

Last day of Winter Semester classes	April 12, 2013
Winter Semester final examination period*	April 15 – 25, 2013
Winter Semester 2013 ends	April 25, 2013

\* Students must be available for final examinations up to the last day of the examination period as specified in the Academic Schedule.

## SPRING 2013 SEMESTER

Registration Access List posted for Spring Semester 2013	March 4, 2013
First day to apply for new students	February 25, 2013
Last day to apply to graduate for Spring 2013 Convocation	February 28, 2013
Registration for Spring Semester 2013 begins for <b>continuing</b> students	March 11, 2013
Registration for Spring Semester 2013 begins for <b>new</b> students	March 30, 2013
Last day to add name to Waitlist	April 12, 2013
Full fees for Spring Semester 2013 due (registered students only)	April 29, 2013
First day of Spring Semester classes	May 6, 2013
Last day to adjust registration (Drop/Add/Cancel) for Spring Semester 2013 with full tuition refund (less deposit)	May 14, 2013
Last day to pay fees for Spring Semester 2013	May 15, 2013
Last day to apply to attend Spring 2013 Convocation	May 15, 2013
Last day to be re-instated for Spring 2013 classes	May 21, 2013
Last day to withdraw from 6.5-week courses with an award of "W" grade(s)	June 7, 2013
Spring 2013 Convocation	June 7, 2013
Last day of classes for 6.5-week courses	June 19, 2013
Final examination period for 6.5-week courses*	June 24 – 25, 2013
Last day to withdraw from 13-week courses with an award of "W" grade(s)	July 16, 2013
Last day of classes for 13-week courses	August 9, 2013
Final examination period for 13-week courses*	August 12 – 13, 2013

\*Students must be available for final examinations up to the last day of the examination period as specified in the Academic Schedule.

## FALL 2013 SEMESTER

Apply for Early Admission for Fall Semester 2013 (applications are accepted ongoing until August 31 or until the program is declared full)	December 1, 2012 – March 1, 2013
Registration Access List posted for Fall Semester 2013	March 4, 2013
Registration for Fall Semester 2013 begins for <b>continuing</b> students	March 11, 2013
Registration for Fall Semester 2013 begins for <b>new</b> students	April 8, 2013
Last day to apply to graduate for Fall Convocation	July 31, 2013
Last Day to apply to attend Fall 2013 Convocation	October 15, 2013

## HOLIDAYS

Labour Day	September 3, 2012
Thanksgiving Day	October 8, 2012
Remembrance Day	November 12, 2012
Christmas and New Year's closure (Recreation Centre open to the public, but administrative and academic offices closed)	December 25, 2012 – January 1, 2013
Family Day	February 18, 2013
Good Friday	March 29, 2013
Easter Monday	April 1, 2013
Victoria Day	May 20, 2013
Canada Day Holiday	July 1, 2013
Calgary Stampede Parade Morning	July 5, 2013
Heritage Day	August 5, 2013

*The University reserves the right to make adjustments to the calendar, as required.*

## SPECIFIC GRADUATION REQUIREMENTS – BACHELOR OF ARTS WITH A MAJOR IN ANTHROPOLOGY

All students must meet the general graduation requirements for the Bachelor of Arts with a Major, as indicated in the General Graduation Requirements – Bachelor of Arts with a Major section of this calendar. In addition, Anthropology Major students must meet the following graduation requirements.

1. Students must take a minimum of **16** ANTH courses (not including courses taken in fulfillment of the General Education requirements).
2. Students may take a maximum of 24 ANTH courses (including electives and courses taken in fulfillment of the General Education requirements).
3. Students must take the following four 1000-level ANTH courses, which are introductions to the four fields in Anthropology: ANTH 1102, ANTH 1103, ANTH 1104, and ANTH 1106.
4. Students must take a minimum of **12** ANTH courses at the 2000-level or higher, including:
  - a. the following six courses, some of which are prerequisites or strongly recommended for other upper-level ANTH courses:
    - ANTH 2225 – Ancient Civilizations
    - ANTH 2229 – Anthropology of “Race”
    - ANTH 2241 – Ethnography in Anthropology
    - ANTH 3305 – History of Anthropology
    - ANTH 3307 – Statistics for Anthropology
    - ANTH 4401 – Anthropological Theory
  - b. **six** additional senior-level ANTH courses, as follows:
    - a minimum of three other ANTH courses at the 2000/3000-level, not including the required courses listed above;
    - a minimum of any two of the following courses:
      - ANTH 3302 – Ethnographic Methods
      - ANTH 3309 – Ceramic Analysis
      - ANTH 3321 – Human Osteology
      - ANTH 3342 – Anthropology Perspectives on Discourse Tactics
    - a minimum of one other ANTH course at the 4000-level, in addition to ANTH 4401 Anthropological Theory.

**Note:** Students may pursue a general background in Anthropology or they may elect to focus on a particular field or fields (Cultural Anthropology, Linguistic Anthropology, Biological Anthropology, and Archaeology). If a focus is desired, then students should consult with the Anthropology Advisor in order to prepare the proper array of courses.

## SPECIFIC GRADUATION REQUIREMENTS – BACHELOR OF ARTS WITH HONOURS IN ANTHROPOLOGY

All students must meet the general graduation requirements for the Bachelor of Arts with Honours, as indicated in the General Graduation Requirements – Bachelor of Arts with Honours section of this calendar. In addition, Anthropology Honours students must meet the following graduation requirements.

1. Students must take a minimum of **20** ANTH courses (not including courses taken in fulfillment of the General Education requirements).
2. Students may take a maximum of 24 ANTH courses.
3. Students must take the following four 1000-level ANTH courses, which are introductions to the four fields in Anthropology: ANTH 1102, ANTH 1103, ANTH 1104, and ANTH 1106.
4. Students must take a minimum of **16** ANTH courses at the 2000-level or higher, including:
  - a. the following eight courses, some of which are prerequisites or strongly recommended for other upper-level ANTH courses:
    - ANTH 2225 – Ancient Civilizations
    - ANTH 2229 – Anthropology of “Race”
    - ANTH 2241 – Ethnography in Anthropology
    - ANTH 3305 – History of Anthropology
    - ANTH 3307 – Statistics for Anthropology
    - ANTH 4401 – Anthropological Theory
    - ANTH 5110 – Research Design and Professional Development
    - ANTH 5120 – Honours Thesis
  - b. **eight** additional senior-level ANTH courses, as follows:
    - a minimum of four other ANTH courses at the 2000/3000-level, not including the required courses listed above;
    - a minimum of any two of the following courses:
      - ANTH 3302 – Ethnographic Methods
      - ANTH 3309 – Ceramic Analysis
      - ANTH 3321 – Human Osteology
      - ANTH 3342 – Anthropology Perspectives on Discourse Tactics
    - a minimum of two other ANTH courses at the 4000-level, in addition to ANTH 4401 Anthropological Theory.

**Note:** Students may pursue a general background in Anthropology or they may elect to focus on a particular field or fields (Cultural Anthropology, Linguistic Anthropology, Biological Anthropology, and Archaeology). If a focus is desired, then students should consult with the Anthropology Advisor in order to prepare the proper array of courses.

## MINOR IN STUDIES IN AGING

Required courses:

- SAGE 2401 – Perspectives in Aging
- SAGE 3303 – Health and Aging

Three of the following courses:

- ANTH 1103 – Introduction to Cultural Anthropology
- HIST 2207 – Histories of Western Sexualities
- INTS 1240 – Fundamentals of Interpersonal Communication
- NPRO 2201 – Canada's Nonprofit Sector - Foundations
- NPRO 2247 – Introduction to Volunteer Management
- PHED 2367 – Physical Activity for Special Populations
- PLSC 1183 – Issues and Trends in World Politics
- PSYC 2235 – Lifespan Development
- SAGE 3407 – Aging and Physical Health
- SAGE 3413 – Aging Families
- SLGY 2271 – Sociology of Families
- SLGY 2273 – Sociology of Aging
- WMST 2221 – Women and Health
- WMST 2283 – Women and Aging

At least three courses from the following list:

- INDS 3309 – History of Interiors
- NPRO 3305 – Program Planning and Assessment for the Nonprofit Sector
- PHED 3385 – Physical Activity and the Older Adult
- PSYC 2219 – Psychology of Death and Dying
- PSYC 3353 – Topics in the Psychology of Aging
- RELS 3333 – Religion, Death and Mortality
- SAGE 4405 – Aging and Mental Health
- SAGE 4490 – Capstone Project
- SLGY 3309 – Sociology of the Body

## MINOR IN TEACHING ENGLISH AS A SECOND LANGUAGE (TESL)

Required courses:

- EDUC 2271 – The Teacher: Introduction to TESL
- EDUC 3372 – The Learner: Early Literacy TESL **or**
- EDUC 4471 – The Community: ESL in Mainstream
- LING 1111 – The Nature of Language I
- LING 1113 – The Nature of Language II **or**
- EDUC 2371 – The Learner: Language Development and Literacy
- LING 2221 – Modern English Grammar

Three additional courses from the following list:

- EDUC 2371 – The Learner: Language Development and Literacy\*
- EDUC 3372 – The Learner: Early Literacy TESL\*
- EDUC 4471 – The Community: ESL in Mainstream\*
- ENGL 3304 – Composition Theory
- LING 1113 – The Nature of Language II\*
- LING 2207 – Second Language Acquisition
- LING 2231 – First Language Acquisition
- LING 3371 – Introduction to Psycholinguistics
- A university credit course in an additional language

\*This course can be used as an option if it was not taken as a required course (listed above) in this minor.

## MINOR IN WOMEN'S STUDIES

Required courses:

- WMST 1172 – Introduction to Women's Studies
- WMST 3301 – Feminist Theories
- WMST 3302 – Feminist Research Methods

Five additional courses from the following list

- Any WMST course not mentioned above
- HIST 2208 – Women and Gender in Canada to 1900
- HIST 2209 – Women and Gender in Canada Since 1900
- PHIL 2237 – Feminist Philosophy
- RELS 2281 – Women and Religion
- RELS 3281 – Advanced Studies in Women and Religion

### Minors outside the Faculty of Arts

Bachelor of Arts students may choose to complete a minor offered by a faculty other than Arts. For more information on minors in Education, Science, Business, or other subject areas outside of Arts, consult the relevant sections of this calendar.

## MINOR IN SUPPLY CHAIN MANAGEMENT

Supply Chain Management includes management of the flow and transportation of goods from raw materials through to the consumer. Areas of study include production planning, logistics management, purchasing, inventory management, material handling, transportation, enterprise resource planning, and global logistics. Course credits may be transferable to professional programs such as the Certified Professional Purchaser (CPP), Certified Professional Logistician (CPL) and the Canadian Institute of Traffic and Transportation (CITT). Students with an interest in supply chain can be prepared for careers in professional purchasing, international trade, and demand forecasting as well as management positions in transportation, inventory, and distribution.

## MINORS OFFERED BY THE BISSETT SCHOOL OF BUSINESS

All students enrolled in four-year baccalaureate degree programs at Mount Royal have the opportunity to pursue a minor in one of several business disciplines. The Bissett School of Business offers minors in Business, Business and Society, Business of Sport and Recreation, Financial Services, Human Resources, Innovation and Entrepreneurship, International Business, Marketing, Risk Management & Insurance, Supply Chain Management and Social Innovation and Non-profit Studies.

Each minor requires that the student complete between six and nine courses. Some courses required in each minor have prerequisite requirements. Students are advised to consult with an Advisor before choosing their courses. Courses used to fulfill the requirements for a minor may also be used to fulfill other program requirements.

### MINOR IN BUSINESS

Required Courses:

- ACCT 2121 – Financial Accounting Concepts
- HRES 2170 – Introduction to Human Resources
- MGMT 2130 – Management Principles & Practices
- MKTG 2150 – Introduction to Marketing
- Plus any three (3), 3000-level or higher course offered by the Bissett School of Business

### MINOR IN BUSINESS AND SOCIETY

Required Courses:

- INBU 2201 – Cross Cultural Management
- ENTR 3370 – Society, Innovation and Enterprise
- MGMT 4402 – Corporate Social Responsibility
- MGMT 4403 – Environmental Management & Sustainable Development
- MGMT 4407 – Governance & Ethical Issues in Organizations
- PHIL 2229 – Business Ethics

## MINOR IN BUSINESS OF SPORT AND RECREATION

The minor is composed of three required courses and three options, for a total of 6 courses.

Required Courses:

- ENTR 2301 – The Entrepreneurial Experience
- PHED 1203 – Organization and Administration of Sport and Recreation
- PHED 1216 – Program Planning

Students are required to take any three of the following:

- ACCT 2121 – Financial Accounting Concepts
- ENTR 3302 – Innovation and Creativity for Entrepreneurial Practice
- MGMT 3210 – Business Communication Theory and Practice
- MGMT 3230 – Business Law
- MKTG 2150 – Introduction to Marketing
- MKTG 3258 – Marketing Research
- PHED 2261 – Facility Development and Organizing Special Events
- PHED 4267 – Issues and Trends in Sport and Recreation
- RECR 1203 – Community Development
- RECR 1207 – Commercial Recreation
- RECR 1217 – Marketing for Sport and Recreation

### MINOR IN FINANCIAL SERVICES

Required Courses:

- FNCE 3201 – Retirement Planning
- FNCE 3203 – Income Tax Planning
- FNCE 3205 – Strategic Investment Planning
- FNCE 3207 – Risk Management & Estate Planning
- FNCE 3301 – Canadian Securities Course I
- FNCE 3303 – Canadian Securities Course II

Plus any three (3) of the following:

- FNCE 2132 – Introduction to the Stock Market
- FNCE 3302 – International Finance
- FNCE 4407 – Investment Principles
- FNCE 4408 – Financial Risk Management
- FNCE 4409 – Securities Analysis and Valuation
- INSR 2140 – Principles and Practices of Insurance
- MKTG 2154 – Professional Selling

### MINOR IN HUMAN RESOURCES

Required Courses:

- HRES 2170 – Introduction to Human Resources
- HRES 3278 – Employee Relations

Plus any other four (4), 3000-level or higher HRES course.



## MINOR IN INNOVATION AND ENTREPRENEURSHIP

Required Courses:

- ENTR 2301 – Innovation and the Entrepreneurial Experience
- ENTR 3302 – Creativity for Entrepreneurial Practice
- ENTR 4331 – Idea to Opportunity
- ENTR 4332 – Venture Launch
- ENTR 4343 – Growing the Enterprise

Plus any ONE of the following:

- ENTR 3370 - Society, Innovation and Enterprise
- ENTR 4344 – Corporate Innovation and Entrepreneurship
- ENTR 4433 - Business Plan Development

## MINOR IN INTERNATIONAL BUSINESS

Required Courses:

- INBU 2201 – Cross Cultural Management
- INBU 3301 – Global Business Environment
- INBU 3302 – International Marketing

Plus any five (5) of the following:

- CNST 2233 – Canada in Comparative and International Perspective
- FNCE 3302 – International Finance
- INBU 3304 – Global Supply Chain Management
- INBU 3305 – International Market Entry Strategy
- INBU 3306 – International Trade Research
- INBU 3307 – International Trade Law
- INBU 4408 – International Trade Management
- PLSC 3485 – The Politics of the International Economic Order
- PLSC 3489 – Foreign Policies of the Major Powers
- Any Language course

## MINOR IN MARKETING

Required Courses:

- MKTG 2150 – Introduction to Marketing
- MGMT 2262 – Business Statistics I
- MKTG 3150 – The Science of Persuasion
- MKTG 3258 – Evidence-Based Marketing

Plus any two (2) of the following:

- Any marketing course (MKTG)
- INBU 3302 – International Marketing

## MINOR IN RISK MANAGEMENT AND INSURANCE

Required Courses:

- INSR 2140 – Principles & Practices of Insurance

Plus any seven (7) of the following:

- FNCE 2130 – Personal Finance
- FNCE 3207 – Risk Management & Estate Planning
- FNCE 3302 – International Finance
- FNCE 4408 – Financial Risk Management
- INSR 2141 – Insurance on Property
- INSR 2143 – Automobile Insurance
- INSR 2144 – Loss Adjusting
- INSR 2145 – Insurance Agency
- INSR 3247 – Underwriting Essentials
- INSR 3249 – Liability Insurance
- MKTG 2154 – Professional Selling

## MINOR IN SOCIAL INNOVATION AND NON-PROFIT STUDIES

Required Courses:

- ENTR 2301 – The Entrepreneurial Experience
- ENTR 3370 – Society, Innovation and Enterprise
- MGMT 4407 – Governance & Ethical Issues in Organizations
- NPRO 2201 – Rebels with a Cause
- NPRO 3305 – Agents of Social Change

Plus any one (1) of the following:

- ACOM 2251 – Introduction to Fund Development
- COMM 1841 – Introduction to Public Relations
- INTS 3331 – International Community Development
- MGMT 2275 – Creativity in the Workplace
- MGMT 4403 – Environmental Management & Sustainable Development
- MGMT 4407 – Governance and Ethical Issues in Organizations
- NPRO 2247 – Introduction to Volunteer Management
- NPRO 3730 – **Special Topics in Social Innovation and Nonprofit Studies**
- PLSC 1101 – Introduction to Government & Politics
- PLSC 1123 – Canadian Political Issues
- PLSC 2298 – Politics and the Media
- SLWK 2221 – Community Development

## MINOR IN SUPPLY CHAIN MANAGEMENT

Required Courses:

- LSCM 2201 – Introduction to Logistics & Supply Chain Management
- LSCM 3203 – Principles of Quality Management
- LSCM 3301 – Introduction to Physical Distribution
- LSCM 3303 – Fundamentals of Purchasing
- LSCM 3305 – Physical Distribution & Logistics
- LSCM 4402 – Inventory & Warehouse Management
- LSCM 4407 – Business Negotiations/Project Management
- LSCM 4409 – Supply Chain Decision Making
- LSCM 4411 – Integrated Business Solutions

## ADDITIONAL CRITERIA

Selected applicants will be invited for an interview that will assess the qualities deemed important in a prospective health professional such as communication and critical thinking skills.

## ABORIGINAL STUDENT ADMISSION

Each year 10 percent of the seats in the Bachelor of Midwifery program will be reserved for Aboriginal applicants through an Aboriginal admission target.

To be considered for admission under the Aboriginal admission target, the applicant must:

- self-identify as an Aboriginal applicant on the Application for Admission
- meet the definition of an Aboriginal Applicant
- meet the minimum admission requirements as indicated in the general admission requirements for Mount Royal University as well as any program level admission requirements

Designated seats for this special consideration target will be filled by Aboriginal applicants on a competitive basis. Applicants are encouraged to apply during Early Admission December 1 – March 1. Any unfilled designated seats will be released on June 1 to students applying under the general admission requirements.

See general admission requirements in the Admissions section of this calendar for further information.

## GENERAL EDUCATION

Mount Royal's Bachelor of Midwifery program requires specific general education courses to meet graduation requirements. These are specified in the program curriculum. For incoming students in the Bachelor of Midwifery program, it is important to seek clarification of these requirements and up-to-date registration information through an Academic Advisor in the Department of Advanced Specialty Health Studies.

## TRANSFER CREDIT ASSESSMENT

Transfer credits towards Mount Royal Midwifery (MDWF) courses will be limited to courses that have been successfully completed within seven (7) years from the date of initial registration in the student's original midwifery program. **All Midwifery Core courses will not be eligible for transfer credit if taken more than 7 years ago. BIOL 1220 and BIOL 1221 will not be eligible for transfer credit if taken more than 7 years ago.**

## ACADEMIC PERFORMANCE AND PROGRESSION REQUIREMENTS

In order to be considered a continuing student of record in the Bachelor of Midwifery Program, the student must achieve a minimum overall C+ average with no course grade below a C- in all required core courses exclusive of GNED courses. An "EP" (Experiential Pass) grade is required for all MDWF clinical courses. To be eligible for graduation, the student must achieve a minimum cumulative Grade Point Average of 2.3.

A grade below a C- in a required core course or an EF (Experiential Failure) in a MDWF clinical course must be cleared by repeating the course before a student may progress to any further courses. Students whose overall average falls below C+ must complete additional courses to achieve the minimum average.

Students are permitted one re-registration in the same required midwifery course (a course with the prefix MDWF, HLTH, INTS) That is, students are not allowed more than two (2) grades below the minimum pass or two (2) withdrawals in the same midwifery course, nor are they permitted one (1) withdrawal and one (1) grade below the minimum pass within the same midwifery course. Students who are unsuccessful after two registrations in the same midwifery course will be required to withdraw from the program and will not be eligible for re-admission.

Students are permitted one re-registration in each of BIOL 1220 and 1221. That is, students are not allowed more than two (2) grades below the minimum pass in the same biology course.

Students who are unsuccessful after two registrations in the same biology course will be required to withdraw from the program and will not be eligible for re-admission.

## GRADING SCHEME

### Mount Royal University Bachelor of Midwifery Grading System \*

Description	Alpha Grade	4.0 Scale
	A+	4.0
Excellent	A	4.0
	A-	3.7
	B+	3.3
Good	B	3.0
	B-	2.7
	C+	2.3
Minimal pass	C	2.0
Course failure	C-	1.7
	D+	1.3
	D	1.0
	F	0

\* The practice (clinical) experience is graded "Pass/Fail" (EP/EF). A student is evaluated according to criteria based on the program and course intents. All criteria must be met at a satisfactory level in order to receive a pass in the clinical experience.

## REGULATIONS

Students are responsible for familiarizing themselves with the policies and procedures of Mount Royal University as outlined in the Calendar and the Code of Student Conduct.

## DURATION OF THE PROGRAM

Program requirements for degree completion can be completed in four (4) academic years. Students have eight (8) calendar years from the date of initial registration in the Bachelor of Midwifery Degree to complete all requirements. Students seeking an extension beyond eight (8) years may be required to complete additional course work.

## CANADIAN MIDWIFERY REGISTRATION EXAMINATION

Students will be eligible to write the Midwifery Examination upon satisfactory completion of all degree program requirements. Students are responsible for all costs related to the examination.

Although Conditional Admission may be granted in advance of receipt of final/official transcripts, confirmation of the achievement of specified minimum grades will take place after all final/official transcripts have been received by the University. Applicants who do not meet these minimum grade requirements will be denied admission.

## DIRECTED FIELD STUDIES

Directed Field Studies are designed to provide an extension of the learning process in a relevant work environment. Delivered in two semesters, comprising 25 per cent of the curriculum for applied baccalaureate degree programs, Directed Field Studies integrate academic learning with paid work experience. Each Directed Field Studies semester has specific course objectives and outcomes. Students are responsible to complete requirements assigned by Mount Royal University faculty and are obligated to fulfill commitments made to employers. Successful completion of each semester receives a total of 15 credits.

Given the fluctuating nature of the local labour market, opportunities for work experience may be located outside Calgary, across Canada and in international markets. Students should be prepared to relocate and to receive intern or entry-level compensation.

Students will participate in DFS on the basis of academic performance, professional suitability and availability of sites. Prior to observation course and Directed Field Studies, students will be required, at their own expense, to obtain a Police Information Check and Intervention Record Check. It is each agency's decision to accept or reject a student for DFS or observation experience based upon the results of a Police Information Check and Intervention Record Check or other background check. Since both completion of course requirements and eventual employment in a field of study may be dependent upon the results of such checks, students who have concerns should discuss the matter with the department chair or designate prior to applying for admission.

Directed Field Studies are considered an academic component of the program. Therefore, students are advised to refer to other parts of the calendar including *Evaluation of Prior Learning* and *Fees and Deposits*.

## CONTINUANCE IN THE PROGRAM

~~Students accepted into the applied degree program must comply with all University policies and regulations relating to applied degrees and continuance. Students enrolled in the applied degree program must obtain a minimum grade of "C" in all required core courses, program required courses and options in areas of concentration and maintain a minimum cumulative Grade Point Average of 2.00.~~

## CURRICULUM

### Bachelor of Applied Child Studies

The interdisciplinary educational program in the Bachelor of Applied Child Studies combines theoretical knowledge with practical skills to prepare students to take leadership roles in the provision of services for children and families in community settings.

CHST 1101 – Professional Preparation  
 CHST 2010 – Directed Field Studies I  
 CHST 2203 – Child and Youth Human Rights  
 CHST 2211 – Disabling Conditions  
 CHST 2241 – Observing Children  
 CHST 2281 – Introduction to Child Focused Services  
 CHST 2283 – Supporting Children Through Play  
 CHST 3010 – Directed Field Studies II  
 CHST 3301 – Policies and Issues  
 CHST 3303 – Working with Families  
 CHST 3305 – Diversity Issues  
 CHST 3307 – Community Development  
 CHST 3309 – Interviewing Skills  
 CHST 3311 – Program Planning and Evaluation  
 CHST 3381 – Children and Youth at Risk  
 CHST 4401 – Working with Groups  
 CHST 4403 – Community Based Research  
 CHST 4405 – Ethics and Ethical Issues  
 CHST 4407 – Leadership in Human Services  
 CHST 4441 – Observing Specialized Services for Children and Youth  
 CHST 4481 – Children's Mental Health Interventions

### Support Courses

Elective 1  
 Elective 2  
 ENGL 1101 or any other 1100-level (or higher) English  
 INTS 1240 – Fundamentals of Interpersonal Communication  
 PSYC 1105 – Introduction to Psychology  
 PSYC 3351 – Topics in Child Development\*  
 Arts and Sciences, 4 junior level and 2 senior level requirements  
 \* Prerequisite waived.

### Sequence of Directed Field Studies

Directed Field Studies typically occur during the fifth and eighth semesters.

## GRADUATION REQUIREMENTS

- Successful completion of a minimum of 123 credits, of which 30 credits will be for Directed Field Studies.
- Successful completion of two (2) terms of Directed Field Studies.

