learn how to evaluate, select, and adapt materials for teaching ESL. They will be exposed to various media used in developing ESL materials, including print, video, audio, blackboard, overhead, felt board, and visual aids. Approaches to involving students in materials development are discussed.
Prerequisite(s) or Corequisite(s): TESL 31 or TESL 34; or TEFL 12.

TESL 33 English Grammar and Phonology
Elements of English grammar, discourse structure, sound system, and suprasegmental features will be examined in some depth. The focus is on Standard Canadian English. Techniques of instruction will be discussed.
Prerequisite(s) or Corequisite(s): TESL 31 or TESL 34; or TEFL 12.

TESL 34 TESD for Aboriginal Peoples
This course presents information, concepts, and skills intended to assist teachers of indigenous students. Topics include an overview of indigenous languages in Canada, the educational needs of minority students, models of bilingual/bicultural education, instructional approaches and techniques, and assessment of minority students. Access to indigenous students who are in the process of mastering standard English is highly recommended.
Prerequisite(s) or Corequisite(s): TESL 31 or TESL 34; or TEFL 12.

TESL 43 Professional Project
This course is designed to provide teacher trainees with the opportunity to apply theory and practice in the field of English as a second language. During the practicum, trainees will observe experienced teachers and discuss classroom applications and needs of various types of students. Students will plan lessons, teach in an observed situation, and receive feedback and guidance on their teaching. It is the student's responsibility to find access to ESL or EFL classrooms to complete this course.
Prerequisite(s): TESL 21 and TEFL 11 and one other TESL course; OR, TESL 21 and (TESL 31 or TESL 34) and one other TESL course; OR, TEFL 11 and one other TESL course.
Note: This option will not meet core accreditation requirements of TESL Canada, TESL Ontario, or Alberta TESL.

TOX — TOXICOLOGY

College of Arts and Science

TOX 200.3 — 1/2(3L)
Poisons and Pollutants
This unique course provides an overview of the history of toxicology told through stories and case studies covering pivotal and transformative events and discoveries through time. Topics include high profile poisonings in ancient and modern times, natural poisons, classical examples of industrial and environmental pollution, current issues, and important discoveries that led to the development of the field of toxicology and the creation of national regulatory agencies and guidelines. The use of case studies provides students with exciting and memorable examples of how poisons and pollutants have changed history and had important influences at regional, national and international scales. No previous knowledge of toxicology is required.
Permission of the Department.
Prerequisite(s): 18 credit units of university courses
TOX. 298.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

TOX. 299.6 — 1and2(6S)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

TOX. 300.3 — 1(3L)
General Principles of Toxicology
An introduction to the general principles of toxicology. Salient topics include: dose-response relationships, toxicokinetics, target toxicity, mechanisms of toxic action, general principles of toxicity testing, and mechanisms of action of antidotes.
Formerly: VBMS. 300
Prerequisite(s): BMSIC. 224.3/BIOL. 224.3 or PSHI. 208.6
Note: Open to all students. Students with credit for VBMS. 300 may not take this course for credit.

TOX. 301.3 — 1/2(3L)
Environmental Toxicology
A discussion of major environmental pollutants, their sources, interactions with atmospheric, terrestrial and aquatic systems, exposure of people, animals and other biota, and their dose-response relationships. Some of the physical and chemical changes induced in the environment by pollutants, contaminant fate and transport, and bioremediation are also discussed.
Prerequisite(s): BIOL. 120 and 121 and CHEM. 112.

TOX. 302.3 — 1/2(3L)
Introduction to Aquatic Toxicology
This course will provide an overview of the sources, fate and effects of toxicants in the aquatic environment. Material will center around prevailing issues reported in the popular news media associated with modern and legacy contaminants, and will illustrate how laboratory and field testing can be combined to assess and predict effects on organisms.
Prerequisite(s): BIOL. 120.3, BIOL. 121.3 and CHEM. 112.3
Note: TOX. 300.3 is recommended.

TOX. 310.3 — 1/2(3L-2T)
Radiation and Radionuclide Toxicology
Discusses natural and artificially produced radionuclides, units of radiation measurement, processes of decay and fission, interaction of radiation with matter, doses, risks of effects, and radionuclide transfer through ecosystems. Provides students with the knowledge to assess potential environmental impacts and health hazards from exposure to ionizing radiation from natural background, uranium mining and medical courses. A 2-hour tutorial once a week is included.
Prerequisite(s): BIOL. 120, BIOL. 121, and CHEM. 112 or PHYS. 115.

TOX. 320.3 — 1/2(3L)
Inhalation and Environmental Toxicology of Air Pollutants
Covers the sources, types, behavior and toxic effects of major air pollutants. It is based on four units: 1) the respiratory system as a target for toxic agents, mechanisms of damage and repair, assessment of respiratory function and standardized inhalation toxicity testing; 2) major classes of air pollutants, environmental behavior and effects; 3) climate change and the impact of human emissions of greenhouse gases; and 4) student seminars and rants on current topics in air pollution and inhalation toxicology.
Prerequisite(s): BIOL. 120.3, BIOL. 121.3, CHEM. 112.3, and CHEM. 115.3.

TOX. 321.3 — 1/2(3L)
Risk Assessment and Regulatory Toxicology
An introduction to human health and ecological risk assessment and an overview of Canadian and international regulatory requirements for the registration of new products, focussing on safety assessment/toxicity testing of pesticides and human pharmaceuticals, and basic principles of occupational health and industrial hygiene.
Prerequisite(s): 6 credit units BIOL and 6 credit units CHEM.
Note: TOX. 300 and TOX. 301 recommended.

TOX. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

TOX. 399.6 — 1and2(6S)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

TOX. 400.3 — 1/2(3L)
Quantitative Toxicology
This course provides students with the knowledge and tools required to design, evaluate and interpret toxicological studies. Students will learn how to identify putative causes of adverse effects, design experiments to evaluate these causes and how to estimate, and communicate about, how toxicant concentrations are linked to adverse effects. The course will include test designs at the organism, population and ecological levels of organization by using examples drawn from human and ecological toxicological disciplines. At the conclusion of this course, students will have gained an understanding of how human and ecological toxicity tests are designed, interpreted and communicated.
Prerequisite(s): TOX. 300, TOX. 301, and one of STAT. 245, STAT. 246 or PLSC. 214

TOX. 402.3 — 1/2(3L)
Systemic Toxicology
An overview of the types of injury produced in specific vertebrate, especially mammalian, organ systems by toxic agents and how such injury alters their functions and the overall effect on the body.
Prerequisite(s): TOX. 300.

TOX. 403.3 — 1/2(3L)
Biotoxins
An overview of the occurrence, mechanisms of action and clinical effects of commonly encountered plant toxins, mycotoxins, poisonous mushrooms, algal toxins, bacterial toxins, and zootoxins (venomous and poisonous snakes, fish, arthropods, and marine invertebrates).
Prerequisite(s): TOX. 300.