Compliant with *General Graduation Requirements* section.

For *Restrictions and Interpretations* concerning the program requirements for English, Elective, and Arts and Science courses, refer to the section entitled *General Graduation Requirements*.

## WORK-RELATED PRACTICA

Practica are designed to provide an extension of the learning process in a relevant work environment. Delivered in two semesters, comprising 10 percent of the curriculum for applied baccalaureate degree programs, practica integrate academic learning with paid or unpaid work experience. Each practica semester has specific course objectives and outcomes. Students are responsible to complete requirements assigned by Mount Royal faculty and are obligated to fulfill commitments made to employers. Successful completion of each semester receives a total of 3 and 9 credits respectively. Given the fluctuating nature of the local labour market, opportunities for work experience can be located outside Calgary, across Canada and in international markets. Students should be prepared to relocate and to receive entry-level compensation.

Practica are considered an academic component of the program. Therefore, students are advised to refer to other parts of the calendar including *Evaluation of Prior Learning and Fees and Deposits*.

## CONTINUANCE IN THE PROGRAM

Students accepted into the Bachelor of Applied Ecotourism and Outdoor Leadership degree program must comply with all University policies and regulations relating to applied baccalaureate degrees and continuance. Students enrolled in the Bachelor of Applied Ecotourism and Outdoor Leadership degree program must maintain a minimum grade of "C" (2.00 GPA) in each of the required core courses in the program and maintain a minimum cumulative Grade Point Average of 2.00. Core courses are designated with "ETOL", "RECR", and "PHED."

## CURRICULUM

### Bachelor of Applied Ecotourism and Outdoor Leadership Year One

COMP 1209 – Introduction to Computing for Applied Degrees

ECOL 1210 – Ecology

ENGL 1101 – Critical Reading and Writing

ETOL 2201 – Foundations of Outdoor Leadership

**ETOL 2203** – Sustainable Tourism

ETOL 3303\* – Expedition I

GEOG 1101 – The Physical Environment

PHED 1005 – Leadership & Communication in Physical Education

PHED 2402 – Introduction to Backpacking

PHED 2404 – Introductory Rock Climbing

PHED 2410 – Wilderness Survival Techniques

PHED 2414 – Introductory Canoeing

PHED 2416 – Introduction to Kayaking

#### Year Two

ETOL 2011 – Practicum I

ETOL 2401 – Ecotourism Facilitation Skills

ETOL 3305 – Program Planning

ETOL 3307 – Administration of Outdoor Centres

NTSC 1112 – Introduction to Current Environmental Issues

PHED 2406 – Back Country Skiing

PHED 2408 – Mountain Bike Trekking

PHED 2418 – Introductory Mountaineering

RECR 1247 – Theory and Practice in Leadership

RECR 2217 – Marketing for Sport and Recreation

Arts and Science Requirement

Arts and Science Requirement

Elective 1

#### Year Three

ENTR 1232 – Entrepreneurship Studies

ETOL 3011 – Practicum II

ETOL 3309 – Individual Projects

GEOG 2443 – Tourism and Recreation Geography

Arts and Science Requirement

Arts and Science Requirement

Arts and Science Requirement

Arts and Science Requirement

Senior Arts and Science Requirement

Elective 2

Elective 3

#### Year Four

ETOL 4405 – Issues in Ecotourism

ETOL 4409 – Applied Leadership

ETOL 5010 – E-Portfolio

Senior Arts and Science Requirement

Elective 4

\* Ecotourism 3303 consists of a 10 day expedition in early May or late August of semester 3. Students will be responsible for personal subsistence costs associated with Ecotourism and Outdoor Leadership 3303. For details on the date, consult an advisor in the Department of Physical Education and Recreation Studies.

**Note:** Arts and Science Requirements must be selected from four (4) different areas. At least two (2) arts and science courses (a minimum of six [6] credits) must be at the senior level (see program/academic advisor for details). See *General Graduation Requirements* section for a full listing of approved Arts and Science Requirements, areas and restrictions.

## GRADUATION REQUIREMENTS

- Successful completion of a minimum of 120 credits
- Successful completion of the two work related practica, ETOL 2011 and ETOL 3011
- A minimum overall Grade Point Average of 2.00 on all courses required for the program. This includes all core "ETOL", "PHED" and "RECR" courses, all approved options, the Arts and Science Requirements. English 1101 and Computer Science 1209.
- A minimum grade of "C" (2.00 GPA) in all required core "ETOL", "PHED" and "RECR" courses in the program.

Additionally, students must complete the following graduation requirements:

- A self-directed outdoor expedition, approved by the department;
- A Wilderness and Remote Emergency Response certificate, provided by the department; and
- An advanced certificate related to the ecotourism and outdoor leadership field, approved by the department

## FIELD WORK AND PRACTICUM REQUIREMENTS

All students will be selected for practicum on the basis of academic performance, professional suitability and availability of practicum sites. A student may be prohibited from attending or completing a practice experience if there is evidence to suggest that the student's physical and/or psychological health may be detrimental to the client care.

**Note:** Students will be required to present a current Criminal Record Check prior to the placement. Those students wishing to work with children and youth will be required to have an Intervention Record Check in addition to the Criminal Record Check. It is each practicum agency's decision to accept or reject a student for placement based upon the results of the criminal record and Intervention checks.

## INTERNATIONAL PRACTICUM OPPORTUNITY

Students may have an opportunity to complete a practicum in an international placement during the Spring Semester.

## CURRICULUM

### Diploma – Disability Studies

#### Year One

DAST 1102 – Disabling Conditions I

DAST 1104 – Disabling Conditions II

DAST 1111 – Social History of Disability

DAST 1124 – Field Experience

DAST 1126 – Practicum I

**DAST 2223** – Positive Behavioural Supports

INTS 1240 – Fundamentals of Interpersonal Communication

PSYC 1105 – Introduction to Psychology

General Education Requirement Foundation Level Cluster 4

General Education Requirement

#### Year Two

DAST 2205 – Disability Work Management

DAST 2206 – Organizations and Leadership

DAST 2208 – Advocacy for Canadians with a Disability

DAST 2209 – Disability Social Policy

DAST 2211 – Group Facilitation

DAST 2224 – Practicum II

DAST 2226 – Practicum III

General Education Requirement

General Education Requirement

General Education Requirement

**Note:** Students will be accepted into practica on the basis of academic performance, professional suitability, fitness and conduct. To be placed in Disability Studies 2224 and 2226, students must obtain a minimum Grade Point Average of 2.00 in all courses other than General Education Requirements.

For *Restrictions and Interpretations* concerning the program requirements for General Education and Elective courses, refer to the section entitled General Graduation Requirements.





## ACADEMIC PERFORMANCE AND PROGRESSION REQUIREMENTS

Many courses in the Bachelor of Science require minimum prerequisite grades of "C-" or better.

For the purpose of progression and graduation all degree candidates must complete all courses in the program, General Education requirements and electives included, with a cumulative grade point average of 2.00 or greater and with final grades of "C-" or better, except that a maximum of two courses in total and only one in the core, may be completed with a pass grade of less than "C-".

## DURATION OF PROGRAM

Program requirements for degree completion can be completed in four (4) academic years. Students have seven (7) calendar years from the date of initial registration in the Bachelor of Science Degree to complete all requirements. Students seeking an extension beyond seven (7) years may be required to complete additional course work.

## INTERRUPTION OF PROGRAM

Students who interrupt their program for more than twelve months are advised that they will be required to comply with any new regulations that may have come into effect in regard to their program and requirements. Students will be required to re-apply for admission and notify the department in which their major resides or the Office of the Dean of the Faculty of Science and Technology at Mount Royal in writing by March 15 of their intention to return for the following fall semester or by October 1 for the following winter semester.

## GRADUATION REQUIREMENTS

To be eligible for graduation, students must satisfactorily complete all degree program requirements. Students must maintain an overall minimum GPA of 2.00 to be eligible for graduation.

Students are advised that they may Not use more than 16 junior level (1000 level) courses towards the completion of their degree graduation requirements.

Students completing degree requirements will be awarded a Bachelor of Science degree in their chosen major (General Science, Geology, Cellular and Molecular Biology or Health Sciences) from Mount Royal.

**Note:** For course descriptions refer to:

Bachelor of Science:

[mtroyal.ca/scitech/bachsci/curriculum.shtml](http://mtroyal.ca/scitech/bachsci/curriculum.shtml)

## CURRICULUM

### Bachelor of Science – General Science

i) During the first two years of studies, students will take two courses from each of four areas of specialization: (Biological Sciences, Physical Sciences, Mathematics and Computer Sciences, and Earth Sciences) for a total of eight core science courses in years one and two.

ii) After completing the core science requirements in (i), students will take a minimum of 16 additional science courses. These courses, referred to as Approved Science Options, must be taken from at least two of the four areas of specialization (Mathematics and Computing Sciences, Physical Sciences, Earth Sciences, and Biological Sciences). At least 6 of these 16 Approved Science Options must be taken at the 3000 level or higher.

iii) Students will also take 12 General Education courses and 4 Electives. The electives may include further science courses listed under the Areas of Specialization.

BIOL 1202 – An Introduction to Cell Biology

BIOL 1204 – The Evolution of Eukaryotes

CHEM 1201 – General Chemistry

COMP 1001 – Introduction to Computer-Based Problem Solving  
for the Sciences

MATH 1200 – Calculus for Scientists I

PHYS 1201 – Classical Physics I

Two of: GEOL 1101 – Physical Geology, GEOG 1101 – Physical Environment,  
GEOL 1103 – Historical Geology, GEOG 1103 – Human Geography

General Education Requirement Foundation Level, Cluster 1

General Education Requirement Foundation Level, Cluster 2

General Education Requirement Foundation Level, Cluster 3

General Education Requirement Foundation Level, Cluster 4

General Education Requirement Level 2, Cluster 1

General Education Requirement Level 2, Cluster 2

General Education Requirement Level 2, Cluster 3

General Education Requirement Level 2, Cluster 4

General Education Requirement Level 3

General Education Requirement Level 3

General Education Requirement Level 3

General Education Requirement Level 3

Approved Science Option

Approved Science Option

Approved Science Option

Approved Science Option

Approved Science Option

Approved Science Option

Approved Science Option

Approved Science Option

Approved Science Option

Approved Science Option

Approved Science Option

Approved Science Option

Approved Science Option

Approved Science Option

Approved Science Option

Approved Science Option

Elective

Elective

Elective

Elective

## Bachelor of Science – Geology

### Entry into the program

Students who are enrolled in the Bachelor of Science – General Science program can apply to transfer into the Bachelor of Science – Geology program early in the Winter semester. This is a competitive process based on overall GPA and GPA in six defined courses from Year 1 of the General Science program. An interview may be necessary. Students are informed of the decision of the Department Earth Sciences at the end of the Winter semester.

Students admitted into the Geology Major must register in the following courses in the Fall semester immediately following their acceptance into the program, in order to maintain their position in the program:

GEOL 2101 Introduction to Geologic Field Methods

GEOL 2103 Minerals and Rocks

GEOL 2105 Structural Geology

### Field Schools and Field Trips

Field Schools and Field Trips are an integral part of the Geology major program. Students should note that there will be costs, in addition to tuition, to cover transportation, food and accommodation for the following Field Schools:

GEOL 2101 Introduction to Geologic Field Methods

GEOL 3101 Advanced Geologic Field Methods

Note that these courses will be held for approximately 12-14 days after the end of the Winter semester or before the start of the Fall semester.

In addition to Field Schools, individual courses may include Field Trips as part of the curriculum. These trips are typically 1-2 days in length but may be longer.

The department will make every effort to keep the additional costs to students of Field Schools and Field Trips as low as possible.

### Note: Courses in *Italics* are under development

CHEM 1201 – General Chemistry I

CHEM 1202 – General Chemistry II

COMP 1001 – Introduction to Computer-Based Problem Solving for the Sciences

GEOL 1101 – Physical Geology

GEOL 1103 – Historical Geology

GEOL 2101 – Introduction to Geologic Field Methods

GEOL 2103 – Minerals and Rocks

GEOL 2105 – Structural Geology

GEOL 2107 – Paleontology

GEOL 2109 – Stratigraphy and Sedimentation

GEOL 2111 – Crystallography and Optical Mineralogy

GEOL 3101 – Advanced Geologic Field Methods

GEOL 3103 – Igneous Petrology

GEOL 3107 – Geomorphology

GEOL 3109 – Sedimentary Petrology

GEOL 3111 – Metamorphic Petrology

GEOL 3113 – Geochemistry

*GEOL 4101 – Advanced topics in Sedimentary Geology or*

*GEOL 4103 – Advanced topics in Igneous/Metamorphic Geology.*

*GEOL 4105 – Hydrogeology*

*GEOL 4107 – Geological History of Western Canada*

*GEOL 4109 – Petroleum Geology*

*GEOL 4111 – Ore Deposits and Economic Geology*

*GEOL 4113 – Geoscience Research*

GEOP 3101 – Exploration Geophysics

MATH 1200 – Calculus for Scientists I

MATH 1203 – Linear Algebra for Scientists and Engineers

MATH 2235 – Statistics with Applications in Geology

PHYS 1201 – Classical Physics I

PHYS 1202 – Classical Physics II

General Education Requirement Foundation Level, Cluster 1

General Education Requirement Foundation Level, Cluster 2

General Education Requirement Foundation Level, Cluster 3

General Education Requirement Foundation Level, Cluster 4

General Education Requirement Level 2, Cluster 1

General Education Requirement Level 2, Cluster 2

General Education Requirement Level 2, Cluster 3

General Education Requirement Level 2, Cluster 4

General Education Requirement Level 3

General Education Requirement Level 3

General Education Requirement Level 3



## ADDITIONAL ADMISSION REQUIREMENTS – BACHELOR OF APPLIED SCIENCE – ENVIRONMENTAL SCIENCE DEGREE

In addition to meeting the general admission requirements indicated in the *Admissions* section of this calendar, applicants must also satisfy the following criteria:

### Academic Course Requirements

The following specific courses (or equivalencies) with the specified minimum grades are required for admission into the Bachelor of Applied Science – Environmental Science program:

- English Language Arts 30-1 – 60%
- Mathematics 30 (Pure)– 60%
- Chemistry 30 – 60%
- Biology or Physics

Although Conditional Admission may be granted in advance of receipt of final/official transcripts, confirmation of the achievement of specified minimum grades will take place after all final/official transcripts have been received by the University. Applicants who do not meet these minimum grade requirements will be denied admission.

### DIRECTED FIELD STUDIES

Directed Field Studies (DFS) are designed to provide an experiential extension of the learning process in a relevant industry work setting. Delivered in two semesters, presently comprising 25 per cent of the curriculum for applied baccalaureate degree programs, Directed Field Studies integrate academic learning with paid work experience. Each Directed Field Studies semester has specific course objectives and outcomes. Students are responsible to complete requirements assigned by Mount Royal University which include satisfactory completion of pre-employment Professional Development sessions and Safety Courses prior to the first work placement. During the DFS students are obligated to fulfill commitments made to employers. Successful completion of each DFS work experience receives a total of 15 credits.

Given the nature of the local labour market and environmental industry, some opportunities for work experience may be located outside Calgary, across Alberta, across Canada and/or international markets. Students should be prepared to relocate and to receive intern or entry-level compensation.

Directed Field Studies are considered an academic component of the program. Therefore, students are advised to refer to other parts of the calendar including *Evaluation of Prior Learning and Fees and Deposits*.

### CONTINUANCE IN THE PROGRAM

Students accepted into the Bachelor of Applied Science – Environmental Science degree program must comply with all University policies and regulations relating to applied baccalaureate degrees and continuance. Students enrolled in the Bachelor of Applied Science – Environmental Science degree program must obtain a minimum grade of “C” in all required core courses in the program and maintain a minimum cumulative Grade Point Average of 2.00.

## CURRICULUM

### Bachelor of Applied Science – Environmental Science – Direct Entry

**CHEM 1209** – General Chemistry for Engineers

CHEM 3357 – Industrial Organic Chemistry

COMP 1209 – Computing for Applied Degrees

ECOL 2211 – Terrestrial Ecology

ECOL 2219 – Aquatic Ecology

ENGL 1101 or any other 1100-level (or higher) English

ENTR 1232 – Entrepreneurship Studies

ENVS 2010 – Directed Field Studies I

ENVS 2201 – Introduction to Industrial Ecology

ENVS 2205 – Data Processing and Statistics.

ENVS 2211 – Health and Safety Issues in the Environment Industry

ENVS 3010 – Directed Field Studies II

ENVS 3303 – Life-Cycle Assessment

ENVS 3315 – Applied Instrumentation

ENVS 3321 – Water Pollution and Surface Water Analysis I

ENVS 3323 – Watershed Management

ENVS 3333 – Groundwater Contamination

ENVS 3335 – Issues in Environmental Assessment

ENVS 4405 – Air Quality

ENVS 4407 – Pollution Prevention: Toward Zero Emissions

ENVS 4413 – Principles of Eco-Industrial Development

ENVS 4417 – Design for the Environment

ENVS 4419 – Regulatory Management

ENVS 4423 – Market Based Initiatives

ENVS 4431 – Management of Residuals

ENVS 4433 – Quality Assurance/Quality Control

ENVS 4441 – Site System Remediation Design

MATH 2285 – Calculus with Applications

MIBI 1217 – Applied Industrial Microbiology

Arts and Science Requirement

Arts and Science Requirement

Arts and Science Requirement

Arts and Science Requirement

Arts and Science Requirement

Arts and Science Requirement

# BACHELOR OF ENGINEERING (UNIVERSITY TRANSFER)



## GENERAL INFORMATION

This university transfer program is designed to cover between one and two years of the common core courses of a baccalaureate degree program in engineering. The common core prepares students for many branches of engineering including chemical, civil, computer, electrical, geomatics, manufacturing, mechanical, petroleum and software engineering.

### First year courses at Mount Royal University include:

- Chemistry 1209
- Chemistry 1210
- Engineering 1205
- Engineering 1215
- Engineering 1233
- Engineering 1261
- Engineering 1263
- Engineering 1271
- Engineering 1303
- Engineering 3349
- Mathematics 1203
- Mathematics 1217
- Mathematics 1219
- Physics 1131

### Second year courses at Mount Royal University include:

- Chemistry 3357
- Economics 1109
- Engineering 3319
- English 2263
- Mathematics 1271
- Mathematics 3101
- Mathematics 3307
- Mathematics 3309
- Physics 2369

A list of electives and complementary study courses is available on the departmental website.

All of these courses are directly transferable to the University of Calgary and/or the University of Alberta. There is a full first-year transfer programme to both the University of Calgary and the University of Alberta. For information on transferability to universities outside of Alberta and for further information on transferability to the University of Calgary and the University of Alberta, contact the Department of Mathematics, Physics and Engineering or go to [blogs.mtroyal.ca/engadvising](http://blogs.mtroyal.ca/engadvising).

## GENERAL ADMISSION REQUIREMENTS

All students must meet the general admission requirements for Mount Royal University programs, as indicated in the *Admissions* section of this calendar.

## ADDITIONAL ADMISSION REQUIREMENTS – BACHELOR OF ENGINEERING UNIVERSITY TRANSFER PROGRAM

In addition to meeting the general admission requirements indicated in the *Admissions* section of this calendar, applicants must also satisfy the following criteria.

## ACADEMIC COURSE REQUIREMENTS

- English Language Arts 30-1 – 60%
- Mathematics 30 (Pure) – 65%
- Mathematics 31 – 65%
- Chemistry 30 – 65%
- Physics 30 – 65%

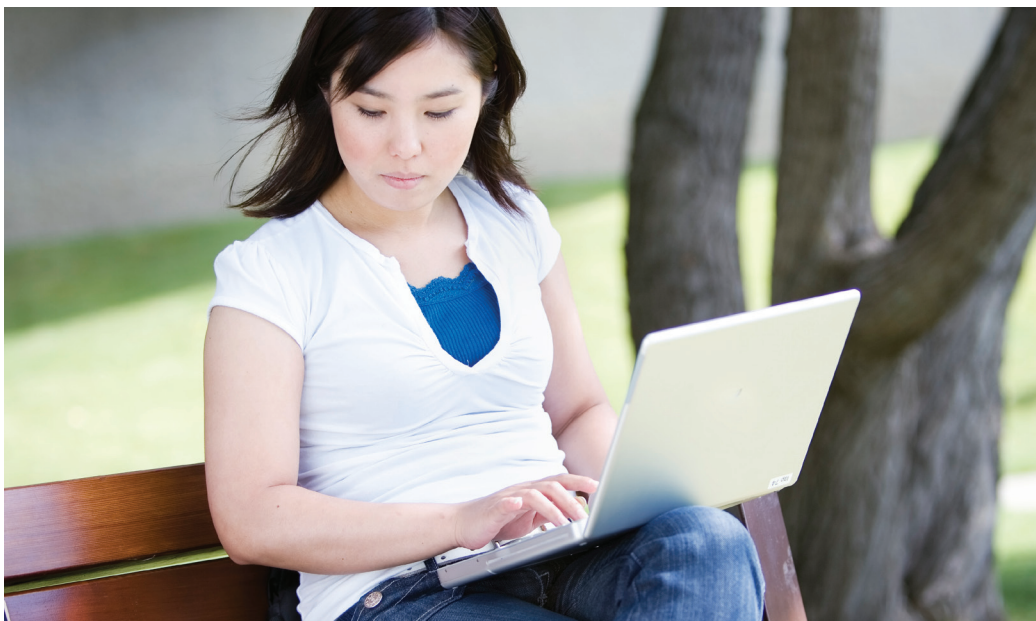
Although Conditional Admission may be granted in advance of receipt of final/official transcripts, confirmation of the achievement of specified minimum grades will take place after all final/official transcripts have been received by the University. Applicants who do not meet these minimum grade requirements will be denied admission.

## MINIMUM OVERALL AVERAGE REQUIRED FOR ADMISSION

To be eligible for admission on the basis of High School Standing, applicants must present a minimum admission average of 65% on their five appropriate grade 12 subjects.

To be eligible for admission on the basis of Post-secondary Standing, applicants must present a minimum Grade Point Average (GPA) of 2.50 on the 8 most recently completed post-secondary courses (minimum 24 credit hours).

# BACHELOR OF SCIENCE – COMPUTER SCIENCE (UNIVERSITY TRANSFER)



## GENERAL INFORMATION

This program offers the first two years of the University of Calgary's Bachelor of Science degree in Computer Science and allows students to transfer between one and two years of studies to other universities. Mathematical ability is necessary for success in this program because of its emphasis on theoretical computing science and mathematics.

If you are interested in combining high school upgrading and university transfer courses, you should apply directly to the General Arts and Science program. A computer science academic advisor should be consulted regarding course selection.

### Curriculum at Mount Royal University includes:

**COMP 1631** – Introduction to Computer Science I

**COMP 1633** – Introduction to Computer Science II

**COMP 2265** – Computer Architecture and Low-Level Programming

**COMP 2613** – Introduction to Computability

**COMP 2659** – The Hardware/Software Interface

**COMP 2631** – Information Structures I

**COMP 2633** – Foundations of Software Engineering

**COMP 3649** – Programming Paradigms

**MATH 1200** – Calculus for Scientists I

**MATH 1203** – Linear Algebra for Scientists and Engineers

**MATH 1271** – Discrete Mathematics

**PHIL 1179** – Introduction to Symbolic Logic

Option

Option

Option

Non-science Option

Non-science Option

Non-science Option

Non-science Option

Non-science Option

Mathematics 1211 and English 2263 are recommended options. Information on requirements at various universities can be obtained from a computer science academic advisor. A few transferable courses such as introductory courses in computer science designed for non-majors, may not be accepted towards a degree by some universities.

Students are normally permitted to repeat a course only once.

## GENERAL ADMISSION REQUIREMENTS

All students must meet the general admission requirements for Mount Royal University programs, as indicated in the *Admissions* section of this calendar.

## ADDITIONAL ADMISSION REQUIREMENTS – BACHELOR OF SCIENCE – COMPUTER SCIENCE UNIVERSITY TRANSFER PROGRAM

In addition to meeting the general admission requirements indicated in the *Admissions* section of this calendar, applicants must also satisfy the following criteria.

## ACADEMIC COURSE REQUIREMENTS

- English Language Arts 30-1 – 60%
- Mathematics 30 (Pure) – 65%

Although Conditional Admission may be granted in advance of receipt of final/official transcripts, confirmation of the achievement of specified minimum grades will take place after all final/official transcripts have been received by the University. Applicants who do not meet these minimum grade requirements will be denied admission.

### **ANTH 2204 – Archaeology of North America (formerly ARKY 3303)**

(3 credits – TG) 3 hours lecture

This course is a general survey of the prehistory of the North American continent north of Mexico, beginning with the earliest evidence for human occupation in the western hemisphere and ending with the period of European contact. Selected geographical and cultural areas include the Arctic, the Northwest Coast, California, the Southwest, the Eastern Woodlands, and the Prairie-Plains.



### **ANTH 2205 – Marriage, Family, Kinship and Descent**

(3 credits – TG) 3 hours lecture

This course explores anthropological approaches to understanding kinship and descent systems, forms of marriage, and types of family that have been found at different times and places. Topics include kinship and descent terminologies; theories of incest and exogamy; bridewealth, brideservice, dowry, and inheritance; arranged versus “free choice” marriage; and the influences of urbanization and industrialization on traditional rural extended families.

*Prerequisite: Anthropology 1103 or consent of the department.*

### **ANTH 2206 – Cross-Cultural Communication and Business (formerly ANTH 3301)**

(3 credits – TG) 3 hours lecture

This course explores ways in which differences in cultural patterns of communication affect interaction between business parties, particularly those of differing cultural/national/ethnic backgrounds.

### **ANTH 2213 – Contemporary Aboriginal Issues in Canada**

(3 credits – TG) 3 hours lecture

This course considers the history of Aboriginal-state relations, the development of “Indian policy” in Canada and socio-cultural and legal aspects of current issues (such as land claims treaties, status of women, human rights, and expression of aboriginal identity and stereotyping of Aboriginal people) that various Aboriginal groups define as central to their existence and cultural survival.

### **ANTH 2214 – Ethnography of the Northwest Coast (formerly ANTH 3313)**

(3 credits – TG) 3 hours lecture

This course is a survey of the aboriginal cultures of the Northwest Coast. Initial topics include prehistory, language, subsistence and settlement patterns, material culture, social organization, religion, ceremonial life and traditional art and mythology. Subsequent discussion will focus on European contact and colonization, social change, and major contemporary issues such as aboriginal rights, land claims and the environment.

*Recommended Preparation: At least one 1000-level course in Anthropology, Archaeology, Psychology or Sociology.*

### **ANTH 2215 – Archaeology of the Levant (formerly ARKY 3315)**

(3 credits – TG) 3 hours lecture

This course examines four successive phases of civilization and its development within Syria, Lebanon, Cyprus, Israel and Jordan, from the third millennium BC through the decline of Roman domination during the third century AD. The emphasis is on understanding the characteristics of those civilizations, and how each civilization responded to external cultural influences from its rise to its demise.

*Prerequisite: Anthropology 1104 or consent of the department.*

*Recommended Preparation: Anthropology 1105 or 2225.*

### **ANTH 2218 – Culture and Society in Contemporary India (formerly ANTH 3318)**

(3 credits – TG) 3 hours lecture

This course is a selective survey of contemporary India with an emphasis on the ways that colonialism, globalization and the media have intersected with and shaped contemporary Indian life and the identities of the Indian populace. Topics include religion, family, gender, the partition of India, nationalism, and the Indian diaspora.

*Prerequisite: Anthropology 1103 or consent of the department.*



### **ANTH 2221 – Hot Topics in Old World Prehistory (formerly ARKY 3321)**

(3 credits – TG) 3 hours lecture

This course is designed to help students think critically about contemporary controversial topics dealing with biological and cultural origins of our early human ancestors of Africa, Eurasia, and Australia between 5 million and 40,000 years ago. Topics may include molecular advances, new hominin fossil discoveries, bipedalism, sexual dimorphism, behavioural reconstructions, and archaeological site interpretation.

*Prerequisite: Anthropology 1101 or 1102 or consent of the department.*



### **ANTH 2225 – Ancient Civilizations (formerly ARKY 3325)**

(3 credits – TG) 3 hours lecture

This course critically examines the theories and facts behind what is meant by “civilization”, the origins of agriculture and its impact on social complexity. The focus is on several of the earliest civilizations in both the Old and New World, including the Sumerians of Mesopotamia, the Harappans of the Indus Valley, Old Kingdom Egypt, China, the Andes, and the Maya of Mesoamerica.

### **ANTH 2226 – Archaeology of Early Empires: Assyrians, Babylonians and Persians (formerly ARKY 3326)**

(3 credits – TG) 3 hours lecture

This course examines the rise, fall and characteristics of three of the world’s greatest successive early empires—the Assyrians, the Babylonians and the Persians—from c 1000 BC to the conquest of Alexander the Great within Iraq and Iran, and how each responded to and incorporated external cultural influences.

*Recommended Preparation: Anthropology 1104, 1105 or 2225; or History 1101; or Religious Studies 1101; or consent of the department.*

### **ANTH 2227 – Archaeology and Early Islam**

(3 credits) 3 hours lecture

This course is a detailed study, both diachronic and synchronic, of the ideals behind and artistic embellishments of monuments and artefacts in the Muslim world, as expressions of Islamic beliefs and traditions. The focus is on the Middle East, from the Arabian Peninsula through North Africa and Spain, in order to address specific regional developments from late pre-Islamic times (1st - 6th centuries AD) into the early Crusades (about 1100 AD).

**Note:** No previous knowledge of Islam or of Arabic is assumed or necessary.



### **ANTH 2229 – Anthropology of “Race” (formerly ANTH 3329)**

(3 credits – TG) 3 hours lecture

This discussion-based course takes a critical examination of historical and modern anthropological perspectives on the biological term “race”. Historically, race in a Biological Anthropology context examines the classification of modern human physical variation. Today this context has expanded including the impact of genetic variation, biological determinism of race and racial definitions of ancient human ancestors.





### **AJUS 4421/CRJS 4021 – Women and Crime**

(3 credits – TG) 3 hours lecture

This course is an advanced-level study, comparison and critical evaluation of the multiple dimensions (theories, disciplines, systems) concerning women in the Canadian criminal justice system: women as offenders, as victims and as criminal justice workers.

*Prerequisites:* Applied Justice 2201, 2203, 2213 and 3301.

### **AJUS 4425 – Justice Capstone Practicum II**

(6 credits) 3 hours tutorial biweekly, 415 hours practicum

This course involves supervised study and practice. Students spend three and one half days a week in a justice-related agency. After an initial orientation period, students are expected to assume responsibility for assigned agency duties in order to enhance their knowledge and skill in social work methods. During agency work, attention is given to developing students' specific skills and competencies in relation to the Department's experiential learning outcomes. Seminars will focus on integrating relevant Justice Studies' program outcomes with students' work in the field.

*Prerequisite:* Applied Justice 3325.

### **AJUS 1199, 1299 – Directed Readings**

See **Directed Readings** which are listed alphabetically in this section of the calendar.

## **ART HISTORY (ARTH)**

### **ARTH 1101 – The History of Art: Prehistory to Renaissance (formerly ARTH 2201)**

(3 credits – TG) 3 hours lecture

This course provides a critical overview of the visual arts from the Old Stone Age to the Renaissance. Students are offered a systematic study of aesthetics and the development of art styles which will enable them to develop a basic appreciation and understanding of art and its origins.



### **ARTH 1103 – The History of Art: Renaissance to the Present (formerly ARTH 2203)**

(3 credits – TG) 3 hours lecture

This course provides a critical overview of the visual arts in Western Europe from the Renaissance to contemporary times.

*Recommended Preparation:* Art History 1101.



### **ARTH 2205 – Art and Architecture of Canada: 1870 to the Present (formerly ARTH 3303)**

(3 credits – TG) 3 hours lecture

This course provides a chronological survey of the visual arts and architecture in Canada from 1870 to the present day. Students will explore the development of the visual arts to enable them to better understand contemporary visual expression in Canada.

*Recommended Preparation:* Any 1000-level Art History course.



### **ARTH 2207 – Curious Narratives: Provocative Themes in Art Explored**

(3 credits – TG) 3 hours lecture

Curious Narratives explores and interrogates some of the significant themes in art that have emerged across time. Themes such as art and power, class, revolution, and exoticism will be explored through a variety of sources. Artistic production including architecture, painting and sculpture will be examined to reveal thought-provoking connections across boundaries and time.

*Recommended Preparation:* Any 1000-level Art History course.



### **ARTH 2209 – History of Modern Art from 1850 to 1920 (formerly ARTH 3310)**

(3 credits – TG) 3 hours lecture

This course is a critical look at the major schools, movements and themes of modern art in Europe and North America from 1850 to 1920.

*Recommended Preparation:* Any 1000-level Art History course.



### **ARTH 3309 – Modern Architecture**

(3 credits – TG) 3 hours lecture

This course focuses on developments in architecture from the mid-nineteenth century to 1960. The course will examine new architectural forms that emerged during this time, brought about by profound social, cultural, political and technical transformations.

*Recommended Preparation:* Any 1000-level Art History course.



### **ARTH 3311 – History of Modern Art from 1920 to 1970**

(3 credits – TG) 3 hours lecture

This course is a critical look at the major schools, movements and themes of modern art in Europe and North America from between the World Wars to 1970.

*Recommended Preparation:* Any 1000-level Art History course.



### **ARTH 3313 – Impressionism: Art, Leisure & Society**

(3 credits – TG) 3 hours lecture

This course will focus on the social history of Paris 1865-1885 as reflected in the subject matter of Impressionist art, particularly leisure issues such as industrialization, class, the secularization of society, the critic-dealer, and gender inequality also figure prominently.

*Recommended Preparation:* Any 1000-level Art History course.



### **ARTH 3315 – Art & Ideas**

(3 credits – TG) 3 hours lecture

Art and Ideas investigates the discipline of art history through the exploration of influential art historical methodologies and theoretical perspectives that have emerged in the discipline.

*Recommended Preparation:* Any 1000-level Art History course.

### **ARTH 3317 – Contemporary Art from 1970 to Today**

(3 credits – TG) 3 hours lecture

This course examines Contemporary art from 1970 to the present in different geographic contexts focusing on various genres, themes and stylistic movements. In exploring the changing meaning of visual culture, the lectures analyze the theories, concepts and institutions informing current art practices.

*Recommended Preparation:* Any 1000-level Art History Course.



### **ARTH 3401 – The Grand Tour: Travel Studies in Western Europe**

(3 credits – TG) 3 hours lecture

The art and architecture of selected western European regions will be explored from an interdisciplinary perspective as a prelude to a field study trip to Europe, offering students an experiential knowledge and a greater appreciation of the regions' artistic and cultural history.

*Prerequisites:* General Education 1201, 1202, or 1203 and consent of the department.

*Recommended Preparation:* Art History 1101 and/or 1103.

**Note:** Students will be responsible for paying all costs, including travel, associated with the field trip.

### **ARTH 4411 – Architecturae: Poetic Intentions in Architecture**

(3 credits – TG) 3 hours lecture

This advanced seminar examines significant buildings with the intention of discovering their essential nature. Students will explore architecture as the embodiment of ideas through the investigation of concepts ranging from light, transparency, opacity and texture, to more nuanced themes, such as the narrative of passage, extreme topographies and genius loci. The seminar provides opportunities for the exploration of links between theory and design in contemporary architecture.

*Prerequisite:* One 2000-level or 3000-level Art History course.

## **ARTH 4850 – Topics in Art History**

(3 credits – TG) 3 hours lecture

This course offers the opportunity for advanced study of selected topics in art history. Specific content will vary by term and instructor.

*Prerequisite:* One of Art History 3309, 3311, 3313, 3315 and 3317.

## **ARTH 3199, 4199 – Directed readings**

See **Directed Readings** which are listed alphabetically in this section of the calendar.

## **ASTRONOMY (ASTR)**

### **ASTR 1101 – The Solar System (formerly ASTR 2201)**

(3 credits – TG) 3 hours lecture

This is primarily a descriptive course aimed at non-science students. Conceptual understanding will be stressed over strict mathematical derivation. The topics covered in this course emphasize astronomy in our own solar neighbourhood. Topics include the Sun, the terrestrial and Jovian planets and their moons, comets, asteroids, as well as the formation of the solar system.

**Note:** Only one of Astronomy 1101 and Astronomy 1301 can be used for graduation purposes.

### **ASTR 1103 – The Universe at Large (formerly ASTR 2203)**

(3 credits – TG) 3 hours lecture, 2 hours lab

This course covers basic concepts of astronomy, with emphasis on our solar system. Topics include Newton's laws and gravitation, the Sun, the terrestrial and Jovian planets, comets, asteroids, the formation of the solar system, and extra-solar planets. This course stresses scientific explanation and uses mathematics, the language of science, whenever possible.

**Note:** Only one of Astronomy 1103 and Astronomy 1303 can be used for graduation purposes.

### **ASTR 1301 – Fundamentals of Astronomy I (formerly ASTR 2211)**

(3 credits – TG) 3 hours lecture, 2 hours lab

This course covers basic concepts of astronomy, with emphasis on our solar system. Topics include Newton's laws and gravitation, the Sun, the terrestrial and Jovian planets, comets, asteroids, the formation of the solar system, and extra-solar planets. This course stresses scientific explanation and uses mathematics, the language of science, whenever possible.

*Prerequisites:* Mathematics 30 (Pure or Applied) and Physics 30 or equivalent. This course is recommended for science majors.

**Note:** Only one of Astronomy 1101 and 1301 can be used for graduation purposes.

### **ASTR 1303 – Fundamentals of Astronomy II**

(3 credits) 3 hours lecture, 2 hours lab

This course covers basic concepts of astronomy, with emphasis on the universe outside the solar system. Topics include the properties of stars, the life and death of stars, galaxies, large-scale structure, and cosmology. This course stresses scientific explanation and uses mathematics, the language of science, whenever appropriate.

*Prerequisites:* Mathematics 30 (Pure or Applied) and Physics 30 or equivalent. This course is recommended for science majors.

**Note:** Only one of Astronomy 1103 and 1303 can be used for graduation purposes.



## **BIOCHEMISTRY (BCEM)**

### **BCEM 2201 – General Biochemistry**

(3 credits – TG) 3 hours lecture, 3 hours lab

This course deals with the biochemistry of the major groups of biological molecules. Topics include carbohydrates, polypeptides, lipids, nucleic acids, and their precursors. Laboratory exercises will involve the isolation and characterization of selected biological molecules.

*Prerequisite:* Chemistry 2101 with a grade of C- or higher.

*Prerequisite or Co-requisite:* Chemistry 2102.

### **BCEM 3201 – Protein Biochemistry**

(3 credits) 3 hours lecture, 3 hours lab

The structure function relationships that exist within this broad category of biomolecules will be investigated. Topics will include levels of protein structure, domains, mosaics, and functional roles of selected proteins or protein classes. Laboratory exercises will involve the utilization of purification techniques in the isolations of selected proteins from simple cellular systems.

*Prerequisite:* Biochemistry 2201 with a grade of C- or higher.

### **BCEM 3202 – Enzymes and Metabolic Systems**

(3 credits – TG) 3 hours lecture, 3 hours lab

Students will investigate the nature of catalytic proteins, their properties, and the kinetics of enzyme catalyzed reactions. An understanding of these concepts will then be applied to some of the important metabolic pathways that support life. Laboratory exercises will highlight the study of enzymes and metabolism.

*Prerequisites:* Chemistry 2102 with a grade of "C-" or higher, and Biochemistry 2201 with a grade of "C-" or higher.

### **BCEM 4212 – Biochemical Pharmacology**

(3 credits) 3 hours lecture, 2 hours seminar

This course covers the fundamental biochemical and physiological concepts of pharmacology. Important concepts include drug administration, sites of action, distribution, metabolism, elimination and adverse effects. The biochemical mechanisms themselves and how they are related to physiological states and effects such as neuronal excitation, blood pressure, and inflammation will be examined. Frequently encountered drugs are used to illustrate these concepts.

*Prerequisites:* Biochemistry 2201 with a grade of C- or higher.

## **BIOLOGY (BIOL)**

### **BIOL 0115 – Introduction to Biology**

(0 credits) 3 hours lecture, 3 hours lab

This is a credit-free upgrading course; special fees apply. Topics include energy flow in the biosphere, energy flow in the cell, adaptation, population and matter and energy exchange.

*Corresponding Alberta High School Equivalent:* Biology 20.

### **BIOL 0130 – Fundamentals of Biology**

(0 credits) 3 hours lecture, 1 hour tutorial, 3 hours lab

This is a credit-free upgrading course; special fees apply. Topics in this course include: cell chemistry, cell ultra-structure, organelle function, metabolic pathways of photosynthesis and respiration, mitotic and meiotic processes, genetics and heredity and human systems.

*Corresponding Alberta High School Equivalent:* Biology 30.

*Recommended Preparation:* Biology 0115 or Biology 20.

### **BIOL 1202 – Introduction to Cell Biology (formerly BIOL 2231)**

(3 credits – TG) 3 hours lecture, 3 hours lab

This course will employ an inquiry approach to expose students to the biology of the cell. The major groups of biological molecules will be studied prior to introducing students to how these macromolecules interact to form prokaryotic or eukaryotic cells. Laboratories will introduce students to basic equipment and techniques used in the study of cells and also develop authentic laboratory skills.

*Prerequisite:* Chemistry 30 or equivalent.

## CANADIAN STUDIES (CNST)

### CNST 1131 – Introduction to Canadian Studies (formerly CNST 2231)

(3 credits – TG) 3 hours lecture, 1 hour tutorial

This course introduces students to the diversity and complexity of Canadian society. Popular culture, art, music, politics, the economy, regionalism, and ethnic relations are some of the topics that may be examined. This course also addresses issues such as identity, difference, nationhood and patriotism.



### CNST 2233 – Canada in Comparative and International Perspective (formerly CNST 3333)

(3 credits – TG) 3 hours lecture

This course offers the opportunity to examine and compare Canada, from a variety of perspectives, to one or more countries in the world. The specific content of the course will vary by term and instructor. Possible topics include popular culture, health care, legal systems, and military history.



### CNST 3730 – Canadian Issues in Context

(3 credits) 3 hours lecture

Building on previous work in Canadian Studies, this course uses a multi-disciplinary perspective to explore contested meanings of nationalism and Canadian identity. Although the issue may vary from semester to semester, the course will focus on how Canadian identity has been formed, challenged, and remade.

*Prerequisites:* Canadian Studies 1131 and one of General Education 1101, 1102, 1201, 1202, 1203, 1301, 1304, 1401, 1402 or 1403.

*Recommended Preparation:* completion of at least ten courses.



### CNST 3199, 4199 – Directed readings

See **Directed Readings** which are listed alphabetically in this section of the calendar.

## CHEMISTRY (CHEM)

### CHEM 0115 – Basic Chemistry I

(0 credits) 3 hours lecture, 1 hour tutorial, 3 hours lab

This is a credit-free upgrading course; special fees apply.

Topics include: matter and measurement in chemistry, atomic structure, periodic table, chemical formulae and nomenclature, chemical reactions and chemical equations, mole concept and stoichiometric calculations, chemical bonding solution, stoichiometry and gas laws. Students who successfully complete this course or its equivalent are adequately prepared to take Chemistry 0130.

*Corresponding Alberta High School Equivalent:* Chemistry 20.

*Recommended Preparation:* Pure Mathematics 10, Mathematics 10-1 or equivalent.

### CHEM 0130 – Basic Chemistry II

(0 credits) 3 hours lecture, 1 hour tutorial, 3 hours lab

This is a credit-free upgrading course; special fees apply. Topics include: solution stoichiometry, acids and bases, oxidation-reduction, energy changes, reaction rates, chemical equilibria, redox reactions and electrochemistry. This is a quantitative chemistry course and therefore some math skills are strongly recommended.

*Corresponding Alberta High School Equivalent:* Chemistry 30.

*Recommended Preparation:* Chemistry 0115 or Chemistry 20 AND Mathematics 0115, Mathematics 20-1 or Pure Mathematics 20.

### CHEM 1201 – General Chemistry – Structure and Bonding (formerly CHEM 2201)

(3 credits – TG) 3 hours lecture, 1 hour tutorial, 3 hours lab

This course builds on basic concepts learned previously. Topics include basic quantum mechanics, the periodic table and the chemistry of selected elements, atomic and molecular structure, various theories of chemical bonding, intermolecular forces and phase diagrams, and the major classes of organic and biological compounds. Laboratory exercises will reinforce lecture topics and develop laboratory skills and other competencies.

*Prerequisites:* Chemistry 30 and Pure Mathematics 30.

### CHEM 1202 – General Chemistry – Introduction to Quantitative Chemistry (formerly CHEM 2203)

(3 credits – TG) 3 hours lecture, 1 hour tutorial, 3 hours lab

This course builds on basic concepts covered in prerequisite courses. Topics include the properties of real gases and solutions, acid/base concepts, chemical kinetics, various equilibria (including acid/base, ionic, and solubility equilibria), elementary thermochemistry and thermodynamics, and electrochemistry. Laboratory exercises will reinforce lecture topics and develop laboratory skills and other competencies.

*Prerequisites:* Chemistry 30 and Pure Mathematics 30.

*Recommended Preparation:* Mathematics 1200.

### CHEM 1203 – An Introduction to Organic Chemistry

(3 credits – TG) 3 hours lecture

This course is designed for students with a general interest in organic chemistry or for students requiring a one semester course in the above. Topics include nomenclature, structures, properties, and reactions of the major classes of organic and biologically important compounds. The principles of stereochemistry, reaction mechanisms and synthesis are presented.

*Prerequisite:* Chemistry 30 or equivalent.



### CHEM 1209 – General Chemistry for Engineers (formerly CHEM 2209)

(3 credits – TG) 3 hours lecture, 1 hour tutorial, 3/2 hours lab

(3 hours lab every 2 weeks)

This course covers basic chemical concepts and introduces atomic and molecular structure with a view to problems encountered in engineering. Topics of discussion include oxidation-reduction reactions, chemical kinetics and equilibria, the chemistry of water, the chemistry of energy sources and quantum theory in chemistry.

*Prerequisite:* Chemistry 30 or equivalent.

Note: Only one of Chemistry 1202 and 1209 can be used to satisfy graduation requirements for the BSc degree.

### CHEM 1210 – Behaviour of Liquids, Gases, Solids (formerly CHEM 2210)

(3 credits – TG) 3 hours lecture, 1 hour tutorial, 3/2 hours lab

(3 hours of lab every 2 weeks)

Students will be introduced to the behaviour of fluids and solids; phase transformations, the phase rule and phase diagrams. Students will undertake an examination of ideal and real gases; equations of state and their applications to engineering; simple kinetic theory and the properties of fluids. In examining liquids emphasis will be placed on vapour pressure, shear behaviour, and fluid flow in pipelines. In addressing the behaviours of solids students will examine crystalline and non-crystalline structure, non-equilibrium solid phases, electrical and thermal conductivity, dislocations, stress and strain, creep and fracture in solids.

*Prerequisite:* Chemistry 30 or equivalent.

### CHEM 2101 – Organic Chemistry I (formerly CHEM 3351)

(3 credits – TG) 3 hours lecture, 1 hour tutorial, 3 hours lab

This is a first course in a sequence of introductory organic chemistry. Topics to be covered include structure and its effects on reactivity, nomenclature, stereochemistry, spectroscopy, reaction types such as substitution, elimination and addition from a mechanistic perspective, and an introduction to synthesis. The laboratory component of the course is designed to reinforce lecture topics and to further develop skills and competencies necessary in modern chemistry laboratories.

*Prerequisite:* Chemistry 1201 and Chemistry 1202 with grades of C- or higher.



**CHEM 2102 – Organic Chemistry II (formerly CHEM 3353)****(3 credits – TG) 3 hours lecture, 1 hour tutorial, 3 hours lab**

This course continues the mechanistic exploration of organic chemistry introduced in the previous course. Lecture topics will include conjugated systems, carbonyl chemistry, aromaticity, substitution and addition reactions in aromatic, conjugated and carbonyl systems, radical reactions, enolate chemistry, pericyclic reactions and a more intensive look at synthesis of organic compounds. The laboratory component allows a more complete look the preparation of compounds and qualitative and quantitative organic analysis.

*Prerequisite:* Chemistry 2101 with a grade of C- or higher.

**CHEM 2103 – Organic Chemistry****(6 credits) 6 hours lecture, 2 hours tutorial, 6 hours lab**

Chemistry 2103 covers a full year of organic chemistry in one course. Topics include: structure and bonding; functional group classification; physical properties; stereochemistry; structure and reactivity relationships; and spectroscopic methods of structure determination. The mechanisms and expected products of several categories of organic reactions will be covered in significant detail in order to illustrate the principles of organic chemistry.

*Prerequisites:* Chemistry 1201 and Chemistry 1202 with a grade of C- or higher.

**CHEM 2205 – Computers in Chemistry****(3 credits) 1 hour lecture, 2 hours lab**

This course will provide the student with a basic knowledge of a number of computer programs that can be used to teach and learn chemical concepts. Programs used may include Microsoft Excel, ChemSketch, Virtual ChemLab, LoggerPro, Odyssey, and Spartan Model. The laboratory component will support the lecture by allowing students to use the programs to develop projects of their choosing.

*Prerequisites:* Chemistry 1201 (or the previous 2201), Chemistry 1202 (or the previous 2203) and Mathematics 1200 (or the previous 2249/2251) with a grade of C- or higher.

**CHEM 2211 – The Chemistry Between Us****(3 credits) 3 hours lecture**

Chemistry 2211 is a study of the Chemistry each of us experiences on a daily basis. Topics include: the nature of chemical species; food chemistry and metabolism; medications, cosmetics, and cleaning agents; explosives and propellants; energy and fuel sources; and environmental chemistry. Students will gain an understanding of chemical safety and the risks and benefits of living in a chemical world.

*Recommended Preparation:* Cluster 1 Foundation Level course.

**CHEM 2220 – Introduction to Atomic Theory and Chemical Bonding****(3 credits) 3 hours lecture**

This course will enable students, currently and previously enrolled in the Bachelor of Engineering program (University Transfer Program), to take further chemistry courses. It will cover classical and quantum mechanical atomic theories and how they have been developed into useful models for understanding molecular bonding, structure and reactivity.

*Prerequisites:* Chemistry 1209 and Mathematics 1219 with a grade of C- or higher.

**CHEM 2301 – Analytical Chemistry I: Quantitative Analysis (formerly CHEM 3101)****(3 credits – TG) 3 hours lecture, 4 hours lab**

This course stresses the importance of precision measurement in the practice of chemistry; the analytical methods employed in data manipulation and complexometric analysis. The laboratory component will focus on the development of analytical laboratory skills in organic and inorganic analysis.

*Prerequisites:* Chemistry 1202 and Mathematics 1200 with a Grade of C- or higher.