TOX. 412.3 — 1/2(3L)
Toxicology of Industrial Pollutants
An introduction to major categories, sources, routes of exposure, metabolism, mechanisms of action and toxic effects on people and ecosystems of common industrial organic chemicals, pesticides and metals. Emphasis will be placed on pollutants and industries of relevance to Canada.
Prerequisite(s): TOX. 300.
Note: TOX. 301 recommended.

TOX. 461.3 — 1/2(1L-2S/T)
Applied Toxicology
Provides students an opportunity to evaluate practical toxicology/ecotoxicology problems associated with Saskatchewan and northern ecosystems. Students will be presented with specific toxicological questions or case studies of current relevance which will be examined using research data and library facilities. Written and oral presentations will be required for each problem.
Prerequisite(s): TOX. 300 and 301.

TOX. 480.3 — 1/2(6P)
Toxicology Research
Students will work on a laboratory, field, library, or theoretical study under the supervision of a faculty member from the Toxicology Group. Each individual project requires approval of a research proposal by the Toxicology Chair in the term preceding registration before permission will be granted. A thorough, written report in thesis format describing the project and the summarized results submitted at the end of the project will be evaluated by the supervisor.
Permission of the department required.
Prerequisite(s): TOX. 300 and 301.
Note: Students with credit for TOX. 481 may not take this course for credit. This course is only open to Honours students in the fourth year of their Toxicology program, unless special permission has been granted by the Toxicology Chair.

TOX. 481.6 — 1and2(6P)
Toxicology Research
Students will work on a toxicology research project under the supervision of a faculty member from the Toxicology Group. Each project requires approval of a research proposal by the Toxicology Chair prior to registration. A written report in thesis format must be submitted at the end of the project.
Permission of the department required.
Prerequisite(s): TOX. 300 and 301.
Note: Students with credit for TOX. 480 may not take this course for credit. This course is only open to Honours students in the fourth year of their Toxicology program, unless special permission has been granted by the Toxicology Chair.
TOX. 490.0 — 1and2(15)
Toxicology Seminar
Seminar presentations by visitors, faculty and students on a broad selection of toxicity issues. Fourth-year students in the Undergraduate Toxicology Program will be required to present one seminar and attend all seminars throughout the full academic year.
Prerequisite(s): TOX. 300 and 301.

TOX. 498.3 — 1/2(35)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

TOX. 499.6 — 1and2(65)
Special Topics
Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.

UKR — UKRAINIAN

College of Arts and Science

UKR. 114.3 — 1/2(3L-1T)
Elementary Ukrainian I
Develops elementary proficiency in speaking, reading, understanding, and writing Ukrainian. Basic grammatical structures, sound patterns, spelling and vocabulary will be studied. Students will be introduced to Ukrainian life and culture, politics, geography and society.
Formerly: UKR. 115.
Note: Students who have completed Ukrainian 20 (Grade 11 Ukrainian) or have completed Ukrainian 30 (Grade 12 Ukrainian), may not take this course for credit. Students who have some background in Ukrainian or who have taken any other courses in Ukrainian and native speakers of Ukrainian are not allowed to register in this course. Students with credit for UKR. 115 may not take this course for credit.

UKR. 117.3 — 1/2(3L-1T)
Elementary Ukrainian II
This course is a continuation of UKR. 114. It develops elementary proficiency in speaking, reading, understanding, and writing Ukrainian. Basic grammatical structures, sound patterns, spelling and vocabulary will be studied. Students will be introduced to Ukrainian life and culture, politics, geography and society. Students will develop the ability to understand spoken Ukrainian and respond to it within certain everyday topics.
Formerly: UKR. 115.
Prerequisite(s): UKR. 114.
Note: Students who have completed Ukrainian 30 may not take this course for credit. Students who have a background in Ukrainian or have taken any other Ukrainian courses and native speakers of Ukrainian are not allowed to register in this course. Students with credit for UKR. 115 may not take this course for credit.

UKR. 214.3 — 1/2(3L-1T)
Intermediate Ukrainian I
This course will concentrate on improving speaking, reading, and writing skills by further expanding the basic syntactic, morphological, lexical, and phonetic structure of modern Ukrainian. Students will be introduced to contemporary life and culture of Ukraine.
Formerly: UKR. 215.
Prerequisite(s): UKR. 114 and 117.
Note: Native speakers of Ukrainian are not allowed to register in this course. Students with credit for UKR. 215 may not take this course for credit.

UKR. 217.3 — 1/2(3L-1T)
Intermediate Ukrainian II
This course builds on skills acquired in UKR. 214. Emphasis is placed on improving oral and written skills through the extensive study of Ukrainian grammar. This course will continue providing students with a view of contemporary life and culture.
Formerly: UKR. 215.
Prerequisite(s): UKR. 214.
Note: Native speakers of Ukrainian are not allowed to register in this course. Students with credit for UKR. 215 may not take this course for credit.

UKR. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

UKR. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

UKR. 314.3 — 1/2(3L-1T)
Intermediate Ukrainian I
Selected readings, composition exercises and a grammar review focusing on phonetics and morphology are used to improve the student’s command of oral and written Ukrainian. There is no translation and the course is conducted entirely in Ukrainian.
Formerly: UKR. 315.
Prerequisite(s): UKR. 214, 217.
Note: Native speakers of Ukrainian may not take this course for credit.

UKR. 317.3 — 1/2(3L-1T)
Advanced Ukrainian II
Selected readings, composition exercises and a grammar review are used to improve the student’s command of oral and written Ukrainian.
Formerly: UKR. 316.
Prerequisite(s): UKR. 214, 217.
Note: Native speakers of Ukrainian may not take this course for credit.

UKR. 398.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

UKR. 399.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

UKR. 498.3 — 1/2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

UKR. 499.6 — 1and2(3S)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

VBMS — VETERINARY BIOMEDICAL SCIENCES

Western College of Vet Med

VBMS. 202.4 — 34L over Q1,3and4
Vernary Biochemistry
Biochemical topics with special relevance to function at the level of the whole organism will be presented. There will be an emphasis on comparative metabolic aspects of the major food and companion animal species, with special attention to metabolic differences that relate to performance, productive capacity and disease conditions.
Formerly: BIOC. 207.
Restriction(s): Admitted to Year 1 of the Doctor of Veterinary Medicine program.
Note: Students with credit for BIOC. 207 will not receive credit for this course.

VBMS. 208.1 — 5L-25T over Q1,2,3and4
Biomedical Rounds
Designed to facilitate integration of learning materials within biomedical sciences and of biomedical sciences with other components in the veterinary medical curriculum.
Restriction(s): Admitted to Year 1 of the Doctor of Veterinary Medicine program.

VBMS. 220.8 — 69L-139P over Q1,2,3and4
Veterinary Anatomy
A general introduction to the anatomy of the common large and small domestic animal species with emphasis on areas of particular functional and clinical significance or biological importance.
Formerly: VBMS. 210.7
Restriction(s): Admitted to Year 1 of the Doctor of Veterinary Medicine program.

VBMS. 222.3 — 28L-18T over Q4
Veterinary Neuroscience
An overview of the structure and function of the nervous system of domestic animals, with emphasis on general clinical applications.
Formerly: VBMS. 212.3
Restriction(s): Admitted to Year 1 of the Doctor of Veterinary Medicine program.
VBMS. 223.2 — 3OL-2P over Q1,2,3and4
Veterinary Embryology
Emphasizes the study of embryonic development, including organogenesis and congenital anomalies. An introduction to teratology is also given.
Formerly: VBMS. 213.2
Restriction(s): Admitted to Year 1 of the Doctor of Veterinary Medicine Program.

VBMS. 224.9 — 106L-58P-22T over Q1,2,3and4
Veterinary Physiology
The function of the physiological systems of mammals is studied with emphasis upon the domestic animals and veterinary medical aspects. After an introductory consideration of basic cell physiology and hematology, the physiology of respiratory, cardiovascular, gastrointestinal, renal and endocrine systems is studied. In the laboratory the principles of physiology are demonstrated through experiments and observation on the normal animal and with computer simulations.
Formerly: VBMS. 221.8 and VBMS. 320.2
Restriction(s): Admitted to Year 1 of the Doctor of Veterinary Medicine.

VBMS. 231.4 — 45L-53P over Q1,2,3and4
Veterinary Microscopic Anatomy
A general and comparative overview of the microscopic anatomy of vertebrate cells, tissues and organs emphasizing functional relationships in animals of veterinary importance.
Formerly: VBMS. 211.4
Restriction(s): Admitted to Year 1 of the Doctor of Veterinary Medicine program.

VBMS. 305.2 — 35L over Q1and2
Veterinary Pain and Analgesia
Examines mechanisms, physiology, impacts, and recognition and treatment of animal pain.
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.

VBMS. 314.3 — 1(3L-2P)
Comparative Anatomy of Domestic Animals
A general review of the macroscopic and microscopic anatomy of the domestic animals with emphasis on those structures, such as the digestive and reproductive systems, that are of particular importance to students of Animal Science.
Restriction(s): Enrolment in the College of Agriculture and Bioresources.

VBMS. 324.3 — 1(3L-3P)
Animal Physiology I
To provide undergraduate students with an understanding of mammalian and avian physiology, with major emphasis on domestic farm animals. Topics include hematology, respiration, the cardiovascular system, renal physiology and monogastric digestion.
Restriction(s): Enrolment in the College of Agriculture and Bioresources.

VBMS. 325.3 — 2(3L-3P)
Animal Physiology II
To provide undergraduate students with an understanding of mammalian and avian physiology, with major emphasis on domestic farm animals. Topics include ruminant digestion, endocrinology, pre-natal growth, reproduction and lactation.
Restriction(s): Enrolment in the College of Agriculture and Bioresources.
Prerequisite(s): VBMS. 324

VBMS. 333.6
Veterinary Pharmacology
To provide a basic understanding of drug pharmacokinetics (what the body does to the drug - the processes of absorption, distribution, metabolism and elimination) and pharmacodynamics (the effect of the drug on the body or the pathogen). Drugs that are clinically important in veterinary medicine will be emphasized.
Formerly: VBMS. 323.3
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine Program.

VBMS. 334.3 — 48L over Q3and4
Veterinary Toxicology
To provide undergraduate students with an understanding of toxic agents, mechanisms of action, manifestations in affected animals, principles of treatment, food safety, and public health concerns of agents commonly encountered in western Canada. Topics including metals, pesticides, plants, household products, feed additives and industrial chemicals will be covered in the course. Instruction in the course will be provided from a clinical perspective with a major case-based component.
Formerly: VBMS. 434.3
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.

Note: Students with credit for VBMS. 434.3 will not receive credit for this course.

VBMS. 422.1 — (3L-3P)
Current Issues in Regulatory Veterinary Pharmacology
Veterinary drug use is highly regulated in Canada. Current topics in the field of regulatory pharmacology will be discussed, including emerging issues affecting drug use and regulation, challenges when designing and implementing veterinary regulations, and the effects of veterinary drug regulations on veterinarians, animal populations and public health.
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine Program.

VBMS. 431.1 — 6L-15-1P-4T
Advanced Veterinary Embryology
Mechanisms of Congenital Anomaly Development
Will provide an in-depth examination of congenital anomalies and mechanisms of their development. Comparison of normal and abnormal structure and development will be made of several anomalies. Teratology of chosen congenital anomalies will be covered through presentation, discussion, and problem solving.
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

VBMS. 435.1 — 12L over Q4
Drugs and the Performance Horse
Using a case-based approach, this course will cover the history of doping in horse sports, the equine sanctioning organizations and their current drug rules, drug detection methodology, and principles of drug depletion.
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

VBMS. 436.3 — 48L over Q1and2
Veterinary Clinical Pharmacology
Covers pharmacology as it applies to the treatment of clinical disease in animals. Principles of clinical pharmacokinetics and pharmacodynamics, drug interactions, and adverse drug reactions will be emphasized. Lectures on specific groups of drugs are delivered with a system-oriented approach, emphasizing rational therapeutic options.
Formerly: VBMS. 426.2
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

VBMS. 437.1 — 12L-6P over Q4
Pain and Analgesia in Non-Mammalian Animals
Provides basic knowledge of the pathways and physiological mechanisms of pain in non-mammalian vertebrates and some invertebrates are provided. Recognition of pain and appropriate treatment, including relevant pharmacology are covered along with clinical application.
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

VBMS. 439.2 — 2(20L-4P over Q4)
Fish Diseases
Introduces students to the many aspects of fish diseases. Students will get an overview on fish and its environment, as well as on fish pathogens and parasites, and environmental fish diseases. This course conforms to the academic requirements and standards for graduate courses, including the rules of Academic Honesty and Student Appeals in Academic Matters. For information, please consult the Office of the University Secretary's website.
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine program.
VINT — VETERINARY INTERDEPARTMENTAL

VINT. 210.1 — 14S over Q3 and Q4
Survey of Veterinary Medicine
A series of seminars introducing the student to the diversity of the veterinary profession. Topics include career opportunities in veterinary medicine, professionalism, ethics, the human-animal bond, animal rights and welfare, etc.
Formerly: VINT. 201.1
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

VINT. 400.2 — 24T over Q1,2,3 or 4
Selected Topics
Offered occasionally in special circumstances to cover in-depth topics not covered in regularly scheduled courses. These may include research projects and off-campus courses.
Permission of the Third Year Teachers and Examiners Committee
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine Program.
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

VINT. 410.1 — 12L over Q4
Business Topics in Professional Practice
Will cover a number of business topics that are important to students as they transition into their professional careers.
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine Program.

VINT. 415.1
Communications
This 1 credit course is designed to build the basic communication skills of the DVM program and allow opportunity for students to practice and refine their skills using simulated clients in a controlled environment. Particular emphasis will be placed on obtaining a full history, dealing with euthanasia, disclosing medical errors, and other common scenarios in which communication skills are essential.
Prerequisite(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine (D.V.M.) Program.