**CHEM 2302 – Analytical Chemistry II, Introduction to Instrumental Analysis****(3 credits – TG) 3 hours lecture, 4 hours lab**

This course follows Chemistry 2301 (Analytical Chemistry 1, Quantitative Analysis) and introduces students to the principles and practice of instrumental methods in quantitative analysis. Lectures will cover spectroscopic analysis (UV-visible, atomic absorption/emission), electroanalytical methods (potentiometry, voltammetry, coulometry and redox titrations) and analytical separation methods (extraction methods, chromatography [including ICP,HPLC,GC,GC-MS] and capillary electrophoresis). Labs will cover quantitative analysis of organic and inorganic materials using some of the above methods.

*Prerequisite:* Chemistry 2301 with a grade of C- or higher.

**CHEM 3103 – Advanced Organic Synthesis****(3 credits – TG) 3 hours lecture, 4 hours lab**

This course deals with the synthetic aspects of organic chemistry: oxidations, reductions, concerted reactions, stereoselectivity, synthetic equivalents, and protecting groups. The reaction types will then be used in planning efficient synthetic pathways towards important complex target molecules such as clinical drugs and natural products. The laboratory component will emphasize isolation, purification, and characterization of major and minor products from selected syntheses.

*Prerequisite:* Chemistry 2102 with a grade of C- or higher.

**CHEM 3201 – Spectroscopy****(3 credits) 3 hours lecture, 3 hours lab**

This course is an exploration of atomic and molecular spectroscopy and application of group theoretical concepts. Topics will include vibrational, absorption and emission spectroscopy, both single and multidimensional NMR based on various nuclei, as well as mass spectrometry. Fundamental theories that lead to spectral phenomenon, as well as the application of these theories in the identification of complex unknowns will be addressed both through lecture and laboratory work.

*Prerequisite:* Chemistry 2102 with a grade of C- or higher.

*Pre or Co-requisite:* Chemistry 3602 or department consent.

**CHEM 3357 – Industrial Organic Chemistry****(3 credits – TG) 3 hours lecture, 1 hour tutorial**

Topics discussed in this course include: the hybridization of the carbon atom; covalent bonding; reactions of alkanes, alkenes, alkynes and aromatic hydrocarbons; functional groups and their reactions; polymerization and industrial applications. Major projects will include cradle-to-grave analysis of an assigned organic compound and theoretical development of new recycling methods for organics.

*Prerequisite:* Chemistry 1209 or equivalent.

**CHEM 3401 – Solid State****(3 credits) 3 hours lecture, 1-hour-tutorial, 4 hours lab**

This course is a study of the models and concepts underlying the field of inorganic chemistry, and the physics of chemical species in the solid state. Topics covered will include coordination complexes, crystal structures, and electronic models of solids. The laboratory component involves synthesis and analysis of inorganic compounds, investigation of semiconductor materials, and research on nanotechnology. Credit for both Chemistry 3401 and Physics 3401 will not be permitted.

*Prerequisites:* Chemistry 1201, Chemistry 1202 and Physics 1202, all with a grade of C- or higher.

**NOTE:** Credit for both Chemistry 3401 and Physics 3401 will not be allowed.

### **CHEM 3601 – Thermodynamics**

(3 credits) 3 hours lecture, 3 hours lab

This is an introduction to thermodynamics from a modern macroscopic perspective. Lecture topics will include the laws of thermodynamics, Maxwell relations, internal energy, enthalpy, entropy, Helmholtz and Gibbs free energies, chemical potential and equilibrium, as well as a detailed study of the Kinetic Theory of Gases for mono- and polyatomic gases, both ideal and real. The laboratory component will support the lecture material through theoretical modeling and basic thermodynamic and kinetic experiments.

*Prerequisites:* Chemistry 1201, Chemistry 1202, Physics 1202 or 1212 and Mathematics 1202, all with a grade of C- or higher or department consent.

**Note:** Credit for both Chemistry 3601 and Physics 3601 will not be allowed.

### **CHEM 3602 – Elementary Quantum Mechanics**

(3 credits) 3 hours lecture, 3 hours lab

This is an introductory course in quantum mechanics. The basic theory and formalisms of quantum mechanics will be developed, followed by its application to a variety of model systems from atomic and molecular physics and chemistry; including a discussion of electron spin with reference to both single- and multielectron atoms. The lab will consist of classic experiments in quantum mechanics and spectroscopy.

*Prerequisites:* Chemistry 1201, Chemistry 1202, Mathematics 1202, Mathematics 1203, and Physics 2201 with grades of C- or higher, or department consent.

*Recommended Preparation:* Mathematics 2207.

**Note:** Credit for both Chemistry 3602 and Physics 3602 will not be allowed.

### **CHEM 3801 – Nuclear Chemistry**

(3 credits) 3 hours lecture, ~~1 hour tutorial~~, ~~2 hours lab~~

This course is a study of the models, applications, and politics of nuclear science. Topics covered will include quantitative and qualitative descriptions of nuclear chemistry; the nuclear politics of warfare, global energy security, and reactors; nuclear medicine; and cosmology. ~~The laboratory component includes both data analysis exercises and formal discussions on the role of nuclear technology in our world.~~

*Prerequisites:* Chemistry 1202, Physics 1202 and Mathematics 1202, all with a grade of C- or higher.

### **CHEM 3802 – The Science and Politics of Nuclear Energy**

(3 credits) 3 hours lecture, 1 hour lab

This course is designed for students with an interest in how nuclear energy impacts our world. Students will explore the science, politics, and policies surrounding nuclear technology in Canada and abroad. Lecture topics include nuclear warfare, classification of radiation, nuclear reactors in Canada, nuclear politics, global energy security, and the future of nuclear energy.

*Prerequisites:* General Education 11XX, and General Education 13XX



### **CHEM 4411 – Organometallic Chemistry and Catalysis**

(3 credits) 3 hours lecture

Chemistry 4411 is an in-depth examination of organometallic chemistry and catalysis, including an independent analysis of the current primary literature in the field. Topics covered will include the fundamentals of structure and bonding of some transition metal compounds, the carbonyl ligand, pi ligands, other important ligands, reactions that occur at the metal, reactions involving the modification of ligands, an introduction to bio-organometallic processes, and the role of transition metal complexes in catalysis.

*Prerequisites:* Chemistry 2401 and Chemistry 2102, both with a minimum grade of C-.

### **CHEM 4213 – Drug Discovery**

(3 credits – TG) 3 hours lecture

This course illustrates the interrelation of Chemistry and Biology in the process of drug discovery and development. Topics include methods of lead discovery and optimization, classes of drug targets, structure-activity relationships and bioisosterism, and radiopharmaceuticals. Concepts will be illustrated using the development of several clinical drugs as examples.

*Prerequisite:* Chemistry 3103 with a grade of C- or higher.

*Pre or Co-requisite:* Biochemistry 4212.

### **CHEM 4701 – Molecular Modelling**

(3 credits) 2 hours lecture, 2 hours lab

This is an introductory course in molecular modelling. The formalism, advantages, and drawbacks of a number of models will be discussed through the study of the shape, symmetry, and properties of inorganic, organic, and biological systems. The lab will reinforce the lecture topics through hands-on computer simulations of various molecular systems, including some chosen by the student.

*Prerequisite:* Chemistry 3602 or Physics 3602 with a grade of "C-" or better or department consent.

### **CHEM 5201 – Independent Projects I**

(3 credits) 6 hours lab

Students will be expected to design and complete a project of their choosing in some area of Chemistry under the guidance of a supervisor. The project results will then be presented as a paper and an oral presentation to the department. To register in this course, you must first consult with a departmental faculty member who will supervise your project and obtain permission from the department chair.

*Prerequisite:* Consent of the department.

### **CHEM 5202 – Independent Projects II**

(3 credits) 6 hours lab

Students will be expected to design and complete a project of their choosing in some area of Chemistry under the guidance of a supervisor. The project results will then be presented as a paper and an oral presentation to the department. To register in this course, you must first have a research proposal approved by the departmental faculty member who will supervise your project and obtain permission from the department chair.

*Prerequisite:* Chemistry 5201 and consent of the department.

### **CHEM 3299, 4299 – Directed Readings**

See **Directed Readings** which are listed alphabetically in this section of the calendar.

## **CHILD AND YOUTH CARE COUNSELLOR (CYCC)**

### **CYCC 1110 – Fundamental Skills in Interviewing**

(3 credits) 3 hours lecture

This course emphasizes the acquisition of skills necessary to interview individuals on a one-to-one basis. Students' attitudes towards the helping relationship and strategies for facilitating relationships will also be explored. Students will learn basic communication skills and styles and be challenged to create goals related to their own communication style.

### **CYCC 1130 – Mental Health and Substance Abuse Issues (formerly HLTH 1130)**

(3 credits – TG) 3 hours lecture

This course will examine a variety of mental health and substance abuse issues affecting children, youth and families. Students will learn risk and protective factors and examine best practices (i.e. assessment, intervention and referral) relevant to serving those impacted by mental health and/or substance abuse issues.

### **CYCC 1132 – The Profession of Child and Youth Care**

(3 credits) 3 hours lecture

This course is the foundation for all subsequent Child and Youth Care Counsellor courses. Students are challenged to explore their belief and value systems, gain self-awareness and understand the personal impact when working with vulnerable children, youth and families. The history and scope of the CYC child and youth care profession are also examined.

**Note:** Child and Youth Care Counsellor 1132 is a prerequisite for all subsequent Child and Youth Care courses.

### **CYCC 1142 – Fieldwork**

(3 credits) 3 hours tutorial, 45 hours fieldwork

This course is an observation fieldwork experience which allows students the opportunity to observe a variety of child welfare, justice, community and educational programs. In seminar, students will explore their "professional presentation of self" through the development of a portfolio, journal writing, self care practices and discussions of ethical practice.

## CLASSICS (CLAS)

### CLAS 1111 – The Technical Terms of Medicine and the Life Sciences (formerly CLAS 2211)

(3 credits – TG) 3 hours lecture

The Greek and Latin elements of modern medical and life-sciences terminology.

## COMMUNICATIONS (COMM)

### COMM 1112 – Introduction to Radio Writing

(3 credits) 3 hours lecture

This course is reserved for Broadcasting students, and is designed to provide students with necessary skills required to write for radio. Students are introduced to the art of writing for sound through writing and producing commercial and public service announcements. In addition, students learn research techniques, interviewing, logging, programming as well as how to contact and work for advertising clients and prepare radio campaigns.

### COMM 1114 – Introduction to Broadcast Journalism (Radio)

(3 credits) 1 hour lecture, 1 hour tutorial, 2 hours lab

This course is reserved for Broadcasting students and is designed as an introduction to journalism for radio, with concentration on newsgathering and news presentation. While developing students' radio news judgement, this course will also develop students' general news judgement. Students will learn to write news for broadcast.

### COMM 1116 – Introduction to Radio Operations

(3 credits) 1 hour lecture, 2 hours tutorial

This course is reserved for Broadcasting students and emphasizes the operation of typical equipment used in most am and fm radio stations. Students will learn the techniques involved in the cueing and playing of various audio formats. They are also taught editing, recording and dubbing, program mixing and microphone techniques. Other areas covered include program preparation, documentary production, production values, programming and music selection. Students will also spend at least two hours each week on-air on CMRC, our internet radio station.

### COMM 1144 – Digital Photography for Broadcast

(3 credits) 1 hour lecture, 2 hours tutorial

This is an introductory course designed to provide the second-year broadcasting students with basic knowledge of digital photography techniques and the use of Adobe Photoshop and its applications to the television medium. Topics include: digital camera operations, exposure control, lighting, composition, colour correction, file formats and the use of Adobe Photoshop to create backdrops for green screen use. Students should supply their own 5 MP or better digital camera.

### COMM 1201 – Advanced Radio Operations

(3 credits) 1 hour lecture, 2 hours lab

Students will receive advanced audio technical skills, specific to their course choice. All students will engage in a variety of live and pre-produced broadcast exercises that will allow them to demonstrate these advanced production skills. In addition, students will participate in various group projects such as radio dramas and variety/talk shows. Each student will be required to work weekly shifts in all areas of CMRC's operation.

*Prerequisites: Communications 1112, 1114, 1116 and 1206.*

### COMM 1202 – Radio Commercial Writing

(3 credits) 1 hour lecture, 3 hours tutorial

This course is designed to expand the fundamental radio writing skills of students through regular weekly copy-writing assignments for use on CMRC, editorial writing, research for talk show format, production of radio documentaries, and production of commercials and public service announcements. Students will also be working on a variety of presentation and promotional assignments, many in conjunction with Communications 1201.

*Prerequisites: Communications 1112, 1114, 1116 and 1206.*

### COMM 1203 – Radio News

(3 credits) 1 hour lecture, 3 hours tutorial

Through regular assignments for use on the CMRC radio station, students are trained to handle an increasing volume of work under pressure of deadlines and to apply broadcast journalism skills through reporting on meetings, panel discussions and press conferences. Students will complete a ten-minute radio current affairs documentary. In addition, students will be assigned a regular news beat and will report on their beat at regularly scheduled intervals throughout the semester. Students will also host various current affairs programs such as live election night specials, political convention coverage and live coverage of public meetings.

*Prerequisites: Communications 1112, 1114 and 1116 and 1206.*

### COMM 1204 – Broadcast Journalism (Television)

(3 credits) 1 hour lecture, 2 hours lab

Students are introduced to the television application of Broadcast Journalism. Through regular news assignments for CMRC-TV News Shows, using electronic newsgathering equipment and techniques, students will develop newsgathering, writing, reporting and presentation skills for television.

*Prerequisites: Communications 1112, 1114, 1116, 1201, 1206, 1209 and 1202 or 1203.*

### COMM 1205 – Radio Practicum

(3 credits) 90 hours practicum over 3 weeks

This course provides a practical experience in radio broadcasting through one or more internships with local radio stations. Areas of emphasis will include commercial writing, foreground writing, research, radio news, traffic, music library and radio production.

*Prerequisites: Communications 1112, 1114, 1116, 1201, 1204, 1206, 1209, 1240, 1241, 1244, and 1202 or 1203, and 1211 and 1213 or 1242 and 1245 or 1247 and 1248.*

### COMM 1206 – Radio Performance

(3 credits) 1 hour lecture, 2 hours tutorial

This course will focus on news reading and broadcast presentation skills. Emphasis is placed on interpretation and the ability to lift the word from the printed page with credibility. Students will also write and perform a commentary.

*Prerequisites: All previous required 1100-level and 1200-level Broadcasting courses.*

### COMM 1209 – Television Operations

(3 credits) 3 hours lecture, 9 hours tutorial over 2 weeks

This course provides an introduction to the operation of basic television equipment: television camera, audio board, television lights, microphones, video switcher and television graphics. This course will also include basic interviewing techniques for television.

*Prerequisites: Communications 1112, 1114, 1116, 1201, 1206 and 1202 or 1203*

### COMM 1211 – Advanced Television Production

(6 credits) 1 hour lecture, 2 hours tutorial, 6 hours lab

In this course, students will acquire sophisticated operational skills on television equipment through a practical approach to production techniques including commercial, program and news production and pre-production projects; principles of directing; and advanced operational skills including editing, shooting and lighting for both studio and on-location projects.

*Prerequisites: Communications 1112, 1114, 1116, 1201, 1204, 1206, 1209, 1240, 1241 and 1202 or 1203.*

### COMM 1213 – Extended Broadcast Studies

(3 credits) 1 hour lecture, 2 hours tutorial

This course runs in tandem with Communications 1211. It is designed to provide second-year broadcasting students in the operations 'stream' with increased exposure to broadcast production techniques. Topics include: advanced audio recording and camerawork, nonlinear editing, specialized lighting and mobile productions.

*Prerequisites: Communications 1112, 1114, 1116, 1201, 1204, 1206, 1209, 1240, 1241 and 1202 or 1203.*

### COMM 1700 – Journalism in Society

(3 credits – TG) Blended delivery, 2 hours lecture and 1 hour online **and/or may be offered online**

Journalism is a product of social interaction and is shaped by a range of societal forces. Through a focus on the concept of the news agenda, students will consider the nature of news, the structures and conventions that shape how journalists gather and present news, the role news plays in democratic societies, the importance of ethical and professional practice considerations, and the influence of external 'voices' on the decisions journalists make daily.



### COMM 1707 – Journalism Elements

(3 credits – TG) 6 hours lecture / tutorial combined, and one hour online

This multifaceted and multidisciplinary course will introduce students to the goals, structure and craft of twenty-first-century broadcast, photo, and print journalism. Work will include researching, reporting, writing and illustrating news stories on events and developments in local communities. An online component will focus on grammar development and current events. Students will be encouraged to adopt reflective and creative approaches to the development of their skills, knowledge and abilities.

### COMM 1709 – Journalism Practice

(3 credits – TG) 6 hours lecture / tutorial combined, and one hour online

Having been introduced in Journalism Elements to the multifaceted and multidisciplinary nature of contemporary journalism, student journalists will now complete significant projects in broadcast, photography and print. An online component will focus on Canadian Press style rules and the program's ethical practice policy. Each student will complete an electronic portfolio as a showcase of their work, and as an archive of reflection on their development and learning as a journalist.

*Prerequisite: Communications 1707.*

### COMM 1720 – Managing Digital Media

(3 credits – TG) 3 hours lecture and tutorial combined, and/or may be offered online

With the potential for any one news story to be edited for use in a variety of ways, and presented in a variety of formats, it is imperative that journalists understand the demands, legal implications and structure of digital file creation, alteration, movement and management. Using media production software, and with a focus on file management, students in this course will use their own work to create a range of media files, and store and retrieve these files for an online production project.

### COMM 1841 – Introduction to Public Relations

(3 credits – TG) 2 hours lecture, 1 hour tutorial

This course will provide students with an overview of the field of public relations and environments in which practitioners work. Public relations will be considered from the perspective of human communication theories. Students will also learn the history and role of public relations in different organizational settings, and all key components of the public relations process from both a theoretical and practical point of view. Issues facing the practitioner and the industry will also be discussed.

### COMM 1845 – Interpersonal Communications

(3 credits – TG) 3 hours lecture

This course introduces the fundamentals of interpersonal communications with a focus on 'influencing with integrity'. Students will practice communicating one-on-one and in small groups; learn effective listening and conflict resolution skills; appreciate differences in others; and examine personal values, intentions and behaviours.

### COMM 1849 – Applied Writing I for Public Relations

(3 credits) 2 hours lecture, 2 hours tutorial

This course will introduce students to intermediate-level elements of writing for specific communications disciplines. Considerations of audience, purpose and technique in media will be examined for a variety of writing assignments in public relations.

*Prerequisite: Communications 1841.*

### COMM 2500 – Introduction to Communication Studies (formerly ACOM 2500)

(3 credits – TG) 3 hours lecture and tutorial combined

When we consume information or communicate with others we are sharing and assessing facts, ideas, opinions, and biases. In doing so we are developing a sense of who we are as individuals, and we're also making decisions about how our world functions. This course will introduce students to the discipline of Communication Studies, and permit examination of a range of communication theories, which describe these dynamic social and personal processes.



### COMM 2501 – Media History and Contemporary Issues

(3 credits – TG) 3 hours lecture and tutorial combined, and/or may be offered online

This course surveys the development of civilization through the lens of human communication and information technology. Starting with Ice Age artifacts and progressing through emergence of the first writing systems, the alphabet, early literacy and the printing press, emphasis on the social impacts of communication developments into the 20th century further prepares students for critical assessment of technology convergence, participatory media and generational issues that mark the globalized world of New Media today.



### COMM 2663 – Rhetoric

(3 credits – TG) 3 hours lecture

This course gives students the opportunity to refine their writing skills by applying the principles of rhetoric and stylistics. To this end, analysis of such realms of discourse as advertising, magazine articles, fiction, political speech and debate will be emphasized to understand how these forms of communication achieve their effects. The rhetorical analysis of texts will, moreover, apply to students' own writing. Rhetorical theory and application will, in other words, be closely linked to ensure that students understand, through practice, the stylistics resources available in language that make ideas clear, cogent and compelling.

### COMM 2666 – Typography

(3 credits) 2 hours lecture, 2 hours lab

Introduction to the topic of typography and examination of the role of type in visual communication and information design through normative and conceptual relationships. Topics will include principles of typography and layout, concept development, and the historical foundations of typography. Students will use typographical principles and methods of visual organization to solve assigned communication problems.

*Prerequisites: Communications 1600, 1610 and 1620.*

### COMM 2667 – Information Architecture

(3 credits) 3 hours lecture

Introduction to the principles and best practices of effective information design for both print and electronic media. The course includes such topics as information types, information categorization and hierarchies, types of organizational patterns, message and document genres, structural markup languages, structured information design and technologies, content management, and single sourcing.

*Prerequisites: Communications 1661 and 1600.*



**COMM 3600 – Usability****(3 credits) 2 hours lecture, 2 hours lab**

Study of the relevant research and practical application of usability testing as part of product development. Students will address complex information design issues and problems including legal documents, business forms, diagrams, transportation maps, statistical information, charts, graphs and tables, instructional materials, way finding systems, and computerized information systems. The course includes strategies for planning, conducting, and analyzing a test. Teams will conduct an expert (heuristic) evaluation and report results from an actual test in a usability lab using industry standard format.

*Prerequisites: Communications 2667 and 2670.*

**COMM 3605 – Research in Information Design****(3 credits – TG) 3 hours lecture**

Introduction to research methods used by practitioners and scholars in information design. Students explore the relationship between theory and research and learn how to design and carry out empirical studies using both quantitative and qualitative methods. Emphasis is placed on the research methods used in workplace settings to design user-centered information products and to test their usefulness and usability.

*Prerequisite: Communications 1600.*

**COMM 3610 – Visual Communication for Information Designers I****(3 credits) 3 hours lecture**

Introduction to the principles of visual communication in the context of information design. The theoretical and historical issues of organizing and visualizing statistics, number, and/or complex relationships will be explored. Emphasis on conceptualization, visual diagramming, and analysis of subtle visual relationships including design and use of photographs and other pictorial materials will be developed, and current approaches to typography are examined.

*Prerequisites: Communications 1620, 1610 and 2666.*

**COMM 3611 – Visual Communication for Information Designers II****(3 credits) 3 hours lecture**

This course builds upon the foundation established in Visual Communications I. Students explore advanced topics in effective graphic design in the context of information design.

*Prerequisite: Communications 3610.*

**COMM 3620 – Document Production I****(3 credits) 2 hours lecture, 2 hours lab**

This course focuses on the basic principles of document production relating to the principles of publishing. Publishing principles and practices, marketing problems, distribution methods and informational systems and techniques are examined. Students will be expected to produce a variety of documents and publications.

*Prerequisite: Communications 3600*

*Co-requisites: Communications 3611 and 3670.*

**COMM 3665 – Technical Writing II****(3 credits – TG) 3 hours lecture**

Introduction to intermediate-level elements of technical writing. Consideration of audience, purpose and technique in print and electronic media will be examined for a variety of writing needs. Technical communication business practices are also examined.

*Prerequisites: Communications 1661 and 2667.*

**COMM 3670 – Project and Content Management****(3 credits) 3 hours lecture**

Introduction to project and content management. Content includes concepts, principles, and the inputs, outputs, tools and techniques necessary to take a project from inception to completion. Projects will be developed that are specific to the communication professions.

*Prerequisites: Communications 1600, 1841 or 1707.*

**COMM 3705 – Reporting News****(3 credits) 3 hours, lecture and tutorial combined**

In their role as staff reporters for the journalism program community newspaper, students will practice reporting and writing news stories for print publication, and writing about the community, arts, business, and sports among a range of other news beats. CP Style, pitching stories, updating stories, and editorial responsibility will also be discussed and practiced.

**COMM 3707 – News Reporting****(3 credits – TG) 3 hours lecture /tutorial combined, 90 minute lab**

In their role as staff reporters for the journalism program community newspaper, students will practice reporting and writing news stories for print publication, and writing about the community, arts, business, and sports among a range of other news beats. CP Style, pitching stories, updating stories, and editorial responsibility will also be discussed and practiced.

*Prerequisite: Communications 1709.*

**COMM 3709 – News Editing and Reporting****(3 credits – TG) 3 hours lecture /tutorial combined, 90 minute lab**

Student journalists in this course, in context of their work with the journalism program community newspaper, will consider more formally the role of editors, while continuing to develop their own reporting skills. Copyediting, section editing, and content planning will be discussed and practiced.

*Prerequisite: Communications 3705 or 3707.*

**COMM 3717 – Specialized Writing for Journalism****(3 credits – TG) 3 hours lecture and tutorial combined, and/or may be offered online**

Journalists need to present information to a variety of audiences and in a variety of ways. Students in this course will consider and practice such forms as longform writing, in-depth profiles, editorial writing, and personal column writing.

**COMM 3720 – Newspaper Production and Design****(3 credits – TG) 2 hours lecture and 2 hours production laboratory**

Working with appropriate production software student journalists will consider design principles and production management of a newspaper, while practicing technical and content-based production processes, page design and layout as members of the journalism program newspaper production team.

**COMM 3727 – Visual Journalism****(3 credits) 3 hours lecture /tutorial combined**

Photography and graphics are essential elements of successful publications. In this course students will build on their understanding of the use of photo tools, software and graphics, through the production of news photography, news graphics, multimedia and journalism focused special photo projects; all in context of their work on the journalism program newspaper.

*Prerequisite: Communications 1709.*

**COMM 3729 – Online Writing, Editing and Production****(3 credits) 2 hours lecture and 2 hours tutorial**

Building on work completed in as a member of the journalism program newspaper's editorial team, student journalists in this course will plan, produce and edit a range of original online journalism for presentation on an online news site, while also considering such issues as the design, nature and goals of online journalism.

*Prerequisite: Communications 3705 or 3707.*

**COMM 3735 – Ethics, Law and Media****(3 credits – TG) 3 hours lecture and tutorial combined**

The course considers ethics and law in relation to the media, and their link to democracy and our political institutions, through consideration of how the justice system functions, and of ethical and legal issues that routinely confront journalists and media organizations.