VINT. 438.1
Research Selected Topics
Will allow Veterinary Medical students to undertake research projects of a specified nature during their program.
Permission of third year teachers and examiners is required.

VINT. 439.2 — 24T over Q1,2,3 or 4
Research Projects
Will allow Veterinary Medical students to undertake research projects of specified nature during their program.
Permission of Third Year Teachers and Examiners Committee
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine Program
Note: Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

VINT. 440.2
Mindful Veterinary Practice
A practical, experiential, and academic exploration of mindfulness as it relates to the practice of veterinary medicine. Upon completion, students will be able to implement mindfulness-based strategies to enhance interpersonal communication, mitigate stress and improve attention and working memory capacity, thereby facilitating patient care and enhancing their own career satisfaction.
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine Program.

VINT. 442.2 — 12L-12P over Q4
Communications Elective
This Third Year elective is designed to build from the basic communication skills taught in Year 1 of the DVM Program and allow opportunity for students to practice and refine their skills using simulated clients in a controlled environment. Particular emphasis will be placed on dealing with euthanasia, disclosing medical errors, conflict resolution and other common scenarios in which communication skills are essential.
Formerly: VINT. 441
Restriction(s): Successful completion of Year 2 of the D.V.M. program.
Note: Students with credit for VINT. 441 cannot receive credit for this course.

VINT. 580.32 — Q1,2,3and4(32 weeks)
Applied Veterinary Medicine
Full-time course load for Year 4 WCVM students. Provides students an opportunity to develop, integrate and apply veterinary medical knowledge and skills in a clinical setting under faculty supervision. Consists of 32 weeks of clinical and other applied experiences. Most of these are clinical rotations in the Veterinary Teaching Hospital but experiences outside of WCVM are permitted.
Restriction(s): Successful completion of Year 3 of the Doctor of Veterinary Medicine program.

VLAC — LARGE ANIMAL CLINICAL SCIENCES

VLAC. 211.3 — 55L-56P over Q1,2,and3
Animal Management and Production I
Provides a basic foundation of knowledge in the welfare, behaviour, management and nutrition of the common animal species including companion animals, emphasizing the role of the veterinarian. Concepts of animal welfare, herd management, health and production interactions, and the common management practices of various animal industries will be emphasized. Laboratory exercises will emphasize hands-on experience in animal handling and restraint. Laboratories will also involve feed evaluation, ration formulations and nutritional case studies in livestock and companion animals.
Formerly: VLAC. 210.5
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.
Note: Students with credit for VLAC. 200 and VLAC. 210 will not receive credit for this course.

VLAC. 310.3
Animal Management and Production II
Provides a basic foundation of knowledge in the behaviour, husbandry, nutrition and breeding of the common animal species, featuring the veterinary aspects of the various animal industries and the contemporary role of the veterinarian in servicing them. Concepts of herd management, health and production interactions, and the makeup of various animal industries will be emphasized for the various species groups.
Formerly: VLAC. 300.5
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.

VLAC. 320.2 — 32L over Q1and2
Evidence based Medicine
Students will learn how to apply the concepts of evidence-based medicine to veterinary practice. The course provides students with the basic skills necessary to evaluate the scientific literature with emphasis on clinical trials, choose diagnostic tests and interpret the results, and investigate and control outbreaks of disease. In-class exercises will provide students with practical experiences for each of these core objectives.
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.

VLAC. 411.3 — Q3(3L)
Diseases of Livestock
Provides an overview of animal disease principles in which disease mechanisms, body response to disease, diagnosis, control and prevention are emphasized. Special attention is given to infectious diseases of cattle that are of economic importance to the Saskatchewan livestock industry.
Restriction(s): Enrolment in the College of Agriculture and Bioresources.
Doctor of Veterinary Medicine program.

Ventilation, meat production, and farm economics also enhance the student’s understanding of disease and production courses. The elective will build on material presented in the core swine comparative approach will be used, and the content diagnosis, control and prevention. A case oriented, diseases, with particular emphasis on clinical surveillance and methods of control/prevention. This course will introduce veterinary students to medicine, records, economics, and nutrition.

Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

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**VLAC. 482.5 — 64L-24P over Q1and2  
Food Animal Production Medicine**  
A series of lectures that deal with the specific diseases of domestic agricultural animals (cattle, sheep, goats, pigs, and poultry). Emphasizes the etiology, epidemiology, pathogenesis, clinical and laboratory findings, diagnosis, treatment and control of the common diseases which occur in domestic farm animals. Some lectures deal with the important exotic diseases that are potential threats to the livestock industry.  
Formerly: Part of VLAC. 452.2 and VLAC. 472.4  
Restriction(s): Successful completion of Year 2 of the Veterinary Medicine program.  
Note: Students with credit for VLAC. 452 or VLAC. 472 will not receive credit for this course.

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**VSAC — SMALL ANIMAL CLINICAL SCIENCES**

**Western College of Vet Med**

**VSAC. 205.1 — 8T over Q1and2  
Basic Surgical Skills**  
A web based instruction manual will be used for a self-study and tutorial based approach to learning and mastering of basic surgical skills. Students will have access to computerized lessons demonstrating basic surgical skills that they will be responsible for learning at their own pace using home-based models. Instructors will be available during weekly scheduled tutorial times to provide individualized help if required.  
Formerly: Part of VSAC. 350.2  
Restriction(s): Admitted to Year 1 of the Doctor of Veterinary Medicine program.

**VSAC. 356.1  
Veterinary Anesthesiology**  
The core component is designed to teach the fundamental principles of veterinary anesthesia. It will focus on pharmacology, physiology and pathophysiology as it relates to anesthesia of domestic species with commonly encountered conditions.  
Formerly: Part of VSAC. 350.2  
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.

**VSAC. 357.1 — 24L-24P over Q4  
Surgical Principles**  
An introduction to the science and pathophysiology of veterinary surgery. Multiple species are used to develop an understanding of the fundamental principles and technical skills associated with the management of surgical conditions. The course is a combination of lectures and laboratory exercises.  
Formerly: Part of VSAC. 350.2  
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.

**VSAC. 362.2 — 24L-8P over Q1and2  
Veterinary Medical Imaging**  
Teaches the fundamentals of veterinary medical imaging, emphasizing x-ray and ultrasound, through a series of illustrated lectures and supervised film-reading laboratories. The course focuses on the basic principles of image analysis and interpretation through developing an understanding of clinical anatomy.  
Formerly: VSAC. 351.2  
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.

**VSAC. 376.3  
Clinical Examination and Diagnosis**  
A series of lectures and laboratories dealing with clinical examinations of the domestic animal species, localizing disease within a body system based on the clinical exam, exploring the diagnostic techniques available for patient evaluation and using the problem oriented approach to making a diagnoses. Emphasis will be placed on the importance of taking an accurate history and performing a thorough physical examination and on comparative aspects of clinical examination.  
Formerly: VSAC. 371.4  
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.

**VSAC. 410.1 — 24P over Q1and2  
Surgical Exercises**  
An introduction to the practical aspects of veterinary surgery prior to entering clinics. The student is expected to demonstrate solid basic surgical skills and peri-operative patient management. Multiple species are used to develop an understanding of the fundamental principles and technical skills associated with the management of surgical conditions.  
Formerly: VSAC. 400.2  
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

**VSAC. 411.2 — 24L over Q3  
Emergency and Critical Care Medicine**  
Students with an interest in emergency and critical care medicine can obtain further training and in-depth knowledge not available in regular medicine, surgery and anaesthesia courses. The course material will provide the student with the ability to deal with critical patients with specific needs and requirements. The course will provide a foundation for a final year critical care rotation.  
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

**VSAC. 431.2 — 24L over Q4  
Small Animal Oncology**  
A series of lectures and laboratories dealing with clinical examinations of the domestic animal species, localizing disease within a body system based on the clinical exam, exploring the diagnostic techniques available for patient evaluation and using the problem oriented approach to making a diagnoses. Emphasis will be placed on the importance of taking an accurate history and performing a thorough physical examination and on comparative aspects of clinical examination.  
Formerly: VSAC. 371.4  
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.

**VSAC. 433.1 — 12L  
Enrichment Companion Animal Ophthalmology**  
Aimed at providing a deeper understanding of ocular anatomy and physiology, as well as diagnostics, pathophysiology, therapeutics, and management of ocular disease in canine, feline, equine, and exotic species.  
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine program.  
Note: Not offered in 2011-12.

**VSAC. 435.2 — 24L over Q4  
Applied Clinical Small Animal Neurology**  
A discussion of problems in veterinary neurology. Cases from WCVM files and published literature will be used to practice neuroanatomic lesion localization and to illustrate functional abnormalities of the nervous system. Extensive use of in-hospital cases, case material and videos.  
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

**VSAC. 437.2 — 20L-4P over Q4  
Small Animal Oncology**  
Will focus on the clinical presentation, diagnosis and staging, treatment options, and prognosis for common or important cancers in dogs and cats. The emphasis will be on establishing an appropriate diagnostic approach and developing knowledge necessary to recommend optimal cancer therapy for tumours that will be commonly encountered in veterinary practice. Laboratory sessions will allow the student to learn common diagnostic techniques, interpret advanced imaging of cancer and become familiar with common chemotherapeutic agents.  
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

**VSAC. 439.2 — 24L over Q4  
Small Animal Medical Imaging**  
Comprised of a series of illustrated and interactive lectures that deal with medical imaging diagnosis of diseases of companion animals (dogs and cats). This will be a relatively comprehensive course in medical imaging, building on the concepts and examples to which the student was exposed in the core course (VSAC. 362). A wider variety and range of case examples and diagnostic techniques will be presented, including special procedures and multiple imaging modalities being covered in greater depth. In addition to prepared material, current VTH case material will be included for illustration and discussion.  
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

**VSAC. 441.1 — 12L over Q3  
Advanced Small Animal Anesthesiology**  
Further in-depth information is provided to enhance material presented in the core veterinary anesthesia program and is aimed at small animals alone. Expansion on dealing with sicker patients, new techniques and further information on monitoring equipment and patient assessment is provided.  
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

**VSAC. 443.1 — 15L over Q3  
Small Animal Behavior**  
An introductory lecture course covering the common behavioral problems in dogs and cats. Normal behavior and training will be discussed but the emphasis will be on diagnostic evaluation of dogs and cats with common behavioral abnormalities. Behavior modification/training and medical and surgical treatments will be discussed for each disorder as will important aspects of client communication and education.  
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine Program.
Doctor of Veterinary Medicine program.

Restriction(s):

The student will take part in didactic lectures and laboratories.

**VSAC. 445.2 — 10L-5S-9P over Q4**
Small Animal Clinical Nutrition

Will introduce the student to the principles of small animal clinical nutrition. They will explore the vital role that nutrition plays in wellness and in disease management. This is accomplished through a lecture series given by the instructor and invited industry representatives, assigned case studies and nutrition project. At the end of the elective, students will present their assigned cases and completed projects to the group.

Restriction(s):

Successful completion of Year 2 of the Doctor of Veterinary Medicine Program.

**VSAC. 447.2 — 24L**
Small Animal Medicine Surgery Practice

A detailed case-based discussion of important or challenging diseases encountered in small animal practice that are either only superficially covered or not covered in other small animal courses. A detailed discussion of how to localize the disease to the appropriate body system, the diagnostic approach, interpretation of relevant lab data and diagnostic tests, and a more in-depth discussion of the different treatment options and prognosis for the medical or surgical disorder will be emphasized.

Restriction(s):

Successful completion of Year 2 of the Doctor of Veterinary Medicine Program.

- **Note:** Not offered in 2011-2012.

**VSAC. 449.2 — 24L over Q3**
Small Animal Clinical Orthopedics

A case-based approach to small animal orthopedics. Clinical cases will be used to practice lameness localization, illustrate abnormalities of the skeletal system of dogs and cats, and discuss principles of fracture management. In-hospital cases, videos and medical imaging will be used. Two laboratory sessions (on cadavers) will provide experience in fracture repair techniques as well as stifle arthroscopy and stabilization for cruciate deficiency.

Restriction(s):

Successful completion of Year 2 of the Doctor of Veterinary Medicine Program.

**VSAC. 454.1 — 2(12L-2P over Q3)**
Companion Animal Ophthalmology

This course is aimed at providing clinical and surgical experience in companion animal ophthalmology. The student will take part in a surgery laboratory and will be introduced to clinical ophthalmology cases followed by group discussion on the pathophysiology, therapeutics, and management of ocular diseases in the canine and feline.

Restriction(s):

Successful completion of Year 2 of the Doctor of Veterinary Medicine Program.

**VSAC. 455.1 — 2(8L-4P over Q3)**
Equine Ophthalmology

This course is aimed at providing a deeper understanding of ocular anatomy and physiology, as well as, diagnostics, pathophysiology, therapeutics, and management of equine ocular disease. The student will take part in didactic lectures and laboratories.

Restriction(s):

Successful completion of Year 2 of the Doctor of Veterinary Medicine Program.

**VSAC. 456.1 — 2(12L-2P over Q3)**
Large Animal Medical Imaging

Will provide a comprehensive review of large animal (primarily equine) medical imaging. It will cover the basic equipment, radiography, positioning, and interpretation of radiographic images. If time allows a brief overview of nuclear scintigraphy, computed tomography, ultrasound and MRI may be provided. (Anatomical review is recommended to gain maximum benefit from this course).

Restriction(s):

Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

Prerequisite(s):

VSAC. 362

**VSAC. 457.1 — 2(8S-2P over Q4)**
Small Animal Dermatology

This is a case-based seminar course intended to familiarize students with the work-up and treatment of patients with selected skin and ear diseases. More in-depth discussion of treatment options is offered than in the core curriculum. The laboratory presents some common dermatologic conditions and their associated laboratory specimens. Advance preparation of case material is required.