### **COMP 1370 – Introduction to Internet Development (formerly COMP 1371)**

(3 credits) 2 hours lecture, 2 hours lab

This course lays the groundwork for effective creation of Internet documents and sites. Students will acquire an in-depth understanding of HTML and an introduction to Cascading Style Sheets. Students will explore strategies for readability and interactivity.

*Note: Credit will be allowed for only one of Computer Science 1274, 1370 or 1371.*

### **COMP 1501 – Programming I: Introduction to Problem Solving and Programming**

(3 credits) 3 hours lecture, 1 hour tutorial, 1 hour lab

This course provides an introduction to problem solving in the context of computer programming. The problem solving process is explored in depth, with a focus on applying the key steps in a variety of situations. The course emphasizes the design of fundamental algorithmic solutions and the implementation of those solutions in a visual development environment. Pre-existing modular building blocks for objects and methods form the basis for program implementation.

**Note:** Only one of Computer Science 1001 and 1501 can be used to satisfy program requirements.

### **COMP 1502 – Programming II: Object Oriented Programming**

(3 credits) 3 hours lecture, 1 hour tutorial, 1 hour lab

The concepts and practices essential to programming within an object-oriented environment are studied. The course also encompasses the key facets of designing a modular solution, developing and executing a test plan and debugging in a systematic manner. Exception handling is also covered.

*Prerequisite: Computer Science 1001 or 1501 with a minimum grade of C-.*

### **COMP 1511 – Web I: Client Development**

(3 credits) 3 hours lecture, 1 hour lab

This course covers the concepts and practice necessary for creating Internet content. The course provides a technical overview of the Internet environment and the structure of the World Wide Web. The technical segment will focus on the design and implementation of an effective web site at the introductory level.

*Prerequisite: Computer Science 1001 or 1501 with a minimum grade of C-.*

### **COMP 1615 – Introduction to Programming (formerly COMP 2215)**

(3 credits – TG) 3 hours lecture, 1 hour tutorial

Introduction to algorithm design and implementation using a structured programming language. Discussion of, and practice with, elementary programming techniques with emphasis on good style.



### **COMP 1631 – Introduction to Computer Science I (formerly COMP 2231)**

(3 credits – TG) 3 hours lecture, 2 hours tutorial

Problem solving and programming in a structured programming language. Data representation, program control, basic file handling, the use of simple data structures and their implementation.

**Note:** This course is intended for prospective majors in Computer Science and for others with a sound mathematical background. Credit may not be obtained for both Computer Science 1501 and 1631.

### **COMP 1633 – Introduction to Computer Science II (formerly COMP 2233)**

(3 credits – TG) 3 hours lecture, 2 hours tutorial

Continuation of Computer Science 1631. The implementation of abstract data structures using pointers and objects, with emphasis on modularity and software design.

*Prerequisite: Computer Science 1631 with a minimum grade of C- or higher.*

### **COMP 2008 – Scientific Computing I: Modeling and Simulation**

(3 credits) 3 hours lecture, 1 hour tutorial

This course provides an introduction to the fundamentals of scientific computing, the modeling process, computer simulations, and scientific applications. While the focus is on cellular automaton simulations and Monte Carlo techniques, a limited number of system dynamics models may also be examined.

*Prerequisite: Computer Science 1001 with a minimum grade of C-.*

### **COMP 2011 – Directed Field Studies I for Computer Information Systems (formerly ENTR 2011)**

(15 credits)

The Directed Field Studies provides Computer Information Systems students with an opportunity to extend what they have learned in the classroom into a relevant work environment. It is also an opportunity to acquire new knowledge (both technical and business) through observation, practice and self-assessment. Directed Field Studies are highly individualized so that each student will gain something unique from the course. Normally this first Directed Field Studies will involve a single employer, and will be arranged through the University. It must allow an appropriate and effective learning opportunity. A significant amount of time is required from the student during the semester prior to the Directed Field Studies (e.g. attending workshops, interviewing, developing suitable learning objectives).

*Prerequisites: All first and second year Computer Science courses in the Computer Information Systems and Business program, Entrepreneurship 2201, Administration 1120, 1210 and 1130 or 1150.*

### **COMP 2503 – Programming III: Data Structures**

(3 credits) 3 hours lecture, 1 hour tutorial

Data structures important to computing such as basic linear structures, trees, heaps and hash tables will be studied. Additionally searching and sorting methods will be covered. The representation, uses and algorithms for manipulating these data structures will be examined. The emphasis is on using these structures to solve problems.

*Prerequisite: Computer Science 1502 with a minimum grade of C-.*

### **COMP 2521 – Database I: Data Modeling and Query Languages**

(3 credits) 3 hours lecture, 1 hour tutorial

This course emphasizes concepts necessary to design and implement databases. Conceptual and logical data modeling is covered in detail. The technical segment focuses on the relational database environment.

*Prerequisite: Computer Science 1502 with a minimum grade of C-.*

### **COMP 2531 – Computer Architecture and Operating Systems**

(3 credits) 3 hours lecture, 1 hour lab

This course covers fundamental hardware and system software topics. Hardware including CPU architecture and computer organization is studied first. Then students explore the inner workings of operating systems, including file systems, process scheduling, concurrency, and memory management.

*Prerequisite: Computer Science 1501 or 1001 with a minimum grade of C-.*

### **COMP 2541 – Systems Analysis**

(3 credits) 3 hours lecture, 1 hour tutorial

This course provides an introduction to systems analysis in the development of computer-based information systems. The theory and models of software evolution are studied. The course covers system development methodologies and key systems analysis tools and techniques, with a focus on object-oriented strategies.

*Prerequisites: Management 3210 and either Computer Science 1502 or 1511 with a minimum grade of C-.*

**COMP 2613 – Introduction to Computability (formerly COMP 3313)****(3 credits – TG) 3 hours lecture, 2 hours tutorial**

This course provides students with an opportunity to gain insight into the theoretical foundations of computing science. Topics include abstract machines (finite automata; push down automata and Turing machines), the hierarchy of formal languages (regular, context-free, and recursive) recognized by these machines, and applications of these languages.

*Prerequisites:* Mathematics 1271 and Computer Science 1633 or 2005 with minimum grades of C- or higher.

**COMP 2631 – Information Structures I (formerly COMP 3331)****(3 credits – TG) 3 hours lecture, 2 hours tutorial**

Data structures important to computer science will be studied, including trees, graphs and hash tables. Searching and sorting techniques will be emphasized. Associated algorithms and their time and space efficiency will also be studied.

*Prerequisite:* Computer Science 1633 with a minimum grade of C- or higher.

*Recommended Preparation:* Mathematics 1271 with a minimum grade of C- or higher.

**COMP 2633 – Foundations of Software Engineering (formerly COMP 3333)****(3 credits – TG) 3 hours lecture, 2 hours tutorial**

Introduction to software development problems and to the processes and methods used to address them. Software life cycles models. Software process improvement. Goals and methods for requirements analysis and specification, software design, implementation, integration and testing of software. An introduction to one or more informal methods (focusing on object-oriented approaches) currently in wide spread use.

*Prerequisite:* Computer Science 2631 with a minimum grade of C- or higher.

**COMP 2635 – Information Structures II****(3 credits – TG) 3 hours lecture, 2 hours tutorial**

This course is a continuation of Computer Science 2631. Advanced data structure topics, including collision resolution in hash tables, search algorithms, tree structures, and strings will be covered. Advanced algorithmic tools for storing and manipulating information will be studied.

*Prerequisite:* Computer Science 2631 with a minimum grade of C- or higher.

**COMP 2655 – Computing Machinery I (formerly COMP 3355)****(3 credits – TG) 3 hours lecture, 2 hours tutorial**

An introduction to computing machinery, establishing the connection between programs expressed in a compiled language, an assembly language, and machine code, and how such code is executed. Includes the detailed study of a modern CPU architecture, its assembly language and internal data representation, and the relationship between high-level program constructs and machine operations.

*Prerequisite:* Computer Science 1633 with a minimum grade of C- or higher.

*Recommended Preparation:* Mathematics 1271 with a minimum grade of C- or higher.

**COMP 2659 – Computing Machinery II (formerly COMP 3325)****(3 credits – TG) 3 hours lecture, 1 hour tutorial, 1 hour lab**

An introduction to combinational and sequential digital logic design, focusing on its application to the creation of modern computing machinery. Includes hardware interfacing to peripheral devices, and programming techniques for asynchronous and real-time machine input/output.

*Prerequisites:* Philosophy 1179 and Computer Science 2655 with minimum grades of C- or higher.

**COMP 3008 – Scientific Computing II: Data and Visualization****(3 credits) 3 hours lecture, 1 hour tutorial**

This course provides an introduction to the underlying theory and practical concepts in data visualization. A number of topics pertaining to data will be covered, including types of data, its acquisition, representation, storage and access, as well as various forms of data analysis. The foundations of visualization and consequent design principles will be presented. Current examples and case studies in data visualization will be examined, with particular emphasis on scientific applications.

*Prerequisite:* Computer Science 2008 with a minimum grade of C-.

**COMP 3011 – Directed Field Studies II for Computer Information Systems (formerly ENTR 3011)****(15 credits)**

The Directed Field Studies provides Computer Information Systems students with an opportunity to extend what they have learned in the classroom into a relevant work environment. It is also an opportunity to acquire new knowledge (both technical and business) through observation, practice and self-assessment. Students will be expected to achieve higher levels of competencies than they did in the first Directed Field Studies course. They must demonstrate their entrepreneurial abilities by generating a suitable work experience, which must be approved prior to the start of the course. It must allow an appropriate and effective learning opportunity. A significant amount of time is required from the student during the semester(s) prior to the Directed Field Studies (e.g. attending work shops, self marketing, developing suitable learning objectives).

*Prerequisites:* Computer Science 2011, plus 22 courses of the Computer Information Systems and Business program, including 11 Computer Science courses and 6 Business courses.

**COMP 3012 – Robotics****(3 credits) 3 hours lecture, 1 hour tutorial, 2 hours laboratory**

This course provides an introduction to the underlying theory and practical concepts in robotics. This includes aspects of geometry, kinematics, statics, dynamics, control, motion planning, trajectory generation, and programming. Students also receive practical experience using a rapid prototyping tool to construct a robotic system.

*Prerequisites:* One of Computer Science 1502 or 2233 or 2531 with a minimum grade of C-, and one of Mathematics 1200 or 1203 or 1505 or equivalent with a minimum grade of C-.

**COMP 3307 – Computing Applications in Small Business and Entrepreneurship****(3 credits) 2 hours lecture, 2 hours tutorial**

This course covers the design and implementation of databases to manage distribution and inventory for a business. It also includes the design and development of print and electronic promotional pieces using desktop publishing and web authoring software, and the exchange of data between applications. The goal of the course is to enable students to use computing resources to gain a competitive edge.

**COMP 3309 – Information Technology and Society****(3 credits – TG) 3 hours lecture**

A study of the implications of information technology for society. Historical perspectives, social context of computing, legal and ethical problems, economic issues, and philosophical frameworks for analysis will be covered.

**COMP 3504 – Programming IV: Best Practices in Design and Development****(3 credits) 3 hours lecture, 1 hour tutorial**

This course continues the study of the art of object-oriented programming by focusing on the practical integration of contemporary best practices in software development. The course will focus on object-oriented design and development. Current methodologies such as extreme programming and testdriven development will be covered. The course will also cover refactoring and design patterns.

*Prerequisites:* Computer Science 2503 and 2541 with a minimum grade of C-.

**COMP 3512 – Web II: Web Application Development****(3 credits) 3 hours lecture, 1 hour tutorial**

This course focuses on the concepts and technologies needed to develop web-centric applications. The overall architecture of Internet applications is examined at a high level. Special emphasis is given to server-side programming, including the creation of multi-tier and multi-layer web applications and using Web Services to integrate web applications with other IT applications.

*Prerequisites:* Computer Science 1511, 2503 and 2521 with a minimum grade of C-.



### **COMP 3532 – System Administration and Maintenance**

(3 credits) 3 hours lecture, 1 hour lab

This course covers the deployment and maintenance of modern computer systems, with particular emphasis on the administration of user accounts. The course includes an overview of basic administrative tasks associated with network operating systems such as Windows and Linux.

*Prerequisite:* Computer Science 2531 with a minimum grade of C-.

### **COMP 3533 – Network Infrastructure and Security**

(3 credits) 3 hours lecture, 1 hour lab

This course covers the principles and practice of computer networking, focusing on the high-level protocol-oriented aspects of computer networks. Networking as it relates to database and file service applications is examined along with Internet structure, protocols and routing. Various aspects of security in networked information systems are studied.

*Prerequisite:* Computer Science 3532 with a minimum grade of C-.

### **COMP 3551 – GUI Development**

(3 credits) 3 hours lecture, 1 hour tutorial

This course focuses on the design and development of contemporary event driven graphical user-interface (GUI) applications. Special emphasis will be given to events, event handling, and exception handling. Different GUI design approaches and design patterns will be examined. Graphics, audio, and timers will also be covered.

*Prerequisite:* Computer Science 2503 with a minimum grade of C-.

### **COMP 3591 – Mandatory Work Experience**

(0 credits)

The Bachelor of Computer Information Systems degree requires that all students complete at least one paid work experience term. Through a competitive process, students are hired by suitable employers, monitored by the University and evaluated by the employer. The course includes work term assignments, on-site performance assessments, employer evaluations and a group debriefing session at the end of the term.

*Prerequisites:* COOP 0001 and Management 3210 and Computer Science 2503, 2521, 2541, 3512 and 3532 as well as three of: Management 2130, Human Resources 2170, Marketing 2150, and Accounting 2121.

### **COMP 3649 – Programming Paradigms**

(formerly COMP 3349)

(3 credits – TG) 3 hours lecture, 2 hours tutorial

This course will examine the basic principles of several major programming paradigms, with emphasis on declarative paradigms such as functional and logic programming. Data types, control expressions, loops, types of references, lazy evaluation, different interpretation principles and information hiding will be studied.

*Prerequisites:* Computer Science 2631 and Philosophy 1179 with minimum grades of C- or higher.

### **COMP 4401 – Quality Assurance and Testing**

(3 credits) 3 hours lecture, 1 hour lab

This course covers the issues involved in ensuring a high quality deployment of a new application. Topics include quality assurance, project management, integrating a new application with existing applications, quality control (testing) and deployment strategies.

*Prerequisite:* Computer Science 4403.

### **COMP 4409 – Advanced Internet Application Development**

(3 credits) 3 hours lecture, 1 hour lab

This course focuses on the design and development of complex Internet applications. Topics included in this course are: Internet application technology, patterns, frameworks and best practices in the design and development of Internet applications. The overall architecture of Internet applications will be examined. Students will use a current Internet development platform to create real-world Internet applications.

*Prerequisite:* Computer Science 4421.

*Recommended Preparation:* Computer Science 1278.

### **COMP 4513 – Web III: Advanced Web Development**

(3 credits) 3 hours lecture, 1 hour lab

This course covers advanced web development topics, applying the foundation client and server techniques learned in Web I and II, and database topics from Databases I. In addition to practical theory, students will learn about asynchronous JavaScript, web services, electronic commerce, search engine optimization and content management systems. Students will use a modern API to develop an application using maps, social network plug-ins, or other advanced web technology.

*Prerequisite:* Computer Science 3512 with a minimum grade of C-.

### **COMP 4522 – Database-II: Advanced Databases**

(3 credits) 3 hours lecture, 1 hour lab

This course covers advanced concepts and techniques associated with information management. Database implementation and administration issues are examined in depth. Emerging database trends such as data warehousing and data mining are introduced. The course also provides an overview of distributed database topics, including distributed transactions.

*Prerequisite:* Computer Science 2521 with a minimum grade of C-.

### **COMP 4535 – Computer Security**

(3 credits) 3 hours lecture, 1 hour tutorial

This course covers the concepts and techniques of computer security. It focuses on security issues relevant to the Internet and protecting an organization's internal network. Risk assessment and development of security policies are covered.

*Prerequisite:* Computer Science 3533 with a minimum grade of C-.

### **COMP 4543 – Project Management and Quality Assurance**

(3 credits) 3 hours lecture, 1 hour tutorial

This course covers strategic approaches for successful management of system development or enhancement projects, from both technical and organizational perspectives. The steps involved in ensuring a high quality deployment of a new application are examined.

*Prerequisite:* Computer Science 2541 with a minimum grade of C-.

### **COMP 4545 – Information Systems Organization**

(3 credits) 3 hours lecture, 1 hour tutorial

This course provides a strategic perspective of an Information Systems Organization. There are two dimensions: the first deals with Information as a strategic resource and the second deals with administering and controlling this strategic resource. This course discusses how the organization manages and uses information to ensure its competitive advantage.

*Prerequisite:* Computer Science 2541 with a minimum grade of C-.

### **COMP 4553 – Human-Computer Interaction**

(3 credits) 3 hours lecture, 1 hour tutorial

This course covers the fundamental theory and practice in the design and evaluation of human-computer interfaces. The impacts of computer-based information systems on individuals and organizations are examined along with the rationale for a user-centric approach in all IT applications and systems.

*Prerequisite:* Computer Science 3551 with a minimum grade of C-.

### **COMP 4555 – Games Development**

(3 credits) 3 hours lecture, 1 hour tutorial

This course focuses on the design and implementation of interactive computer games. It emphasizes the algorithms and data structures required to create real time computer graphics, animation, sound, and network communication. In the technical segment, the course uses a variety of development tools in conjunction with a modern 3-D game engine.

*Prerequisite:* Computer Science 3551 with a minimum grade of C-.

### **COMP 1199, 1299 – Directed Readings**

See **Directed Readings** which are listed alphabetically in this section of the calendar.

### **DAST 1126 – Practicum I**

(3 credits) 1.5 hours lecture and 75 hours fieldwork

This is an intermediate practicum course where students obtain hands-on practical knowledge in working with individuals with disabilities, their families and their support networks. Under the supervision of a skilled community-based practitioner, students will engage with key support people in the life of a person and develop skills in the areas of assessment, person-centered planning and beginning intervention. Students are required to attend weekly classroom sessions where individual field experiences will be discussed.

*Prerequisites: Disability Studies 1124.*

### **DAST 2205 – Disability Work Management (formerly DAST 1205)**

(3 credits) 3 hours lecture

This course is an introduction to vocational rehabilitation and supported employment/ career development for people with disabilities.

*Prerequisite: Disability Studies 1111.*

### **DAST 2206 – Organizations and Leadership (formerly DAST 1206)**

(3 credits) 3 hours lecture

This is an introductory course which focuses on providing students with theoretical and practical information about principles of effective leadership and the functioning of human service organizations. Students will explore the theory and practice of leadership and organizational development in the context of disability-related organizations.

*Prerequisite: Disability Studies 1111.*

### **DAST 2208 – Advocacy for Canadians with a Disability (formerly DAST 1208)**

(3 credits) 3 hours Lecture or Internet Delivery

Students will learn about historical social change movements in society led by marginalized groups. This course will review critical issues and specific examples relevant to the practice of social justice and advocacy for change. The course incorporates planning exercises, ethical discussions, and outcome analysis.

*Prerequisite: Disability Studies 2209*

### **DAST 2209 – Disability Social Policy (formerly DAST 1209)**

(3 credits) 3 hours lecture

In this course students will review and analyze social problems, policies, and issues as they relate to the delivery and development of services for persons with disabilities. It will explore the process by which social policy is developed in Canada and how human service workers can influence policy.

### **DAST 2211 – Group Facilitation (formerly DAST 1211)**

(3 credits) 3 hours lecture

This course is designed to develop skills for working with groups through a combination of lectures, observation, and experiential learning. The stages of group development, group roles and norms, theoretical frameworks, intervention, group design, implementation and evaluation will be addressed.

*Prerequisite: Interdisciplinary Studies 1240.*

### **DAST 2223 – Positive Behavioural Supports (formerly DAST 1123)**

(3 credits) 3 hours lecture

This course will introduce students to approaches and techniques that may be applied in response to difficult and challenging behaviours demonstrated by persons with disabilities. Students will learn to select respectful approaches appropriate to the age of the client and nature of his or her disability. Case studies will be utilized throughout the course.

### **DAST 2224 – Practicum II (formerly DAST 1224)**

(3 credits) 1.5 hours tutorial and 100 hours fieldwork

This is a senior-level practicum course where students obtain hands-on practical knowledge in implementing Positive Behavioral Support strategies to address challenging behaviors. Under the supervision of a skilled community-based practitioner, students will learn strategies for responding to challenging behaviors in ways that are respectful of the rights and dignity of all individuals involved. Students are required to attend weekly tutorials where individual field experiences will be discussed.

*Prerequisites: Disability Studies 2223 and 1126.*

### **DAST 2226 – Practicum III (formerly DAST 1226)**

(3 credits) 1.5 hours tutorial and 150 hours practicum

This is an advanced-level practicum where students have an opportunity to apply many of the supervision and leadership skills which they are learning in Disability Studies 1206: Organizations and Leadership. Under the supervision of an experienced community-based practitioner, students will develop supervisory skills necessary for working successfully with staff in disability-related organizations. As part of their practicum requirement, students must attend bi-weekly integration seminars where reflections from individual practicum experiences will be discussed.

*Prerequisite: Disability Studies 2224.*

*Co-requisite: Disability Studies 2206.*

### **DAST 1199, 1299 – Directed Readings**

See **Directed Readings** which are listed alphabetically in this section of the calendar.

## **EARLY LEARNING AND CHILD CARE (ELCC)**

### **ELCC 1104 – Introduction to Early Learning and Child Care**

(3 credits) 3 hours lecture

This initial course provides students with an overview of the field of early learning, child care and the profession. Students will begin to develop a personal philosophy of early childhood education as they gain knowledge and skills about quality care, professional roles and government regulations.



### **ELCC 1109 – Principles of Development I**

(3 credits) 3 hours lecture

This course is the first of two courses that covers the theories and sequences of development from birth to twelve-years.



### **ELCC 1110 – Learning Through Play I**

(3 credits) 3 hours lecture

This course will examine play as it affects children's total development. Topics to be discussed include: definitions and theories of play; values and types of play; and the role of the adult and the effect of the environment in the facilitation of play.

*Pre or Co-requisite: Early Learning and Child Care 1109.*



### **ELCC 1120 – Learning Through Play II**

(3 credits) 3 hours lecture

This course considers the foundations of a play-based learning environment. Students will explore the theory, methods and techniques of developmentally appropriate practices.

*Pre or Co-requisites: Early Learning and Child Care 1104, 1109, and 1110.*



### **ELCC 1180 – Fieldwork**

(3 credits) 1 hour lecture, 100 hours fieldwork

Students will observe one day a week in a variety of self-selected and pre-selected environments. This course will focus on the practical application of the theories learned in Early Learning and Child Care 1104 and 1109.



## ECONOMICS (ECON)

### ECON 0260 – Issues in Consumer Economics (formerly ECON 1160)

(3 credits – TG) 2 hours lecture, 1 hour tutorial

Issues facing contemporary Canadian consumers are discussed. This course focuses on key issue areas in the discipline including: the interplay between societal trends, consumer choices, and the environment; sustainable lifestyles; credit management, rights, responsibilities and ethics in interactions between government, business and consumers; factors affecting consumer choices in food, shelter and planning for the future; and collective issues such as transportation and health care.

### ECON 1101 – Principles of Microeconomics (formerly ECON 2201)

(3 credits – TG) 3 hours lecture, 1 hour lab

This course examines how individuals, firms, and governments allocate scarce resources. Market, firm, and society choices are examined using the principles of consumption and production under the following market structures: perfect competition, monopoly, oligopoly, and monopolistic competition. These principles form the basis for analyzing the decision-making processes associated with contemporary microeconomics issues.

### ECON 1103 – Principles of Macroeconomics (formerly ECON 2203)

(3 credits – TG) 3 hours lecture, 1 hour lab

This course will acquaint students with introductory macroeconomic principles and issues, including key macro variables, and two important short run models of income determination, namely the Keynesian model and the AS/AD model. The course also examines the monetary system, interest rates and the monetary transmission mechanism, business cycles, fiscal and monetary policies, international trade, exchange rates and the balance of payments.

### ECON 1109 – Engineering Economics (formerly ECON 2209)

(3 credits – TG) 3 hours lecture, 1 hour tutorial

Engineering economics includes such topics as the time value of money, project evaluation, depreciation and taxation, inflation, replacement analysis, public sector projects and the analysis of uncertainty and risk. Various problem-solving techniques will be developed with an emphasis on engineering decision making.

### ECON 1143 – The Economics of Contemporary Issues (formerly ECON 2243)

(3 credits – TG) 3 hours lecture

This course will apply principles of microeconomics and macroeconomics to current issues in society. By examining current issues from an economic perspective, students will learn how to assess contemporary issues in terms of the individual and overall winners and losers resulting from policies, regulations and systems. Specific issues to be covered in this course depend upon their currency and importance in relation to the time of the course offerings.

### ECON 1170 – Economics of Crime and Criminal Justice

(3 credits) 3 hours lecture

This course discusses the economic elements underlying the behaviour of criminals, victims, and law enforcement agencies. Major topics covered include the supply of crime by criminals, the demand for crime prevention by victims, and public policy issues such as crime control and the allocation of criminal justice resources.



### ECON 2211 – Intermediate Economic Theory – Microeconomics I (formerly ECON 3301)

(3 credits – TG) 3 hours lecture

This course examines economic decision making of consumers and businesses. Topics covered include people's consumption choices of and demand for goods and services, the external environment and market structure under which consumers and businesses interact with each other, and the strategic decisions of businesses such as production and pricing strategies.