Restriction(s):

Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

**VSAC. 458.1 — 12L-12P over Q3**
Veterinary Dentistry

A comprehensive course covering applied dental (oral cavity) anatomy, embryology, clinical signs, diagnostic features, treatment planning, principles, prognosis, and post-operative management (both short and long term) of oral diseases. The emphasis is on establishing and identifying the key criteria necessary for diagnosis, appropriate treatment planning and home care to ensure long-term success. The laboratory sessions will allow the students to learn principles, imaging techniques and interpretation, and the necessary technical skills required for the management and diagnosis of entry level surgical cases.

Restriction(s):

Successful completion of Year 1 of the Doctor of Veterinary Medicine program.

- **Note:** Students with credit for VSAC. 358.1 will not receive credit for this course.

**VSAC. 459.1 — 16L over Q4**
Exotic Animal Medicine and Surgery

An introduction to basic husbandry and common clinical presentations for common exotic pets. The species covered will include common avian pets, small mammals and reptiles primarily lizards and turtles. The emphasis will be on common conditions that are most commonly seen in general practice.

Formerly:

Part of VTRA. 443.2

Restriction(s):

Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

**VSAC. 462.1 — 15L‑6P over Q3**
Veterinary Ophthalmology

A comprehensive course designed to provide the veterinary student with a basic knowledge and skill level pertaining to ocular disease in large and small animals. The course will cover topics such as ocular anatomy and physiology, the basic components of the ophthalmic examination, causes of red eye, vision and blindness, eyelid, third eyelid, and nasolacrimal disease, ocular neoplasia, and ophthalmic surgery techniques for general practice.

Laboratories will cover ophthalmic examination in small animals (dogs and cats) and in the horse.

Restriction(s):

Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

**VSAC. 463.5 — 62L-21P over Q1and2**
Small Animal Medicine and Surgery I

A comprehensive course covering the clinical signs, diagnostic features, appropriate management, and prognosis of common and/or important small animal diseases affecting each body system. The emphasis is on establishing a solid diagnostic approach to cases and developing the clinical skills necessary to manage medical and surgical cases. Laboratory sessions will allow the student to learn and practice the common diagnostic techniques necessary to make a clinical diagnosis. This course will cover medical and surgical diseases of the respiratory, cardiac, gastrointestinal and nervous systems as well as surgery of the ears and reconstructive surgery of the skin.

Formerly:

A combination of VSAC. 453.2 and VSAC. 473.3.

Restriction(s):

Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

Note:

Students with credit for VSAC. 453 or VSAC. 473 will not receive credit for this course.

**VSAC. 465.4 — 65L over Q3and4**
Small Animal Medicine and Surgery 2

A comprehensive course covering the clinical signs, diagnostic features, appropriate management, and prognosis of common and/or important small animal diseases affecting each body system. The emphasis is on establishing a solid diagnostic approach to cases and developing the clinical skills necessary to manage medical and surgical cases. Laboratory sessions will allow the student to learn and practice the common diagnostic techniques necessary to make a clinical diagnosis. This course will cover medical and surgical diseases of the urogenital and endocrine systems, dermatology, oncology, immune-mediated disorders, orthopedics, emergency and critical care.

Formerly:

A combination of VSAC. 453.2 and VSAC. 473.3.

Restriction(s):

Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

Note:

Students with credit for VSAC. 453 or VSAC. 473 will not receive credit for this course.

**VSAC. 475.1 — 12L over Q4**
Advanced Large Animal Anesthesiology

Further in-depth information is provided to enhance material presented in the core veterinary anesthesia program and is aimed at large animals alone. Expansion on dealing with sicker patients, new techniques and further information on monitoring equipment and patient assessment is provided relevant to large animals. Includes wildlife and game ranch immobilization techniques.

Restriction(s):

Successful completion of Year 2 of the Doctor of Veterinary Medicine Program.

**VSAC. 477.1**
Topics in Feline Internal Medicine Elective

This one credit course will allow students with an interest in feline medicine to expand on their current knowledge and skills. Emphasis will be placed on common feline health problems and on disorders that are not well covered in the current curriculum.

Prerequisite(s):

Successful completion of Year 2 of the Doctor of Veterinary Medicine (D.V.M.) Program. Enrollment will be limited to 12 students.
VTMC — VETERINARY MICROBIOLOGY

VTMC. 230.2 — 27L over Q4
Veterinary Immunology
An introduction to the basic aspects of humoral and cell-mediated immunity, the role of immunological reactions in infectious disease pathogenesis, hypersensitivity, and autoimmune disease. Students will study the principles of immunity to bacteria, viruses and parasites and the fundamentals of vaccination. Students will also be familiarized with diagnostic techniques for assessing the immune system and for diagnosis of immune mediated disease.
Formerly: VTMC 330.2
Restriction(s): Admitted to Year 1 of the Doctor of Veterinary Medicine program.

VTMC. 238.2 — 26L over Q3and4
Disease Ecology and Epidemiology
Introduces the basic features of disease, including causation, transmission and effects at the individual animal and population level. Emphasis will be placed on disease as an ecological factor and on basic approaches for describing and quantifying disease in populations.
Formerly: VTMC 236.3
Restriction(s): Admitted to Year 1 of the Doctor of Veterinary Medicine program.

VTMC. 334.2 — 24L‑8P over Q1
Veterinary Virology
An introduction to the comparative biology of viral infections, taught from the perspective of virus families and associated diseases. This includes the general principles of virus replication, spread, pathogenesis and control.
Formerly: VTMC 333.2
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.

VTMC. 336.2
Veterinary Parasitology
The course covers helminth, arthropod and protozoan parasites, including zoonoses, of domestic animals, with emphasis on those important in western Canada. The course includes aspects of life cycles, pathogenesis, diagnosis, epidemiology, treatment and prevention. Text and images for the course are available at www.wcvmlearnaboutparasites.usask.ca (password protected), and multiple choice quizzes through U of S Blackboard.
Formerly: VTMC 338.3
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.

VTMC. 340.3
Veterinary Public Health
This course explores the role that the veterinary profession (private and public practice) plays in protection of public health in Canada. From a One health perspective, we will discuss topics including disease surveillance and animal sentinels, risk analysis and communication, occupational health and safety, infection control, companion animal zoonoses, food safety (rendering, drug residues, antimicrobial resistance), food-borne illness outbreak investigations, reportable and foreign animal diseases, and disaster preparedness and emergency response. The course involves practical "laboratories", group assignments and computer-based exercises, as well as guest speakers from academic and government agencies.
Formerly: Part of VTMC 236.3
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.

VTMC. 347.3 — 32L‑44P over Q1and2
Microbiology of Pathogenic Microorganisms
Provides basic knowledge of the common bacterial and fungal diseases of animals, with emphasis on those present in North America. Coverage of specific diseases/organisms include: distribution, epidemiology, mechanisms of pathogenesis, immunity, diagnosis, and prevention. Laboratory sessions emphasize the proper selection, collection and transportation of bacteriologic and fungal specimens. Basic processing of clinical/pathological specimens and identification of bacteria and fungal organisms commonly present in those specimens is offered.
Formerly: VTMC. 337.3
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.

VTMC. 431.2 — 16L‑4P
Molecular Diagnostics Methods and Applications in Veterinary Medicine
An introduction to molecular diagnostic methods including the concepts underlying nucleic acid sequencing, manipulation, detection, quantification, and genomics and bioinformatics. Concepts will be illustrated by drawing on specific applications of these techniques in veterinary medicine with an emphasis on infectious disease diagnosis and research.
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

VTMC. 441.1 — 6L‑6S over Q3
Emerging and Re-emerging Diseases
A course designed to familiarize students with the reasons new diseases emerge in human and animal populations, the molecular, microbiological, and epidemiological tools used to investigate such outbreaks, and strategies to combat them. The course will include didactic lectures as well as seminars on selected emerging disease outbreaks.
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine program.

VTPA — VETERINARY PATHOLOGY

VTPA. 346.3 — 30L‑22P over Q3and4
Veterinary Clinical Pathology
A case-based course designed to attain proficiency in the interpretation of laboratory findings and integration of these with historical and physical findings in order to diagnose disease. The format includes self-study, interactive lectures and case discussions, and applied laboratory techniques.
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.
Note: Students with credit for VTPA. 446.2 may not take this course for credit.

VTPA. 352.3 — 32L‑32P over Q1and2
Veterinary General Pathology
Basic pathogenic mechanisms that underlie disease processes are discussed. Functional derangements are correlated with structural alterations. The following topics are considered: cell and tissue injury, disturbances of circulation and hemostasis, inflammation, healing and repair, immunopathology, disturbances of growth and neoplasia.
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.
Note: Students with credit for VTPA. 342.3 may not take this course for credit.

VTPA. 353.5
Veterinary Systemic Pathology
The principles discussed in general pathology will be utilized in the consideration of specific diseases which affect the body systems of domestic animals. Principles of pathogenesis and diagnosis will be stressed.
Restriction(s): Successful completion of Year 1 of the Doctor of Veterinary Medicine program.
Note: Students with credit for VTPA. 343.5 may not take this course for credit.

VTPA. 412.3 — (3L‑2P)
Diseases of Poultry
Designed to provide information on the causes, signs and control of common poultry diseases for students with little or limited background in the anatomy, physiology, microbiology and pathology of the avian species. Emphasizes the effect of disease as a limiting factor in efficient poultry production and the control of disease on a modern poultry farm. Given in alternate years.
Restriction(s): Enrolment in the College of Agriculture and Bioresources.

VTPA. 421.1 — (3L‑3P)
Veterinary Cytology
A course designed to introduce the students to veterinary cytology and will focus primarily on the types of lesions and samples that veterinarians may encounter in routine practice. The course will be taught using a body systems approach and will include lecture and virtual microscopy laboratories.
Restriction(s): Successful completion of Year 2 of the Doctor of Veterinary Medicine Program.
WGST — WOMEN’S AND GENDER STUDIES

College of Arts and Science

WGST. 112.3 — 1/2(3L)
Introduction to Womens and Gender Studies
Introduces students to selected research and writings in the area of Women's and Gender Studies, emphasizing the diversity of debates informing the field. Examines changing gendered positions and representations across regional, national and international perspectives. Special attention will be given to experiences of gender inequities from the Canadian context.

Formerly: WGST. 110.6
Note: Students with credit for WGST. 110.6 will not receive credit for this course. This course may be used as either Humanities or Social Science credit.

WGST. 201.3 — 1/2(3L/2L‑1T)
Images of Gender and Sexuality in Popular Culture
An introduction to the ways gender, sexuality and identity are represented and produced in popular culture, mainstream media and populist feminism. Focuses on critical analysis and intervention, the production of culture and a variety of cultural forms, mainstream media and representational practices.

Prerequisite(s): Completion of 30 credit units at the university level or permission of the WGST Coordinator.
Note: May be used as Humanities or Social Science credit.

WGST. 204.3 — 1/2(3L)
Gender and Popular Music
The relationship between gender, sexuality, and music; four main themes to be explored, namely rock culture, masculinities and music, femininities and music, and image and identity in music.

Prerequisite(s): 30 credit units at the university level or permission of the WGST Coordinator.
Note: May be used as Humanities or Social Science credit.

WGST. 210.3 — 1/2(3L)
Gendered Perspectives on Current Events
Interdisciplinary examination of current events relating to gender, race, sexuality, ethnicity, ability and class. Special attention will be paid to how recent/ongoing wars, ecological crises, terrorism, economic recession, etc., impact the lives of women, children and subaltern men, and how such events are represented in mainstream and alternative media.

Prerequisite(s): Completion of 30 credit units at the university level or permission of the WGST Coordinator.
Note: May be used as Humanities or Social Science credit.

WGST. 220.3 — 1/3(3L)
Queering the Terrain Cultural Space and Queer Theory
Locates queer embodiments, performances and projects in local, national and transnational contexts. What is made visible and invisible in performance theory, constructions/appropriations of the deviant, and the complex shifts in queer space taking place through globalization? How are effects produced as queer across interwoven spaces?

Permission of the instructor required.
Prerequisite(s): Completion of 30 credit units at the university level.
Note: WGST 110 or 112 is strongly recommended.

WGST. 235.3 — 3L
Representation Embodiment and the City Part I Saskatoon
Initiates international study locally, grounding experiential learning in Saskatoon with a theoretical framework that addresses the interventions that artists/activists seek to make in urban spaces. The course will explore five themes: Gender and Art-making; Memorialization; Metropolis as Meeting Place of Bodies; Racialization of Urban Space; and Spatial Relations.

Prerequisite(s): 30 credit units at the University.
Note: WGST 110 or 112 is recommended.

WGST. 240.3 — 2(3L)
Contemporary Body Projects Refashioning the Self in Everyday Life
The body is fundamental to our sense of self and identity. This course explores the ways in which bodies are constituted in everyday life through the intersections of class, gender, ableness, sexual orientation, age, ethnicity and race.

Prerequisite(s): WGST. 112.3 or 30 credit units of university course work

WGST. 250.3 — 1/2(3L)
Performing Masculinities
Introduces students to core theorists in masculinity studies and examines how “masculinities” circulate in, and are structured by diverse economic and political contexts, social conventions and cultural spaces. Explores the ideological underpinnings of the category “masculinity”, its shifting and contested meanings, and alternative possibilities for thinking and mobilizing the masculinizing.

Prerequisite(s): Completion of 30 credit units at the university level, or permission of the WGST Coordinator.
Note: May be used as Humanities or Social Science credit.

WGST. 290.3 — 1/2(3L)
Feminist Representational Strategies Selected Topics
Considers shifts in the directions and impact of feminist critical thought and diverse practices of cultural production. Offered occasionally as faculty resources permit, the topic will vary in accordance with the research interests of the instructor, student demand and new developments in the field.