*Prerequisite: Economics 1101 or consent of the department.*

### ECON 2213 – Intermediate Economic Theory Macroeconomics I (formerly ECON 3303)

(3 credits – TG) 3 hours lecture

The course deals with Keynesian and AS/AD models, the Hicks-Hansen and Mundell-Fleming macro models in an open economy context (IS-LM-BP), AD-AS model under static expectations, the New-Classical, and New-Keynesian models, exchange rates and fiscal and monetary policies in dealing with contemporary macro economic problems of recession, unemployment and inflation.

*Prerequisite: Economics 1103 or consent of the department.*

### ECON 2221 – International Trade (formerly ECON 3321)

(3 credits – TG) 3 hours lecture

This course examines international trade theory, policy and applications. Topics include a brief history of trade, absolute and comparative advantage basis for trade, the Heckscher-Ohlin theory, trade with economies of scale, tariffs, non-tariff trade barriers, political economy of non-tariff barriers, strategic trade policies, trade agreements, role of the World Trade Organization (WTO) and developing economies' trade policies. The course emphasizes current applications, policy development, as well as the institutional framework underlying the interaction between nations.

*Prerequisites: Economics 1101 and 1103*

### ECON 2223 – Gender Economics (formerly ECON 3323)

(3 credits – TG) 3 hours lecture

This course examines how gender differences impact women in both the household and the marketplace. Basic economic theory provides the framework to explore such issues as marriage, fertility and child care as well as determine overall trends in the labour market.

*Prerequisite: Economics 1101 or consent of the department.*

### ECON 2229 – International Money and Finance (formerly ECON 3329)

(3 credits – TG) 3 hours lecture

This course examines international monetary theory, policy and applications. Topics include: balance of payments, the role of money and relative interest rates, exchange rate models/regimes and their effect on price levels and output, international investment and global capital markets, currency crises, the international financial architecture, including the role of the World Bank and the International Monetary Fund (IMF). This course emphasizes current applications, policy development, as well as the institutional framework underlying the interaction between nations.

*Prerequisites: Economics 1101 and 1103.*



### ECON 2241 – Money and Banking (formerly ECON 3341)

(3 credits – TG) 3 hours lecture

This course examines topics such as financial intermediation, determination and behaviour of interest rates, commercial banking and the money supply process, central banking and monetary control, regulation of financial markets, transmission of monetary impulses to output, employment and prices.

*Prerequisite: Economics 1103 or consent of the department.*



### ECON 2244 – Managerial Economics (formerly ECON 3245)

(3 credits – TG) 3 hours lecture

Managerial economics is concerned with resource-allocation, strategic decisions, and tactical decisions that are made by analysts, managers, and consultants in the private, public, and not-for-profit sectors of the economy. Managerial economic techniques seek to achieve the objectives of the organization in the most efficient manner, while considering both explicit and implicit constraints on achieving the objective(s).

*Prerequisite: Economics 1101.*



### ECON 2255 – Canadian Public Finance (formerly ECON 3355)

(3 credits – TG) 3 hours lecture

This course examines the institutions behind, and the economic rationale for, Canadian government policy relating to public expenditures and taxation. Topics include public goods; externalities; public expenditure theory and policy; tax and user price theory and policy; and social welfare and social insurance.

*Prerequisites: Economics 1101 and 1103 or consent of the department.*



### ECON 2261 – Development Economics

(3 credits – TG) 3 hours lecture

This course provides an introduction to economic challenges facing developing countries, models of economic development, comparative analysis of national economic development experience, perspectives on economic development policies, and roles of the state, domestic institutions and international institutions in the development process.

*Prerequisites: Economics 1101 and Economics 1103.*



**Note:** Students with prior credit for Economics 2263 may not take this course for additional credit.

### ECON 2263 – Development Economics - Field School Program

(3 credits – TG) 3 hours lecture

A hands-on introduction to economic challenges facing developing countries, models of economic development, comparative analysis of development experience, perspectives on economic development policies, and roles of the state, domestic institutions and international institutions in the development process. The entire course is taught at a Mount Royal Field School in a developing country.

*Prerequisites: Economics 1101 and Economics 1103, or consent of Department.*

**Note:** Students with prior credit for Economics 2261 may not take this course for additional credit.

### ECON 3101 – The Law & Economics of Canadian Business Strategy

(3 credits) 3 hours lecture

This course focuses on strategic behaviour of firms in imperfectly competitive markets. Students will learn how businesses can compete with each other without violating any competition laws or industry-specific regulations. Topics studied include mergers, predation, tied selling, resale price maintenance, cartels, intellectual property rights, anti-dumping laws, and network industries.

*Prerequisite: Economics 1101.*

### ECON 3305 – History of Economic Thought

(3 credits – TG) 3 hours lecture

Studying the contributions of leading economic thinkers, from Adam Smith to John Maynard Keynes, this course examines the various perspectives that have influenced the development of economic thought. This course will analyze these economic theories and address some of the implications for policy researchers.

*Prerequisites: Economics 1101 and 1103.*



### ECON 3357 – Intermediate Economic Theory – Microeconomics II (formerly ECON 2257)

(3 credits – TG) 3 hours lecture

This course examines selected microeconomic topics. Major topics include organizational management of businesses such as recruitment and retention of employees and pay structure, and strategic business decisions such as advertising and pricing choices. Other topics covered include general equilibrium analysis, welfare economics, externalities, and factor markets.

*Prerequisite: Economics 2211.*

### ECON 3359 – Intermediate Economic Theory – Macroeconomics II (formerly ECON 2259)

(3 credits – TG) 3 hours lecture

This course examines the role of expectations in macroeconomic models and theories of aggregate consumption, investment, money demand, and economic growth. Students will also study business cycle theories and the inflation unemployment relationship, as well as the theory and practice of economic stabilization policy.

*Prerequisite: Economics 2213.*

### ECON 3395 – Introduction to Applied Econometrics (formerly ECON 2295)

(3 credits – TG) 3 hours lecture

The course introduces techniques for quantifying economic relationships. Topics include estimation and testing of hypotheses, forecasting and construction of prediction intervals, use of appropriate functional forms, detection and correction of measurement problems, model specification, and use of statistical software programs for single equation regression analysis.

*Prerequisites: Economics 1101 and 1103, and one of the following: Policy Studies 2209, Mathematics 1224, Management 2262; or consent of the department.*

### ECON 3199, 4199 – Directed Readings

See **Directed Readings** which are listed alphabetically in this section of the calendar.

## ECOTOURISM AND OUTDOOR LEADERSHIP (ETOL)

### ETOL 2011 – Practicum I

(3 credits) 250 hours of practicum

This is a formal work experience with an assigned organization. Participants will be required to participate in the specified hours of practicum and to complete assignments. Students will be accepted into the practicum upon completion of the course. Prerequisites and/or consent of the department chair. The course is limited to ETOL students enrolled in the Bachelor of Applied Ecotourism and Outdoor Leadership Degree Program who have successfully completed, or are concurrently enrolled in, the core courses.

*Prerequisites for the Practicum include the following courses: Ecotourism 2201, 2203, 3305, 3307 and Recreation Studies 1217 and 1247. Specific practicum assignments may require some students to hold current certification in Wilderness and Remote Emergency Response and CPR.*

### ETOL 2201 – Foundations of Outdoor Leadership

(3 credits) 3 hours lecture

This course will survey the history, philosophy, rationale, benefits and recreational opportunities of outdoor leadership. Students will become familiar with the organization, governance and scope of outdoor leadership. Participation is required in one weekend.



### **ETOL 2203 – Sustainable Tourism**

(3 credits – TG) 3 hours lecture

This course will study the development of the ecotourism industry. Students will examine the political, economic and management issues and trends related to ecotourism in Alberta, Canada and internationally. Students will initiate the development of a personal portfolio in this course.



### **ETOL 2401 – Ecotourism Facilitation Skills**

(3 credits) 3 hours lecture

This course studies the knowledge and skills of leading groups in global ecotourism environments. Students will study teaching and learning methodologies, learning styles, interpretation, group facilitation, moderator techniques, needs assessment surveys and program assessment methods.

*Ecotourism and Outdoor Leadership 2203, Recreation Studies 1247, and one of Applied Communications 2245 or Physical Education 1005.*

### **ETOL 3011 – Practicum II**

(9 credits) 450 hours of practicum

This practicum experience provides students with a further opportunity to apply the Ecotourism and Outdoor Leadership theories and skills studied during the previous semesters and to continue to build upon their experience from Ecotourism and Outdoor Leadership 2011. It is expected that students will diversify their experience relative to the past experience. Students will be required to submit a practicum plan to the ETOL practicum coordinator prior to embarking on the practicum placement. Goals and strategies will be reviewed by a Faculty Advisor prior to the work-term. Students will be accepted into the practicum upon completion of the course Prerequisites and/or consent of the department chair.

*Prerequisite: Ecotourism and Outdoor Leadership 2011.*

### **ETOL 3303 – Expedition**

(3 credits – TG) 1 hour lecture, 96 hours fieldwork

This course is designed to familiarize students with a variety of outdoor activities, such as cycle touring, canoeing and kayaking, backpacking, caving, rock climbing and mountaineering. The emphasis will be on experiential methods of learning and practical application of leadership skills. Participation is required in a 10-day expedition.

*Prerequisites: Ecotourism and Outdoor Leadership 2201, Physical Education 2404, 2410, 2414 and 2416, or equivalent outdoor experience and consent of the department. Additionally, students must provide proof of valid Emergency Wilderness Response Certification at the time of the Expedition.*

**Note:** Students will be responsible for payment of personal subsistence costs associated with the fieldwork. Ecotourism and Outdoor Leadership 3303 will commence prior to the start of the Fall Semester with a 10-day expedition in late August.

### **ETOL 3305 – Program Planning**

(3 credits – TG) 3 hours lecture

This course involves the study of the theory, method and techniques of program planning in ecotourism and outdoor leadership. Students will plan, develop and implement a program.

*Prerequisites: Ecotourism and Outdoor Leadership 2201 and 2203.*

### **ETOL 3307 – Administration of Outdoor Centres**

(3 credits) 3 hours lecture

This course provides a study of the organization and administration of outdoor centres. The student will study and report on outdoor centre organization; administrative systems; training programs; facilities and standards.

### **ETOL 3309 – Individual Projects**

(3 credits) 3 hours lecture

Students will complete individual project assignments negotiated with the course instructor.

*Prerequisites: Ecotourism and Outdoor Leadership 2201, 2203 and 3305.*

### **ETOL 4405 – Issues in Ecotourism**

(3 credits – TG) 3 hours lecture

This course addresses the evolving nature of the field of ecotourism and tourism locally, nationally and internationally. Students will study the issues related to standards, advocacy groups, private industry, certification, leadership and future trends.

### **ETOL 4409 – Applied Leadership**

(3 credits – TG) 3 hours lecture

Students will plan, develop, market, implement and report on an ecotourism outdoor leadership event.

*Prerequisites: Ecotourism and Outdoor Leadership 3305 and 2401.*

### **ETOL 5010 – E-portfolio**

(3 credits) 3 hours lecture

In order to make the transition between the Ecotourism and Outdoor Leadership Applied Degree (ETOL) program and full-time career opportunity, several steps have been put in place to create a meaningful representation of the educational experiences successfully completed at Mount Royal University. This course is designed to encapsulate, in electronic portfolio format, those experiences and will include such diverse elements as: ETOL courses completed, certifications gained, practicum-based work experience undertaken, significant outdoor trips and expeditions accomplished, etc. This is a capstone course for the program that will aim to tie all learning experiences together into one format.

## **EDUCATION (EDUC)**

### **EDUC 1209 – The Learner: Elementary Art Education I**

(3 credits – TG) 3 hours lecture, 2 hours lab

This course is designed to assist prospective teachers in developing their visual communication abilities. Participants will explore various materials and participate in studio projects designed to enhance their understanding of age-appropriate art experiences for elementary students.

### **EDUC 1231 – The Teacher: Professional Dimensions I**

(3 credits – TG) 3 hours lecture, 1 hour tutorial

This course examines the teaching-learning process with reference to psycho-social, philosophical, and political influences in contemporary society, addressing the concept of personal worldview and its impact on teaching and learning. Students are encouraged to recognize similarities and differences between education and schooling. All students are required to participate in relevant field experiences.

### **EDUC 1233 – The Teacher: Professional Dimensions II**

(3 credits – TG) 3 hours lecture, 1 hour tutorial

This course investigates the evolution of the educational enterprise through historical and personal perspectives. Further, it examines possible future developments and their impact on education and schooling. Students will participate in field experiences involving diverse school environments and begin developing their teaching e-portfolio.

*Prerequisite: Education 1231.*

### **EDUC 2271 – The Teacher: Introduction to Methods and Materials in Teaching English as a Second Language (TESL)**

(3 credits – TG) 3 hours lecture

This course introduces students to recognized methods useful for working with beginner level ESL learners and the concomitant demands for materials and learning resources. Students will become familiar with the theoretical underpinnings of Total Physical Response (TPR), audio-lingual, Language Experience Approach (LEA) and the selection/design/ preparation of learning resources required to support these methods.

*Prerequisites: Linguistics 1111 and 1113 or Education 2371.*

**EDUC 2307 – The Learner: Elementary Art Education II****(3 credits – TG) 3 hours lecture, ~~2 hours lab~~**

This course provides an opportunity for prospective teachers to continue to develop their visual communication abilities through participation in advanced studio projects that assist them in producing age-appropriate art materials for use in the classroom. All students are required to participate in relevant field experiences.

*Prerequisite:* Education 1209.

**EDUC 2312 – The Learner: Elementary Music Education I****(3 credits – TG) 3 hours lecture**

This course provides an opportunity for prospective teachers to develop musical skills, concepts and instructional methodologies that are considered to be important for teaching music in the elementary school setting. Students are required to participate in relevant field experiences.

**EDUC 2321 – The Learner: Education and Individual Development****(3 credits – TG) 3 hours lecture, ~~1 hour tutorial~~**

This course examines human behaviour, focusing on physical, emotional, cognitive, moral and social development. Emphasis is placed on understanding classroom implications of motivation, memory, learning styles, student diversity, principles of reinforcement, and the universal aspects of learning. Students are required to participate in relevant field experiences.

*Prerequisites:* Education 1231 and 1233.

**EDUC 2325 – The Community: Understanding Current and Emerging Pedagogical Technologies****(3 credits – TG) 3 hours lecture, 1 hour lab**

This course provides an overview of technological influences in education. It is designed to assist prospective teachers in critically examining current and evolving applications of technology relevant to the teaching and learning process.

*Prerequisites:* Education 1231 and 1233.

**EDUC 2341 – The Community: Diversity and Education****(3 credits – TG) 3 hours lecture**

This course explores key processes, perspectives and practices underlying effective learning in diverse settings. Topics include the construction of the concept of difference, stereotyping, prejudice, discrimination, racism, classism and sexism, all of which are examined with reference to their impact on learning.

*Prerequisites:* Education 1231 and 1233.

**EDUC 2351 – The Learner: Aboriginal Cultural Dimensions and Classroom Applications****(3 credits – TG) 3 hours lecture**

This course is designed to prepare and sensitize prospective teachers to aboriginal perspectives, values, and methods as they relate to the learning context. The course will include an in-depth examination of traditional aboriginal education and associated values.

*Prerequisites:* Education 1231 and 1233.

**EDUC 2371 – The Learner: Language Development and Literacy****(3 credits – TG) 3 hours lecture, ~~1 hour tutorial~~**

This course focuses upon language development and the importance of literacy. Students will examine certain principles of learning in order to gain understanding as to how language development occurs as well as to determine best practice in teaching language and literacy. Students are required to participate in relevant field experience.

*Prerequisites:* Education 1231 and 1233.

**EDUC 3201 – Visual Art and Mathematics: An Integrated Understanding****(3 credits) 3 hours lecture**

This course examines the fundamental knowledge, understanding, skills and processes necessary for the integration of visual arts and mathematics at the elementary school level. The course will address relevant instructional methodologies, curriculum integration and resource development for both visual arts and mathematics.

*Prerequisite:* Education 1209 or Mathematics 1102 or permission of department.

**EDUC 3323 – The Learner: Effective Assessment - Measurement and Evaluation****(3 credits – TG) 3 hours lecture**

This course is designed to assist students in developing an understanding of concepts and issues related to the differentiated assessment of learning. Participants will be required to develop competence in the construction of various instruments and processes used measure and evaluate individual learner performance.

*Prerequisites:* Education 2321, 2325 and 2371.

**EDUC 3361 – The Learner: Exceptional Students, Special Needs, and Inclusive Schooling****(3 credits – TG) 3 hour lecture**

This course examines characteristics of students exhibiting a range of mild, moderate, and severe disabilities and students exhibiting exceptional gifts and talents. Diverse educational, cultural, and linguistic backgrounds will be discussed. The course also examines methods that can be used in adapting classroom instruction and management of the diverse needs.

*Prerequisite:* Education 2321.

**EDUC 3372 – The Learner: Early Literacy Teaching English as a Second Language (TESL)****(3 credits – TG) 3 hours lecture**

This course will introduce the student to ways of working with pre-literate ESL children as they begin to acquire early literacy concepts and skills, develop oral language and breadth, and depth of vocabulary knowledge. The course will comprise a balanced approach to an early literacy program that is necessary for later literacy success in reading comprehension.

*Prerequisites:* Linguistics 1111 and 1113 or Education 2371.

**EDUC 4010 – The Teacher: Practicum I****(3 credits)**

This practicum focuses on inquiry, reflective planning and teaching and assessment practices. Students will be directly involved in all aspects of teaching for 50% of the required time during their last three weeks of the practicum.

*Pre-requisites:* Education 2321, 2325, 2371, 3323 and 3361.

**EDUC 4020 – The Teacher: Practicum II****(6 credits)**

This practicum II experience focuses on inquiry, reflective planning as well as teaching and assessment practices, including the major curriculum project. Students will be expected to be directly involved in all aspects of teaching for 50% by the third week, 75% by the end of the sixth week and 100% during the final three weeks of the practicum.

*Prerequisites:* Education 4010 and 4101.

**EDUC 4101 – Program of Studies and Curriculum Instruction in Teaching Art (Elementary)****(3 credits) 3 hours lecture**

This course examines the fundamental knowledge, understanding, values, attitudes, skills, and processes required to implement an effective program of studies for Teaching Elementary Art in Alberta schools. The course will address relevant instructional methodologies, unit planning, curriculum integration, and resource development. Students will investigate a range of assessment strategies including test design and construction and the reporting of evaluation results.

*Prerequisites:* Education 1231, 1233, 2321, 2325, 2371, 3323, and 3361.

**EDUC 4102 – Program of Studies and Curriculum Instruction in Teaching Drama (Elementary)**

(3 credits) 3 hours lecture

This course examines the fundamental knowledge, understanding, values, attitudes, skills, and processes required to implement an effective program of studies for teaching elementary drama. The course will address a range of approaches to develop instruction, plan units of study, integrate curriculum, develop resources and assessment strategies to meet students' needs, including test design and construction and the reporting of evaluation results.

*Prerequisites:* Education 1231, 1233, 2321, 2325, 2371, 3323 and 3361.

**EDUC 4103 – Program of Studies and Curriculum Instruction in Teaching English Language Arts (Elementary)**

(3 credits) 3 hours lecture

This course explores the knowledge and skills required to implement programs of studies in teaching English Language Arts in Elementary Schools. The course will address relevant instructional methodologies, unit planning, curriculum integration and resource development. Students will investigate a range of assessment strategies including test design and construction, and the reporting of evaluation results.

*Prerequisites:* Education 1231, 1233, 2321, 2325, 2371, 3323, and 3361.

**EDUC 4104 – Program of Studies and Curriculum Instruction in Teaching Music (Elementary)**

(3 credits) 3 hours lecture

This course is designed to provide musical experiences which will help the student gain skills to appropriately enhance the musical growth of children in K – 6 classrooms. The course participant's personal skill and understanding of musical concepts will be developed; musical needs and capabilities of young children will be investigated; methods of teaching music to young children will be presented through observation and application.

*Prerequisites:* Education 1231, 1233, 2321, 2325, 2371, 3323 and 3361.

**EDUC 4105 – Program of Studies and Curriculum Instruction in Teaching Physical Education (Elementary)**

(3 credits) 3 hours lecture

This course examines the fundamental knowledge, understanding, values, attitudes, skills, and processes required to implement an effective program of studies for teaching Physical Education in Elementary School Education in Alberta schools. The course will address relevant instructional methodologies, unit planning, curriculum integration, and resource development. Students will investigate a range of assessment strategies including test design and construction and the reporting of evaluation results.

*Prerequisites:* Education 1231, 1233, 2321, 2325, 2371, 3323 and 3361.

**EDUC 4106 – Program of Studies and Curriculum Instruction in Teaching Science (Elementary)**

(3 credits) 3 hours lecture

This course explores knowledge and skills required to implement programs of studies in teaching Science in elementary schools. The course will address a range of approaches to develop instruction, plan units of study, integrate curriculum, develop resources and assessment strategies to meet students' needs, including test design and construction and the reporting of evaluation results.

*Prerequisites:* Education 1231, 1233, 2321, 2325, 2371, 3323 and 3361.

**EDUC 4107 – Program of Studies and Curriculum Instruction in Teaching Social Studies (Elementary)**

(3 credits) 3 hours lecture

This course explores the knowledge and skills required to implement programs of studies in teaching Social Studies in Elementary (1 – 6) Education. The course will address a range of approaches to develop instruction, plan units of study, integrate curriculum, develop resources and assessment strategies to meet students' needs including test design and construction and the reporting of evaluation results.

*Prerequisites:* Education 1231, 1233, 2321, 2325, 2371, 3323 and 3361.

**EDUC 4108 – Program of Studies and Curriculum Instruction in Teaching Mathematics (Elementary)**

(3 credits) 3 hours lecture

This course explores knowledge and skills required to implement programs of studies in teaching Mathematics in Elementary schools. The course will address a range of approaches to develop instruction, plan units of study, integrate curriculum, develop resources and assessment strategies to meet students' needs, including test design and construction and the reporting of evaluation results.

*Prerequisites:* Education 1231, 1233, 2321, 2325, 2371, 3323 and 3361.

**EDUC 4201 – The Professional Teacher: Integrating Ideas, Values and Praxis**

(3 credit) 3 hours lecture

This required Capstone Course is only open to pre-professional teachers in their final practicum term of the Bachelor of Education program. Participants will critically reflect upon significant issues and experiences gleaned from their education, general education, schooling and elective courses, field experiences and practica. The development of a Professional Teaching E-portfolio and Applied Curriculum Project will be the major focus.

*Pre-requisites:* Education 2321, 2325, 2371, 3323 and 3361.

**EDUC 4321 – The Teacher: Developing a Philosophy of Education**

(3 credits – TG) 3 hours lecture

This course examines basic beliefs concerning what is "sensible", "right", and "good" in promoting learning. Participants will critically reflect upon significant issues and experiences and will develop their philosophy of teaching and learning.

*Prerequisites:* Education 1231 and 1233.

**EDUC 4325 – The Community: The Impact of Social Issues in Education and Schooling**

(3 credits – TG) 3 hours lecture

This course examines factors such as the economy, the state, social class, gender, ethnicity, sub-cultural membership, ideology, religion, and the home environment, and their relationship to and impact on learning in general and schooling in particular.

*Prerequisites:* Education 1231 and 1233.

**EDUC 4471 – The Community: ESL in Mainstream: Language through Content Teaching English as a Second Language (TESL)**

(3 credits – TG) 3 hours lecture

This course will introduce students to the principles of language through content (LTC) teaching and would enable them to respond to the needs of ESL learners as they attempt to learn language AND content together in the context of the mainstream classroom.

*Prerequisites:* Linguistics 1111 and 1113 or Education 2371.

**EDUC 4491 – The Community: Community Involvement in the Fine Arts**

(3 credits – TG) 3 hours lecture, 2 hours lab

This course uses a seminar approach to explore facets of planning and the implementation of meaningful fine arts experiences in the community setting.

*Prerequisite:* Education 1209 or 2307.

**EDUC 3199, 4199 – Directed Readings**

See **Directed Readings** which are listed alphabetically in this section of the calendar.



**ENGL 0212 – Introductory Composition (formerly ENGL 1112)****(3 credits – TG) 3 hours lecture**

This course is designed for students whose understanding of the elements of English grammar and the mechanics of good writing needs reinforcing. Introductory Composition will provide a review of grammar and the mechanics; as well, it will focus on the structures of sentences, paragraphs and essays. Along with written assignments offering practice in composition, the course will emphasize discussion and analysis of readings. Instruction in research methods will also be provided as preparation for a research paper.

**Note:** Students must have passed English Language Arts 30-1, English Language Arts 30-2 or English 0115 to qualify for this course.

**ENGL 1101/GNED 1401 – Critical Writing and Reading****(3 credits – TG) 4 hours lecture**

This foundational composition course offered by the department of English focuses on effective writing styles for academic and wider social contexts. Students will respond to texts pertaining to a variety of disciplines and develop critical reading and thinking skills. Students will also refine their understanding and practice of the structures of writing.

*Prerequisite:* English Language Arts 30-1 or equivalent with a grade of 60% or higher, or English 0212 with a grade of C or higher.

**ENGL 1117 – Introduction to Writing Poetry (formerly ENGL 2217)****(3 credits – TG) 3 hours lecture**

In this workshop-based course, students will acquire the skills, understanding and practice they need to write, edit, and discuss their own original poetry. The course will result in the completion of an original portfolio which can be used to apply for entry to upper-level courses.

*Prerequisite:* English Language Arts 30-1 or equivalent.

*Recommended Preparation:* English 0212 or 1101.