Prerequisite(s): Completion of 30 credit units at the university level or permission of the WGST Coordinator.
Note: May be used as Humanities or Social Science credit. Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

WGST. 298.3 — 1/2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

WGST. 299.6 — 1and2(3L)
Special Topics
Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

WGST. 311.3 — 1/2(3L)
Contemporary Feminist Theories
Through interdisciplinary and intersectional frameworks, this course focuses on selected feminist theories that examine gender in contemporary life, analyzing the shift from what is known as ‘Second Wave’ to ‘Third Wave’ Feminisms. A variety of feminist theories will be considered with a focus on diversity, power relations and subjectivity.

Prerequisite(s): WGST. 112.3, and 6 credit units in WGST and/or cognate courses, or permission of the WGST Coordinator.
Note: PHIL. 227 is recommended. May be used as Humanities or Social Science credit.

WGST. 312.3 — 1/2(3L)
Feminist Research Methodologies
Examines various feminist methodologies and approaches to the formal construction of knowledge. A survey of the major methods of research in diverse fields is presented in the context of feminist critique and epistemology. Androcentric bias, feminist epistemology, ethics and subjectivity are central themes of the course.

Prerequisite(s): WGST. 112, or 6 credit units WGST and/or cognate courses, or permission of the WGST Coordinator.
Note: Students with credit for WGST. 398 Special Topics: Feminism and the Construction of Knowledge may not take this course for credit. May be used as Social Science credit.
WGST. 315.3 — 1/2(3S)
Politics of Gender and Sexuality in Transnational Feminisms

Constructed notions of gender and sexuality are profoundly implicated in uneven economic development; poverty and disadvantage accrues to women and feminized positions in both one and two-thirds worlds. How do women, men, non-governmental, state and intergovernmental organizations respond to resulting crises? What alternatives are envisioned by transnational feminisms?
Prerequisite(s): WGST. 110 or 112 is recommended.
Note: May be used as Humanities or Social Science credit.

WGST. 320.3 — 1/2(3S)
Reading on the Edge Feminist and Queer Cultural Texts

Provides advanced critical interdisciplinary consideration of reading practices; theoretical, literary and media-based, in the context of feminist and queer interventions in “dominant” narratives of gender, sexuality, race, ability, nationality. We will employ intersectional analysis that understands cultural production, reproduction, circulation, and reception to be historically and ideologically situated.
Prerequisite(s): WGST. 112.3, and 6 credit units in WGST and/or cognate courses, or permission of WGST Coordinator.
Note: May be used as Humanities or Social Science credit.

WGST. 324.3 — 2(3S)
Rebels With A Cause Feminism and the Visual Arts

Examines contemporary feminist art since the 1970s, specifically: 1) diverse strategies of representing the female body and women's heterogeneous cultural experiences, 2) shifting relationships between art/activism, theory/practice, private/public spheres, Canadian/International contexts, and 3) the ways practices of making, exhibiting and writing about art have intersected feminist thought.
Prerequisite(s): WGST. 112.3 or WGST. 201.3 or permission of the WGST Coordinator.

WGST. 335.3 — (3S)
Representation Embodiment and the City New York

Brings intersectional gender-based analysis to advanced study of the effects of representational processes on possibilities for identity formations in an international cosmopolitan center. Experiential learning engages five previously established themes: Gender and Art-making, Memorialization, the Metropolis as Meeting Place of Bodies, Racialization of Union Space, and Spatial Relations.
Prerequisite(s): WGST 235.3 and completion of 30 credit units at the university.
Note: WGST. 110 or 112 is recommended.

WGST. 355.3 — 1/2(2L-1S)
The Celluloid Cyborg: A Course in Technotheory and Cyberpunk

An interdisciplinary examination of selected literary and cinematic representations of cyberspace and the figure of the female cyborg in the context of feminist technotheory.
Prerequisite(s): 60 credit units at the university level, or permission of the WGST Coordinator.
Note: This course is offered in a 3-hour block in order to accommodate 3 feature-length films. Students with credit for WGST. 398 Special Topics the Celluloid Cyborg may not take WGST. 355 for credit. May be used as a Humanities.

WGST. 390.3 — 1/2(3S)
Gender in Interdisciplinary Contexts Selected Topics

Examines the ways diverse disciplinary projects have intersected with feminist studies. Whether co-taught, to provide an overview of converging approaches, or delving more deeply into a particular theme, the course is offered occasionally and topics vary in response to instructor and student interests, and developments in the field.
Prerequisite(s): 30 credit units of university courses including at least 6 credit units of WGST and/or cognate courses; or permission of the WGST Coordinator.
Note: May be used as Humanities or Social Science credit. Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

WGST. 398.3 — 1/2(3S/3L)
Special Topics

Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

WGST. 399.6 — 1and2(3S/3L)
Special Topics

Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

WGST. 400.0 — 1/2(3S)
Honours Colloquium

Oral presentation of an academic paper in the department. The presentation is normally based on a paper already prepared, or in preparation, for a third- or fourth-year WGST seminar course.
Permission of the WGST Coordinator required.
Prerequisite(s): At least 3 credit units of 400-level WGST.
Note: WGST. 400 is required in all Honours programs. Application for Honours must be made at least 18 months in advance of expected graduation date so requirement can be met.

WGST. 409.3 — 1/2(3S-1T)
Understanding Western Patriarchy

Examination of a selection of texts which helped to shape gender, race, class, and ethnic arrangements in Western culture from. 1700 BCE to the early 20th Century. The focus will be on influential sacred, legal, philosophical, and political writings that made the emergence of feminist thought and the rise of political feminism both necessary and possible.
Permission of the WGST Coordinator required.
Prerequisite(s): 18 credit units WGST and/or cognate courses, including at least two of WGST. 311, 312, PHIL. 227, HIST. 347, RLST. 359.
Note: Students with credit for WGST. 309 may not take this course.

WGST. 411.3 — 1/2(3S)
Situating Transnational Feminisms

Examines women's and allied efforts to organize across national borders with focus on: social movements and self-advocacy; innovative uses of human rights and international change instruments; efforts to reduce poverty and create access to citizenship in processes of cooperation and conflict; critiques of economic "development"; land use, and environmental damage.
Permission of the WGST Coordinator required.
Note: May be used as Humanities or Social Science credit.

WGST. 490.3 — 1/2(3S)
Gender Culture and Political Struggle Selected Topics

Examines critical and creative crosscurrents that surface at sites where gender, culture and political struggle converge. Designed for advanced students, specific topics addressed in this course will vary according to instructor and student interests and emergent issues in the field.
Permission of the WGST Coordinator required.
Prerequisite(s): 18 credit units WGST and/or cognate courses, including at least two of WGST. 311, 312, PHIL. 227, HIST. 347, RLST. 359.
Note: May be used as Humanities or Social Science credit. Students may take this course more than once for credit, provided the topic covered in each offering differs substantially. Students must consult the Department to ensure that the topics covered are different.

WGST. 498.3 — 1/2(3S)
Special Topics

Offered occasionally by visiting faculty and in other special situations to cover, in depth, topics that are not thoroughly covered in regularly offered courses.

WGST. 499.6 — 1and2(3S)
Special Topics

Offered occasionally by visiting faculty and in other special situations. Students interested in these courses should contact the department for more information.