**ENGL 1118 – Introduction to Writing Fiction (formerly ENGL 2218)****(3 credits – TG) 3 hours lecture**

In this workshop-based course, students will acquire the skills, understanding and practice they need to write, edit, and discuss their own original fiction. The course will result in the completion of an original portfolio which can be used to apply for entry to upper-level courses.

*Prerequisite:* English Language Arts 30-1 or equivalent.

*Recommended Preparation:* English 0212 or 1101.

**ENGL 1131 – Introduction to Fiction (formerly ENGL 2231)****(3 credits – TG) 3 hours lecture**

In this course selected novels and short stories are studied, with instruction in the writing of critical essays.

*Prerequisite:* English Language Arts 30-1 or equivalent with a grade of 60% or higher.

**ENGL 1135 – Introduction to Poetry (formerly ENGL 2235)****(3 credits – TG) 3 hours lecture**

A study of selected poetry written in English, with instruction in the writing of critical essays.

*Prerequisite:* English Language Arts 30-1 or equivalent with a grade of 60% or higher.

**ENGL 1137 – Introduction to Dramatic Literature (formerly ENGL 2237)****(3 credits – TG) 3 hours lecture**

A study of six to eight plays, with instruction in the writing of critical essays.

*Prerequisite:* English Language Arts 30-1 or equivalent with a grade of 60% or higher.

**ENGL 1141 – Introduction to Children's Literature (formerly ENGL 2241)****(3 credits – TG) 3 hours lecture**

This course offers a critical study of literature for young children (ages two-eight). By providing a survey of the various genres of children's literature, this course introduces students to the range of work available for preschool and primary school children. Students will also be given opportunities to develop their skills for oral presentation and written composition.

*Prerequisite:* English Language Arts 30-1 or 30-2 or equivalent with a grade of 60% or higher.



**Note:** Students cannot receive credit for both English 1241 and 1141.

**ENGL 2202 – Theory in English Studies (formerly ENGL 3302)****(3 credits – TG) 3 hours lecture**

Why do English students study concepts like "representation," "the subject," and "the other," all of which originate in European philosophy? This course explores the question by analyzing the historical influx of Theory into English Studies, and the resulting experiments and controversies.

*Prerequisites:* English 1101/General Education 1401 or 1402 or 1403 and English 1131, 1135, 1137 or 1141 with a grade of C- or higher.

**ENGL 2205 – Literary Research and Methods****(3 credits – TG) 3 hours lecture**

This course focuses on effective literary scholarship and criticism, channeling research and writing skills developed in junior English courses into coherent focus. The course highlights key elements in the discipline of English, including (but not restricted to) in-depth research skills, understanding the contexts for literary criticism, and various analytical methods.

*Prerequisites:* English 1101/General Education 1401 or 1402 or 1403 and one of English 1131, 1135, 1137, or 1141.

**ENGL 2207 – Advanced Writing (formerly ENGL 3307)****(3 credits – TG) 4 hours lecture**

A course in which students study rhetorical theory and apply it to the examination of their own writing and that of selected texts.

*Prerequisite:* English 1101/General Education 1401 or 1402 or 1403.



**Note:** Credit will be allowed for only one of Applied Communications 2263, English 2207 or Freelance Writing 1301.

**ENGL 2210 – English Literature to the Restoration (formerly ENGL 1113)****(3 credits – TG) 3 hours lecture**

This course surveys English literature from its earliest beginnings to the Restoration (1660), with an emphasis on major authors. Students will read a variety of genres closely and critically, and will examine how these texts relate to their socio-political, religious and cultural environments. Students will be introduced to literary research.

*Prerequisites:* English 1101/General Education 1401 or 1402 or 1403 and English 1131, 1135, 1137 or 1141 with a grade of C- or higher.

**ENGL 2211 – English Literature from the Restoration to the Present (formerly ENGL 1114)****(3 credits – TG) 3 hours lecture**

This course surveys English literature from the Restoration (1660) to the present. Students will read a variety of texts closely and critically within various cultural contexts. Students will be introduced to literary research.

*Prerequisites:* English 1101/General Education 1401 or 1402 or 1403 and English 1131, 1135, 1137 or 1141 with a grade of C- or higher.



**ENGL 3372 – Western Canadian Literature**

(3 credits – TG) 3 hours lecture

Through representative texts, students will examine how writers' conceptions of the West alter over time, what constitutes a definition of "West," and how Indigenous and non-European authors create alternatives to Eurocentric narratives of western expansionism and frontiers. Students will also study how conceptions of region and landscape affect identity.

*Prerequisites:* English 2210 or 2211 and one of 2202, 2203, 2207, 2263, 2264, 2265, 2266, or 2267.

*Recommended Preparation:* Three 2000-level English courses.

**ENGL 3382 – Textualities/Sexualities**

(3 credits – TG) 3 hours lecture

This course examines both the body of the text and the text of the body. While reading the body as it is represented in writing, we will investigate such concepts as representation (including what has been erased or silenced), the gendered text, the imaginary and the limits of textualized sexualities.

*Prerequisite:* One of: English 2202, 2203, 2216, 2219, or Film Studies 3345 or consent of the department.

*Recommended Preparation:* English 2210 and 2211.

**ENGL 3390 – African Writing in English**

(3 credits) 3 hours lecture

This course will consist of a carefully nuanced, historically and culturally specific study of the theories and literatures emerging from one of the regions of the African continent whose traditions were broken by the experience of colonialism.

*Prerequisite:* One of English 2202, 2291 or 2292.

*Recommended Preparation:* Three 2000-level English courses.

**ENGL 3394 – The Graphic Novel**

(3 credits – TG) 3 hours lecture

The graphic novel has recently emerged as a unique storytelling medium. This course focuses on both the theoretical bases of sequential art and the graphic novel's literary and aesthetic properties. Students will draw on a variety of modern and postmodern theories of texts to analyze specific graphic novels.

*Prerequisites:* English 2210 or 2211 and one of 2202, 2203, 2207, 2263, 2264, 2265, 2266, 2267 or Film Studies 3345.

*Recommended Preparation:* Three 2000-level English courses.



**Note:** Students cannot receive credit for both English 3394 and English 3329.

**ENGL 3397 – Studies in Children's Literature**

(3 credits) 3 hours lecture

This variable-content course offers the opportunity for specialized study within the field of literature for children and adolescents. Critical, historical, and theoretical questions related to the child or childhood will be central to such study. Topics may include (among others) young adult fiction, the picture book and multiculturalism, Canadian children's literature, or contemporary nursery rhymes.

*Prerequisites:* One of English 2210, 2211, 2298, or 2299.

**ENGL 4401 – Select Topics in Themes, Forms, and Genres**

(3 credits – TG) 3 hours lecture

This advanced seminar explores the historical or cultural significance of a specific literary theme, form, or genre. Variable in focus, the course may concentrate on topics related, for example, to concepts of diaspora or beauty or disease; developments in satire or comedy or realism; approaches to the short story or sonnet or long poem.

*Prerequisites:* One of English 3246, 3256, 3304, 3305, 3306, 3308, 3309, 3310, 3311, 3312, 3313, 3323, 3324, 3327, 3330, 3331, 3340, 3341, 3342, 3343, 3344, 3345, 3350, 3353, 3368, 3372, 3382, 3390, 3394 or 3397.

**ENGL 4410 – Select Topics in Medieval Literature, 650-1500**

(3 credits – TG) 3 hours lecture

This advanced seminar engages students in a selection of poetic, prose, and dramatic works from the medieval period. Featured works may include Beowulf, the works of Chaucer, literature by and about women, Romances in poetry or prose, religious ecstasies, Arthurian legends, and Middle English lyrics.

*Prerequisite:* One of English 3246, 3256, 3304, 3305, 3306, 3308, 3309, 3310, 3311, 3312, 3313, 3323, 3324, 3327, 3330, 3331, 3340, 3341, 3342, 3343, 3344, 3345, 3350, 3353, 3368, 3372, 3382, 3390, 3394 or 3397.

*Recommended Preparation:* English 3323 or 3324.

**ENGL 4420 – Select Topics in Early Modern Literature, 1450-1700**

(3 credits – TG) 3 hours lecture

This advanced seminar engages students in a study of literature from the Early Modern Period, a survey that may include transitional texts between the Middle Ages and the Renaissance, a tracing of Romance from Roland to Quixote, Shakespearean and non-Shakespearean theatre, Milton's prose, 17th-century poetry, and women's writing.

*Prerequisite:* One of English 3246, 3256, 3304, 3305, 3306, 3308, 3309, 3310, 3311, 3312, 3313, 3323, 3324, 3327, 3330, 3331, 3340, 3341, 3342, 3343, 3344, 3345, 3350, 3353, 3368, 3372, 3382, 3390, 3394 or 3397.

*Recommended Preparation:* English 3342 or 3343.

**ENGL 4440 – Select Topics in Literature of the Long Nineteenth Century, 1790-1917**

(3 credits – TG) 3 hours lecture

This advanced seminar focuses on ideas, issues, or individuals important to the poetry, prose, and drama of the Romantic, Victorian, and Golden Ages. Varying from semester to semester, select topics may include (among others) Pre-Raphaelite poetry and painting, performance in nineteenth-century culture, and the literature of the New Woman.

*Prerequisite:* One of English 3246, 3256, 3304, 3305, 3306, 3308, 3309, 3310, 3311, 3312, 3313, 3323, 3324, 3327, 3330, 3331, 3340, 3341, 3342, 3343, 3344, 3345, 3350, 3353, 3368, 3372, 3382, 3390, 3394 or 3397.

*Recommended Preparation:* One of English 3340, 3341, 3344, or 3345.

**ENGL 4443 – Select Topics in Literature of the Long Eighteenth Century, 1660-1832**

(3 credits – TG) 3 hours lecture

This advanced seminar features a selection of works from the long eighteenth century. Texts may include those by the early novelists Bunyan, Defoe, Richardson, Fielding, or Sterne, feminist writers from Aphra Behn to Jane Austen, Restoration comedy through Romantic drama, or the satiric verse tradition leading to Romantic poetry.

*Prerequisite:* One of English 3246, 3256, 3304, 3305, 3306, 3308, 3309, 3310, 3311, 3312, 3313, 3323, 3324, 3327, 3330, 3331, 3340, 3341, 3342, 3343, 3344, 3345, 3350, 3353, 3368, 3372, 3382, 3390, 3394 or 3397.

*Recommended Preparation:* One of English 3330, 3331, 3340, 3341.

**ENGL 4446 – Select Topics in Literature of the Long Twentieth Century, 1865-Present**

(3 credits – TG) 3 hours lecture

This advanced seminar studies a selection of literary and other forms of cultural text produced between 1865 and the present. A national literature such as Canadian, American, or British may furnish the texts or a postcolonial approach may offer a study of African, Caribbean, Irish, or subcontinental Indian literature written in English.

*Prerequisite:* One of English 3246, 3256, 3304, 3305, 3306, 3308, 3309, 3310, 3311, 3312, 3313, 3323, 3324, 3327, 3330, 3331, 3340, 3341, 3342, 3343, 3344, 3345, 3350, 3353, 3368, 3372, 3382, 3390, 3394 or 3397.

### ENTR 3302 – Creativity for Entrepreneurial Practice

(3 credits) 3 hours lecture

This course introduces the concepts of innovation and entrepreneurial creativity. Students draw upon the inspired thinking and entrepreneurial pursuits of leaders in a variety of disciplines in order to understand the process of innovation and appreciate the role of creativity in making innovation possible. Emphasizing the development of the student's own entrepreneurial creativity and ability to innovate, the experiential and reflective activities in this course encourage students to explore their potential as passionate agents of change – in their own lives and in society.



### ENTR 3305 – The Art of the Pitch

(3 credits) 3 hours lecture

This course will help students develop their entrepreneurial communications skills to help them prepare for and present their business ideas to prospective investors, partners, employees and customers. It will focus on skill development in visual, verbal and vocal communications to pitch business ideas and handle questions and answers about their presentations.

### ENTR 3331 – Law for Small Business

(3 credits – TG) 3 hours lecture

This course requires students to recognize and analyze legal principles and processes in contemporary business environments. The primary topics are: the legal system – courts, civil litigation, and Constitutional issues; applicable tort and contract principles and cases; real property law; business and nonprofit entities, forms, organization and liabilities; insurance and risk management; leases and employment law. Additional topics may include intellectual property; marketplace legislation; commercial law; negotiable instruments; purchase and sale of a business; and trust law.

**Note:** Only one of Entrepreneurship 3331 or Management 3230 can be used to satisfy program requirements.

### ENTR 3333 – New Venture Feasibility

(3 credits) 3 hours lecture

This course introduces students to the key skills required to succeed as an entrepreneur. Students will gain applied skills by researching and preparing a business plan for a new enterprise. Lectures will expose students to critical new venture marketing and funding issues, and will use local case material and guest speakers to provide insight into the entrepreneurial environment.

*Prerequisites:* Management 2130 or Entrepreneurship 2201 or 2301, Marketing 2150, Accounting 2121.

**Note:** Only one of Entrepreneurship 3333 or 4433 can be used to satisfy program requirements.

### ENTR 3370 – Society, Innovation and Enterprise

(3 credits) 3 hours lecture

In this course, students will be equally introduced to theories and practical understanding of private initiatives for public purpose. Current social realities have generated a paradigm shift in relation to the interface of business and society. This new paradigm sees innovation and market models as venues to address social challenges. The course explores the foundations of the social economy and relates them to the necessary entrepreneurial thinking of organizational structures and operating systems. Students will be exposed to the social context of social enterprises through service learning or other experiential activities.



### ENTR 3730 – Special Topics in Innovation and Entrepreneurship

(3 credits) 3 hours lecture

This course provides an examination of selected topics in innovation and entrepreneurship. As this is a variable content course, the specific topic will be announced and advertised each time it is offered. Students may not receive credit for this course more than once.

### ENTR 4331 – Idea to Opportunity

(3 credits) 3 hours lecture

In this highly experiential course, students will work to develop an understanding of how opportunities are identified, selected and developed for the creation of an entrepreneurial endeavor within a new business, mature organization or nonprofit setting. Students will build an awareness of the local and global factors that lead to favorable conditions for opportunity development, as they work towards a single relevant, innovative and scalable opportunity that has the potential to attract the required resources. Opportunities will be analyzed using a range of practical tools and methodologies. Assessment will, where possible, mirror the processes and criteria relevant to entrepreneurs in the real world.

*Prerequisites:* Entrepreneurship 2301 or 3301 or 3302.



### ENTR 4332 – Venture Launch

(3 credits) 3 hours lecture

In this course, students will be immersed in the issues encountered by entrepreneurs while starting a new venture. They will be challenged to evaluate and build upon the opportunities they developed in ENTR 4331 and consider industry, market and product research through the lens of the start-up phase of the venture life cycle. Contingency strategies will be developed as necessary after students receive feedback on progress and viability.

*Prerequisite:* Entrepreneurship 2301.

### ENTR 4343 – Growing the Enterprise

(3 credits) 3 hours lecture

In this course, the ventures that students developed in ENTR 4332 will continue to be evolved through to the early growth phase of the venture life cycle. In this course the focus will be on topics such as marketing, sales, financials, business modeling, opportunity valuation, next levels of fundraising, management team and founder as leader, and other topics related to bringing ventures to fruition. In addition, the reasons businesses typically fail will be analyzed.

*Prerequisite:* Entrepreneurship 2301.

### ENTR 4344 – Corporate Innovation and Entrepreneurship

(3 credits) 3 hours lecture

This course is designed to develop an understanding of the scope and complexity of the issues related to fostering and developing innovation and entrepreneurial endeavors within established enterprises, including the corporation. Topics to be examined include the challenges and opportunities for both employees and senior leaders in creating and maintaining a culture that fosters both intrapreneurial endeavors and corporate entrepreneurship.

*Prerequisite:* Entrepreneurship 2301 or Entrepreneurship 3302

### ENTR 4433 – Business Plan Development

(3 credits) 3 hours lecture

Students will be able to prepare and present a solid business plan for a new or existing enterprise. Areas covered will include identifying and assessing opportunities, developing a winning strategy, identifying resource requirements and selling the plan to financing sources.

*Prerequisites:* Management 2130 or 2131 or Entrepreneurship 2201 or 2301, Marketing 2150 and Accounting 3224 or Administration 1329.

**Note:** Only one of Entrepreneurship 3333 or 4433 can be used to satisfy program requirements.

### ENTR 4434 – Small Business Practicum

(3 credits – TG) 2 hours lecture, 1 hour tutorial

This course is designed to help students acquire the ability to rationally analyse the real life issues and problems of a currently operating small business. Teams of two students will work as consultants to an existing small business. This course provides the opportunity to integrate problems and apply knowledge by identifying, examining, and creating a recommended solution within a holistic framework.

*Prerequisites:* Entrepreneurship 2010, Finance 4427 and Management 4431.

### **ENTR 4435 – Small Business Strategy**

(3 credits) 3 hours lecture

Students will develop a comprehensive framework for the strategic management processes used in small business. Integrated cases will incorporate and expand upon concepts and analytical techniques introduced in previous courses. Strategic concepts will be applied through a term-long business decisions laboratory using an interactive medium.

*Prerequisite: Entrepreneurship 2010.*

### **ENTR 4461 – The Entrepreneurial Manager**

(3 credits) 3 hours lecture

This course contains experiential learning aspects and it addresses the issues addressed by owners/managers who attempt to create viable organizations out of identified opportunities in order to create value. It will empower students to develop their own unique approaches, systems, skills and methodologies to deal with unstructured situations in preparation to become entrepreneurial managers.

*Prerequisite: Entrepreneurship 2201 or 2301 or Management 2130.*

### **ENTR 2299, 3399 – Directed Readings**

See **Directed Readings** which are listed alphabetically in this section of the calendar.

## **ENVIRONMENTAL SCIENCE (ENVS)**

### **ENVS 2010 – Directed Field Studies I (formerly IDEC 3000)**

(15 credits)

Students will be assisted in finding a work-term placement. This normally will be in a business, industry or a research laboratory that deals with environmentally related problems. Completion of non-credit safety courses prior to the work placement will be required. Students will be mentored by a faculty member during the work-term. An oral and a written report, completed by the student, in addition to an evaluation carried out by the employer will be required following the work-term.

*Prerequisites: Successful completion of Semesters 1 to 4 of the Biogeochemical Process stream or the Physical Process stream courses or equivalents or consent of the department.*

### **ENVS 2201 – Introduction to Industrial Ecology**

(3 credits) 3 hours lecture

The major ideas and tools of industrial ecology will be introduced. Industrial ecology "focuses on the potential role of industry in reducing environmental burdens throughout the product life cycle, from the extraction of raw materials, to the production of goods, to the use of those goods and to the management of the resulting wastes" (Journal of Industrial Ecology). Topics covered will include: environmental concerns, risk assessment, global budgets and cycles, industrial processes, life-cycle assessment, design for environment, pollution prevention and zero emission strategies.

### **ENVS 2205 – Data Processing and Statistics**

(3 credits – TG) 2 hours lecture, 2 hours lab

The organization, processing, and presentation of quantitative data. Fundamental statistical ideas, descriptive statistics, inferential statistics (including Analysis of Variance, regression and correlation), statistical quality control and timeseries analysis will be covered. Laboratories will include the analysis of data using statistical software packages.

*Prerequisite: Pure Mathematics 30.*

### **ENVS 2211 – Professional Development: Health and Safety for the Environment Industry**

(1 credit) 3 hours lab

This course will prepare students for work experience (Directed Field Studies) through Professional Development activities. Recent developments, trends and opportunities in the environmental industry and the field of Industrial Ecology will be covered by representatives from industry and government. The Professional Development component will prepare students to search for work experience opportunities in the environmental field. As the labour market increasingly expects that employees practice due diligence in their adherence to mandated occupational health & safety legislation and regulations, students will be introduced to the general workplace health, safety and career development issues as they relate to the Canadian environmental industry. Within this context, students must demonstrate certifiable proficiencies in H2SAive, First Aid with CPR, Transportation of Dangerous Goods (TDG), Workplace Hazardous Materials Information System (WHMIS) and other strategies as required by industry.

### **ENVS 3010 – Directed Field Studies II (formerly IDEC 4000)**

(15 credits)

Students will be assisted in finding a work-term placement. This normally will be in a business, industry or a research laboratory that deals with environmentally related problems. Students will be mentored by a faculty member during the work-term. An oral and a written report, completed by the student, in addition to an evaluation carried out by the employer will be required following the work-term.

*Prerequisites: Successful completion of Semesters 1, 2, 3, 4 and 5 of the Biogeochemical Stream or Physical Processes Stream or equivalents or consent of the department.*

### **ENVS 3303 – Life-Cycle Assessment**

(3 credits) 3 hours lecture, 3 hours lab

Life-cycle assessment (LCA) compiles and analyzes comprehensive information on the overall consumption of resources and the production of wastes during the whole life-cycle of a product or service. For example, in the case of a product, this includes the extraction of the raw materials, the energy used during manufacture and the wastes produced, the energy used to transport the finished product to market, and the ultimate fate of the discarded product. The analysis indicates the potential environmental impact of the product or service, and allows comparisons to be made of alternate products or services. Case studies of a wide variety of industries and industrial processes will be discussed. Laboratories will consist of field studies and simulations using a number of different software packages and databases that are available.

*Prerequisite: Environmental Science 2201.*

### **ENVS 3307 – Air Pollution Monitoring**

(3 credits) 3 hours lecture, 3 hours lab

This course will examine the methods used to monitor pollutants emitted to the atmosphere, the precision and accuracy of these methods and the audit procedures used to determine compliance, emission credits and documenting improvement to industrial processes.

*Prerequisites: Chemistry 1209, 2210, Mathematics 1217 or equivalents or consent of the department.*

### **ENVS 3315 – Applied Instrumentation**

(3 credits) 3 hours lecture, 3 hours lab

This course is aimed at offering a fundamental understanding of field screening techniques and practices of instrumental measurements for the qualitative determination of substances. The main analysis methods dealt in this course are Atomic Absorption and Emission Spectroscopy, Infra red Spectroscopy, Ion Chromatography, High Pressure Liquid Chromatography, Gas Chromatography. Students are also introduced to the scientific way of expressing results and also error analysis. The lab component gives the students hands-on experience with the above-mentioned analytical techniques.

*Prerequisite: Chemistry 1209.*



**ENVS 3321 – Water Pollution and Surface Water Analysis****(3 credits) 2 hours lecture, 3 hours lab**

A study of the sources, transport, effects and fates of chemicals in surface waters. Topics include: industrial effluents, the nature and composition of surface waters, the principles of water pollution control, aquatic environmental chemistry. Emphasis will be placed upon water quality analysis: pH, acidity, alkalinity, hardness, residual chlorine, chloride, sulphate, dissolved oxygen, BOD, field sample preservation. Field trips will be arranged involving sampling procedures and field recording of data for chemical and physical water quality parameters.

*Prerequisites:* Chemistry 1209 and 3357 or equivalents or consent of the department.

**ENVS 3323 – Watershed Management****(3 credits) 3 hours lecture, 3 hours lab**

Ensuring a safe and adequate supply of water is a global concern. This course is designed to provide an understanding of watershed practice and an approach to managing watershed systems in a sustainable fashion.

*Prerequisite:* Environmental Science 3321 or 3333 or consent of the department.

**ENVS 3333 – Ground Water Contamination****(3 credits) 3 hours lecture, 3 hours lab**

This course will provide a basic understanding in applied hydrogeology with emphasis being on the fate and behaviour of industrial chemicals in the groundwater, the impact of industrial activities on groundwater quality, control, monitoring and remediation of contaminated groundwater systems.

*Prerequisites:* Chemistry 1209 and 3357 or equivalents or consent of the department.

**ENVS 3335 – Issues in Environmental Assessment****(3 credits) 3 hours lecture**

This course will review and analyze provincial, national and international environmental assessment issues. Important representative case studies will be reviewed. Guest speakers will be drawn from appropriate organizations. Current methodologies in environmental impact assessment will be covered, including overviews of Risk Assessment, Cumulative Effects Assessment and Strategic Environmental Assessment. The advantages of moving towards Comprehensive Risk Assessment and Comprehensive Policy Support Assessment will be critically discussed. These integrated decision methodologies will be necessary to support industrial ecology infrastructure and be crucial to making progress towards economic and environmental efficiency at all system levels.

*Prerequisites:* Successful completion of Semesters 1, 2, and 3 of the Biogeochemical Stream or equivalents or consent of the department.

**ENVS 4405 – Air Quality****(3 credits) 2 hours lecture, 3 hours lab**

This course will examine the composition, evolution, and future of the earth's atmosphere. It will include human impact, mitigating initiatives and will examine the predictive methods and databases currently in use to predict future scenarios. It will examine the atmosphere as part of the biogeochemical cycling of its constituents.

*Prerequisites:* Chemistry 1209 and 3357, Computer Science 1209 and Environmental Science 2205 and 3315 or equivalents or consent of the department.

**ENVS 4407 – Pollution Prevention: Toward Zero Emissions****(3 credits) 3 hours lecture**

This course is a study of the principles of recovery, reuse and recycling ("3R's") of pollutants and contaminants. Examples will be drawn from the 176 currently listed in the National Pollutant Release Inventory (NPRI). Measures taken to reduce the release, allow tracking of transfers, and achieving reductions will be analyzed. Measures to control and reduce emission of carbon dioxide, methane, and other greenhouse gases will be discussed. The technologies and techniques as well as the voluntary and legislative measures will be compared. The petroleum industry will be analyzed in detail with an examination of wellsite and facility technologies.

*Prerequisites:* Successful completion of Semesters 1, 2, 3, 4, and 5 of the Biogeochemical stream and the Physical Processes stream courses or equivalents or consent of the department.

**ENVS 4413 – Principles of Eco-Industrial Development****(2 credits) 2 hours lecture**

Students will be introduced to the process of initiating, planning, designing, marketing, financing and operating eco-industrial parks and eco-industrial networks. An examination of case studies on existing eco-industrial parks and the application of key concepts through the completion of a term project with a network of local companies will be involved.

*Prerequisites:* Successful completion of Semesters 1, 2, 3, 4, and 5 courses or equivalent or consent of the department.

**ENVS 4417 – Design for the Environment****(3 credits) 2 hours lecture, 3 hours lab**

This course develops concepts and procedures to integrate and implement the vision of industrial ecology into business decisions. It will examine how leadingedge industrial ecology precepts can be implemented in the real world. The course will explore a systematic approach to support business decisions within the industrial ecology framework. Students will develop skills in incorporating environmental objectives and constraints into process and product design, materials and technology choices. Case studies will highlight DFE success stories. Project work will provide hands-on experience in the DFE field. The course will examine local, regional and global issues related to the design and redesign of industrial systems in order to make them more sustainable.

*Prerequisites:* Successful completion of Semesters 1, 2, 3, 4, 5, 6 and 7 of the Biogeochemical Stream courses or Physical Processes Stream courses or equivalents or consent of the department.

**ENVS 4419 – Regulatory Management****(1 credit) 3 hours lab**

Students will be introduced to the processes associated with Regulatory Management through case studies of relevant local, regional, national, and international laws, regulations, and treaties governing the environment. The understanding of the origins, current status, and future impacts of these studies will provide insight into the effects of environmental initiatives on the region, the province, Canada and in the international arena.

**ENVS 4421 – Environmental Resource Management****(3 credits) 3 hours lecture**

This course investigates development and use of natural resources in modern society with an emphasis on the interrelationship between industrial activities and resource consumption, and their effects on the biosphere. Topics covered include analyses of new directions in products and systems' design, and their impacts on sustainable environmental resource management. Critical international issues in environmental resource management will also be examined.

*Prerequisite:* Environmental Science 3335 or Geography 2445 or equivalent or departmental approval.

**ENVS 4423 – Market Based Initiatives****(3 credits) 3 hours lecture**

This course will examine the initiatives being taken by local, regional, and national governments, and the United Nations to encourage organizations to improve their environmental outcomes for economic reasons. Emission trading, the evolution of environmental law and its role in regulatory management, and the elements of ISO-14000 will be reviewed.

*Prerequisite:* Mathematics 1200.

**ENVS 4431 – Management of Residuals****(3 credits) 3 hours lecture**

This course is designed to provide the students an understanding of the principles and concepts of waste management. Topics include: environmental chemistry of hazardous wastes, principles of industrial metabolism, waste disposal, health risks, regulatory aspects of residuals management, principles of industrial metabolism, optimization of materials.

*Prerequisites:* Successful completion of Semester 1, 2, 3, 4 and 5 of the Biogeochemical Stream courses or equivalents or consent of the department.



**FLTR 2201 – Navigation Flight 5**

(0 credits) Solo training and ground briefing

Students will develop their abilities to fly cross country and sharpen their navigational abilities. This class has 11 hours of training and instruction.

**FLTR 2202 – Navigation Flight 6**

(0 credits) Solo, dual and simulator training and ground briefing

Students will develop their abilities to fly cross country and sharpen their navigational abilities. This class has 16.5 hours of training and instruction.

**FLTR 2203 – Navigation Flight 7**

(0 credits) Solo training and ground briefing

This course provides students with the opportunity to develop their cross country flying proficiency in a Piper Arrow aircraft. This course has 11 hours of training and instruction.

**FLTR 2204 – Navigation Flight 8**

(0 credits) Solo training and ground briefing

This course provides students with the opportunity to develop their cross country flying proficiency in a Piper Arrow aircraft. This course has 16.5 hours of training and instruction.

**FLTR 2300 – Additional Training – Advanced**

(0 credits) Solo, dual and simulator training and ground briefing

This course provides students the opportunity to develop greater proficiency in single engine flight.

**FLTR 2301 – Additional Training – Multi Engine**

(0 credits) Multi dual and simulator training and ground briefing

This course provides students with further training on the multi-engine aircraft.

**FLTR 2302 – Additional Training – Simulator**

(0 credits) Simulator training and ground briefing

This provides students with further training in the Simulator to increase proficiency.

**FLTR 2303 – Additional Training – IFR**

(0 credits) Solo and dual training and ground briefing

This course provides students with further single engine IFR training to further increase proficiency.

**FORENSIC STUDIES (FORE)****FORE 2301 – Violence Across the Lifespan**

(3 credits) 3 hours lecture

In this course we use multiple strategies to explore factors contributing to risks for violence and resiliency to the effects of violence at the individual, community and societal level. Examples include vulnerability, peer pressure, culture, race, gender, media, gaming, social networks, social norms and developmental stages. Theories of violence and violence prevention are discussed.

**FORE 5501 – Forensic History, Risk Populations and Issues (formerly FORE 4401)**

(3 credits – TG) Distance Delivery – Internet

This course focuses on prevailing social/ethical forensic issues where health care overlaps with the law. Roles of the forensic subspecialties are outlined, together with the target forensic populations they serve. Historical roots, principles and professional practices of emerging subspecialties are examined, while current and future career opportunities are explored. A larger systems overview of criminal justice and health care is used to examine the broad scope of societal influences and the increasing impact of legal dimensions on forensic practice. Risk populations, issues and relevant laws and acts (local and international) are examined in relation to victims of physical and/or psychological trauma/abuse/neglect as well as perpetrators. Issues relevant to families of both victims and perpetrators are also explored.

**FORE 5503 – Forensic Psychiatric and Correctional Populations (formerly FORE 4403)**

(3 credits – TG) Distance Delivery – Internet

This multidisciplinary web course addresses the roles of various professionals in forensic psychiatric and correctional areas. The focus of this course is on the perpetrators of violence. Assessment, intervention and prevention are addressed for various forensic concepts and at risk populations in these settings. Relevant ethical/legal practice issues in the correctional and forensic psychiatric setting are debated with the opportunity to access international forensic resources on the web.

**FORE 5505 – Victims of Violence (formerly FORE 4405)**

(3 credits – TG) Distance Delivery – Internet

This multidisciplinary web course focuses on recognition, assessment and intervention with victims of violence. Topics include: victim behaviours, patterns of injury, evidence collection, forensic photography, fact testimony; risk reduction, prevention of violence and follow up. Specific sections discuss domestic violence, sexual assault, child abuse/neglect, elder abuse and violence against professionals. Course content is designed for nurses and physicians and is also valuable for other professionals (e.g., Police, social workers, paramedics) who interact with health care professionals or victims of violence.

**FORE 5507 – Forensic Science (formerly FORE 4407)**

(3 credits – TG) Distance Delivery – Internet

This multidisciplinary web course focuses on forensic lab analyses in criminal investigations. Specific laboratory techniques, limitations and implications of findings are discussed including microscopy, gas chromatography, DNA analysis, toxicology, fingerprinting, trace evidence and blood spatter analysis. We briefly introduce hypothesis development, event reconstruction, death investigation and analysis of remains.

**FORE 5509 – Expert Witness Testimony (formerly FORE 4409)**

(3 credits – TG) Distance Delivery – Internet

This course is designed to increase professionals' understanding of the issues and preparation required to give expert witness testimony. Issues include criteria and qualifications for expert witnesses, role in court, fields of expertise, locating experts, ethical considerations and the future of expert witnesses.

**FORE 5511 – Crime Scene Investigation and Evidence (formerly FORE 4411)**

(3 credits – TG) Distance Delivery – Internet

This course centers around a functional analysis of undertaking investigations with a focus on the crime scene. The course presents basic information on conducting investigations applicable to both law enforcement and other forensic professionals who may be at the scene. It also provides an assessment of the various investigative techniques that are applied to specific types of crimes against persons and property. The types of physical evidence expected during a crime analysis and criminal profiling are explored. In particular, information will be covered on the legal responsibilities in conducting an investigation, rules of evidence, evidence collection, working with victims and suspects, courts testimony as a fact witness, case presentation requirements and the important role of evidence documentation and preservation.

**FORE 5513 – Sexual Assault Examination and Intervention Theory (formerly FORE 4413)**

(3 credits) Distance Delivery – Internet

This online course provides the knowledge required to practice as a sexual assault nurse examiner (SANE) or physician examiner. Content is aimed at providing comprehensive care to victims of sexual assault including techniques for history taking and physical/psychosocial assessment, injury identification, evidence preservation and collection, assessing risks for infection/pregnancy and selecting treatment, crisis counseling, discharge considerations and court testimony. The course is designed for licensed nurses and physicians although police, social workers and lawyers involved with sexual assault may benefit - it is NOT open to undergraduate students.

*Prerequisite: Forensic Studies 5505 is strongly recommended prior to Forensic Studies 5513 if the student has limited clinical experience.*

### **GNED 1402 – Writing for the Professions**

(3 credits – TG) 3 hours lecture

This course presents the principles and techniques of writing for the professions. The course provides students with an opportunity to develop skills in written and oral communication and to critically analyse documents and genres commonly used in various professions. Practice in a variety of writing situations encountered by professionals such as correspondence, proposals, documented research reports, abstracts, definitions, product and process descriptions is provided.

*Prerequisite:* English Language Arts 30-1 or equivalent with a grade of 60% or higher, or English 0212 with a grade of C or higher.



### **GNED 1403 – Writing in a Digital Context: Language, Media, Culture**

(3 credits) 3 hours lecture

Working online and in the classroom, students in this foundational composition course will explore how various new media shape their writing. The course examines social media in particular, such as social networking sites, video file sharing, and blogging, in the context of rhetoric, cultural studies, and new literacies.

*Prerequisite:* English Language Arts 30-1 or equivalent with a grade of 60% or higher, or English 0212 with a grade of C or higher.



### **GNED 1404 – Writing about Images**

(3 credits) 3 hours lecture

This foundational composition course focuses on writing about images. Students will refine their understanding and practice of the structures of writing by responding to and analyzing images.

*Prerequisite:* English Language Arts 30-1 or equivalent with a grade of 60% or higher, or English 0212 with a grade of C or higher.



### **GNED 2402 – Inside Information: Challenges and Controversies in the Information Age**

(3 credits) 3 hours lecture

This course surveys the many challenges confronting us in the "Information Age". Students will have the opportunity to explore the major issues that influence information use, creation, and dissemination. Topics may include: tensions between the right to know and the right to privacy; information equity, access, and power; and intellectual freedom.



## **GEOGRAPHY (GEOG)**

### **GEOG 1101 – The Physical Environment**

(3 credits – TG) 3 hours lecture, 1 hour lab

This course is an introduction to the physical elements of the environment. Topics include: weather, climate, hydrology, landforms, soils, vegetation, and the processes producing variations of these elements on the surface of the earth. Examples of environmental inter-relationships and problems that affect humanity are emphasized.



### **GEOG 1102 – World Regional Geography**

(3 credits – TG) 3 hours lecture

The major cultural regions of the world are introduced in this course. Emphasis is placed on cultural characteristics, including population, political situation, economy, language, and religion, as well as the physical environment, including landforms and climate, that make regions distinctive. Historical developments provide context for understanding regional features. This course provides the background for understanding current world affairs.



### **GEOG 1103 – The Human Environment**

(3 credits – TG) 3 hours lecture, 1 hour lab

This course is the study of societies and cultures; their economies, technologies and political systems as these influence human use of physical and natural environments. The course concentrates on human/environment interrelationships and the manner in which humans attempt to impose order upon the surface of the earth. Some emphasis will be placed on student projects in the laboratories.



### **GEOG 1105 – Introduction to Mapping, GIS and Remote Sensing**

(3 credits – TG) 3 hours lecture, 3 hours lab

This course covers three key areas of geographical techniques: 1) an introduction to topographic and thematic maps, map projections, and map design and layout; 2) the use of geographic information systems to manipulate and visualize data and; 3) an introduction to digital imagery and remote sensing. This course utilizes descriptive statistics and includes a hands-on applied computer component.



### **GEOG 2107 – Weather and Climate**

(3 credits – TG) 3 hours lecture, 2 hours lab

This course involves the study of physical principles of meteorology and climatology. Air masses and fronts, mid-latitude depressions, small and large-scale storms, atmospheric-oceanic coupled circulations, and human-induced climate change are among the topics presented. The characteristics and distributions of climates are explored. Laboratory work emphasizes North American examples.

*Prerequisite:* Geography 1101 or consent of the department.



### **GEOG 2109 – Ecological Land Classification and Soils**

(3 credits – TG) 3 hours lecture, 3 hours lab

This course includes a study of the physical, chemical and biological characteristics of soils, and the processes and factors of soil formation. Course topics will also include an exploration of land morphology, soil and plant relationships, and their classification. Laboratory work will include the analysis of samples gathered in the field.

*Prerequisite:* Geography 1101 or Geology 1101 or 1109 or consent of the department.

### **GEOG 2111 – Landform Processes and Morphology**

(3 credits – TG) 3 hours lecture, 2 hours lab

This course involves a systematic study of the origin, nature and distribution of landforms. Laboratory work will include geomorphic interpretation of maps and remotely sensed images.

*Prerequisite:* Geography 1101 or Geology 1101, 1103 or 1109.

### **GEOG 2225 – Regional Geography of Canada**

(3 credits – TG) 3 hours lecture

This course involves a regional geography approach to the study of Canada. Included is the study of the physical framework of Canada and its significance in Canada's historical development. The concept of geographic regions, and the patterns and characteristics of these regions are explored using selected detailed studies.

*Recommended Preparation:* A previous course in Geography.



### **GEOG 2230 – Regional Geography of Europe**

(3 credits – TG) 3 hours lecture

This course will explore Europe's regional geography, its physical setting, its human geography (history, demography, economics, politics, culture), and its environmental challenges. Students will be exposed to the internal and external forces that bind the continent's various parts together and the social geographic factors that pull them apart. Special emphasis will be placed on contemporary Europe in the era of globalization and the deepening and widening of the European Union.

*Recommended Preparation:* A previous course in Geography.



### **GEOG 3447 – Parks and Protected Areas**

(3 credits) 3 hours lecture

This course will emphasize social and environmental science-based management in both provincial and national park systems. It will explore park formation, policies, planning and resource conservation from within a park and protected areas management framework.

*Prerequisite:* Geography 2333 or 2337 or 2443 or 2445.

### **GEOG 3553 – Spatial Analysis and GIS**

(3 credits) 3 hours lecture, 3 hour lab

This course is designed to advance knowledge in spatial methods and science with specific emphasis on Geographic Information Systems (GIS) and Remote Sensing. Important principles and concepts of GIS/Remote Sensing are expanded beyond those introduced in the prerequisites.

*Prerequisite:* Geography 2553 or 2555 or consent of department.

### **GEOG 1199, 1299 – Directed Readings**

See **Directed Readings** which are listed alphabetically in this section of the calendar.

## **GEOLOGY (GEOL)**

### **GEOL 1101 – Physical Geology**

(3 credits – TG) 3 hours lecture, 3 hours lab

This course provides a study of the principles of physical geology. Topics include: the classification and identification of rocks and minerals; processes in the earth's interior; plate tectonics and mountain building; surface processes and geologic hazards; and geologic resources, and an introduction to geologic time.

**Note:** Credit can only be obtained for one of Geology 1120, 1101, 2209 or U of C GLGY 201, 209 or 271.

### **GEOL 1103 – Historical Geology**

(3 credits – TG) 3 hours lecture, 3 hours lab

A study of the earth's geologic history as interpreted from sedimentary rocks. Emphasis will be on rock types and fossils, and their stratigraphic and environmental significance, as they relate to the physical and organic evolution of North America, from Precambrian to Recent times.

*Prerequisite:* Geology 1101 with a grade of C- or higher.

### **GEOL 1109 – Introduction to Geology**

(3 credits – TG) 3 hours lecture, 1 hour lab

Basic concepts regarding the major features of the earth: its rock and mineral composition; processes controlling erosion, deposition and surface structures; formation of the landscape; the history of the earth; plate tectonics and geologic hazards and how it all relates to you.

**Note:** Designed primarily for non-science students.

### **GEOL 1151 – Introduction to the Petroleum Industry**

(3 credits – TG) 3 hours lecture

An overview of the history, operations and technical aspects of the petroleum industry. The course content will emphasize the geologic occurrence of petroleum. Topics include: origin, migration and occurrence of petroleum; methods of exploration; and production and uses of petroleum.

**Note:** A non-science background is assumed.



### **GEOL 2101 – Introduction to Geologic Field Methods**

(3 credits – TG) 10-day field school

This course introduces the concepts of mapping geology at large and small scales. Detailed maps will be prepared using pace, compass and triangulation methods. Geologic sections will be measured with staff and tape and students will complete field reports. The field work will concentrate mainly on sedimentary rocks and basic structural geology. Field exercises are typically conducted outside of Calgary and normally occur during the two week period before Labour Day.

*Prerequisite:* Geology 1103 with a grade of C- or higher and consent of the department.

**Note:** This course occurs in rugged field conditions and varying weather, for which participants must be prepared and equipped. Students may be required to cover food and accommodation costs.

### **GEOL 2103 – Minerals and Rocks**

(3 credits – TG) 3 hours lecture, 3 hours lab

This course focuses on the identification of rocks and rock forming minerals in hand sample and under the binocular microscope. Included are rock classification schemes; the interpretation of rock textures and structures; an introduction to the petrographic microscope; orthoscopic optical techniques and elementary petrography.

*Prerequisites:* Chemistry 1201 and Geology 1103 with a minimum grade of C- or higher or departmental approval.

### **GEOL 2105 – Structural Geology**

(3 credits – TG) 3 hours lecture, 3 hours lab

This course will introduce orthographic and stereographic techniques used to examine tectonic structures. Students will also study the classification of tectonic structures, geological maps and cross sections, the mechanical principles involved in the deformation of rocks and the manipulation of structural data.

*Prerequisites:* Geology 1103 with a grade of C- or higher.

**Note:** There will be a weekend field trip during the course. Students will be required to cover food and accommodation costs.

### **GEOL 2107 – Palaeontology**

(3 credits – TG) 3 hours lecture, 3 hours lab

Principles of classification, comparison of fossil with modern forms, morphology of invertebrate fossils, their evolutionary history and paleoecologic significance.

*Prerequisite:* Geology 1103 with a grade of C- or higher.

### **GEOL 2109 – Stratigraphy and Sedimentation**

(3 credits – TG) 3 hours lecture, 3 hours lab

This course is an introduction to stratigraphic principles and sedimentary processes. Included are the properties, classification and interpretation of sedimentary rocks, stratigraphic nomenclature and stratigraphic relationships and interpretations.

*Prerequisite:* Geology 1103 with a grade of C- or higher.

### **GEOL 2111 – Crystallography and Optical Mineralogy**

(3 credits – TG) 3 hours lecture, 3 hours lab

External and internal symmetry, chemistry, structure and conoscopic optical properties of crystalline material as a basis for more refined identification of rock-forming minerals.

*Prerequisite:* Geology 2103 with a grade of C- or higher.

### **GEOL 2151 – Environmental Geology and Earth Resources**

(3 credits – TG) 3 hours lecture

Environmental geology involves the application of geological information to environmental problems. This course examines the interaction between man and the environment from a geological perspective with an emphasis on natural resource development in Western Canada.

*Prerequisite:* Geography 1101 or Geology 1101 or Geology 1109



**HIST 1117 – America to 1865 (formerly HIST 2217)**

(3 credits – TG) 4 hours lecture

This course provides a survey of the history of the United States from colonial settlement to the end of the American Civil War. Course topics include the struggle for liberty by groups and individuals, sectional conflict, interactions between Native Americans and the federal government, and changes in politics, society, and diplomacy.

**HIST 1119 – The United States, 1865 to the Present (formerly HIST 2219)**

(3 credits – TG) 4 hours lecture

This course provides a survey of the history of the United States from the Civil War to the present. Course topics include the struggle for liberty by groups and individuals, America's rise to global power, and political, social, and economic changes.

**HIST 1131 – Canada, Origins to 1867 (formerly HIST 2231)**

(3 credits – TG) 3 hours lecture, 1 hour tutorial

This course introduces students to key issues and events in early Canadian history. Themes include social and cultural change, as well as economic and political developments. Topics such as the interactions between Natives and non-Natives, war and conflict, and French and British relations will be examined.

**HIST 1133 – Modern Canada, 1867 to Present (formerly HIST 2233)**

(3 credits – TG) 3 hours lecture, 1 hour tutorial

This course introduces students to key issues and events in modern Canadian history. Themes include social and cultural change, as well as economic and political developments. Specific topics covered may include Canada's military participation, the Cold War, immigration and regionalism.

**HIST 2202 – The Historian's Craft (formerly HIST 3301)**

(3 credits – TG) 3 hours lecture

The Historian's Craft is an introduction to history as a distinct field of study. It aims to help students understand what history is, what it means to be a historian, and how to write history. The course is intended primarily but not exclusively for history majors in order to prepare them for the advanced study of history in upper-division courses.

*Prerequisite:* Any one of the following courses: History 1100, 1101, 1103, 1111, 1117, 1119, 1131, or 1133.

**HIST 2204 – The Medieval World**

(3 credits) 3 hours lecture

This course surveys the history of medieval Europe from c. 500 to c.1500. It focuses on the development of the political, religious and social structures that shaped Europe. Topics explored may include the ordering of society, belief systems, warfare and violence, art and architecture, literature, education and intellectual developments, and religious and political institutions.

**HIST 2205 – Health, Disease and Medicine in Western Society (formerly HIST 3305)**

(3 credits – TG) 3 hours lecture

This survey course in the social history of medicine focuses on the "medical revolution" of the nineteenth century. Topics include epidemics, mental illness, the development of the medical profession, and the role of medicine in culture and society.

*Recommended Preparation:* Any 1000-level History course.

**HIST 2206 – The History of Ancient Rome**

(3 credits) 3 hours lecture

This course surveys the history of Ancient Rome from the early kings to the spread of Christianity and the fragmentation of the Roman Empire in the West. Particular attention will be paid to the military, political, social and cultural achievements of the Romans, and to their long-standing legacy within Western Europe.

**HIST 2207 – Histories of Western Sexualities (formerly HIST 3307)**

(3 credits – TG) 3 hours lecture

Histories of Western Sexualities aims to help students understand that, contrary to our intuitive understanding, sexuality – both our sexual practices and our attitudes towards sexuality – have varied enormously over time and between cultures – that is, our sexuality is "historically contingent" and "socially constructed". Given the enormity of the subject, the course will focus on sexuality in Western cultural experience and the topics covered will vary from semester to semester.

**HIST 2208 – Women and Gender in Canada to 1900**

(3 credits – TG) 3 hours lecture

This course examines women's experiences and gender dynamics in Canada from the eighteenth through the nineteenth century. Themes include race and racism, family, politics and political culture, spousal and sexual violence, religion, public and private spheres, as well as sexuality.

*Recommended Preparation:* Women's Studies 1172 or any first year history course.

**HIST 2209 – Women and Gender in Canada Since 1900**

(3 credits – TG) 3 hours lecture

This course examines women's experiences and gender dynamics in twentieth century Canada. Themes include feminism's three waves, the social welfare state, the rise of the Left, World War II, post-war family and consumption, immigration and race, heterosexism and homophobia, environmentalism, and anti-racism.

*Recommended Preparation:* Women's Studies 1172 or any first year history course.

**HIST 2210 – Travel Studies in Canadian History**

(3 credits – TG) 3 hours lecture

Themes and course content will vary, but may include topics such as the settlement of the west, the military history of Canada, Aboriginal/European relations, urban history, and Canadian cultural history. This course will include at least one multi-night field trip to sites in Canada.

*Recommended Preparation:* History 1131 and/or 1133.



**Note:** Students will be responsible for paying all costs, including travel, associated with the field trip.

**HIST 2212 – Travel Studies in American History**

(3 credits – TG) 3 hours lecture

Themes and course content will vary, but may include topics such as the Revolutionary War, the American Civil War, Aboriginal Peoples of the United States, urban history, and American cultural history. This course will include at least one multi-night field trip to sites in the United States.

*Recommended Preparation:* History 1117 and/or 1119.



**Note:** Students will be responsible for paying all costs, including travel, associated with the field trip.



### HIST 2263 – Conflict and Society in the Twentieth-Century (formerly HIST 3363)

(3 credits – TG) 3 hours lecture

This course examines the role of conflict in society during the twentieth-century. It will focus on the ideas that produced social and political upheaval and the impact of this upheaval on various groups. Specific themes and topics to be addressed include the Great War; democracy, fascism and communism in the interwar period; Nazism and the “Final Solution”; the Cold War; competing nationalisms, genocide and contemporary civil wars.



### HIST 2271 – Latin America Before Independence

(3 credits – TG) 3 hours lecture

This course is an introduction to the history of colonial Latin America. Topics will include the process of conquest, the development of imperial bureaucracies to facilitate control, and the nature of everyday life within the colonies. The course will conclude with an assessment of Latin America’s wars of independence.



### HIST 2273 – Latin America After Independence

(3 credits – TG) 3 hours lecture

This course is an introduction to the history of Latin America after Independence. It will trace two centuries of volatile change within a region encompassing twenty unique republics. Among the topics to be explored are chronic militarism, uneven economic development, and ongoing struggles for social justice.



### HIST 2291 – Film and History (formerly HIST 3391)

(3 credits – TG) 3 hours lecture

This course examines film as a historical document. Films are a valuable source of social, cultural and intellectual history, as well as historical continuity and change. Themes addressed may include: collective memory; documentary films versus fictional films; war and film; issues of gender, race, ethnicity and representation of minority groups; class; sexuality; and film as a source of propaganda.



*Recommended Preparation: Any one of History 1101, 1103, 1131 or 1133.*

### HIST 3201 – Crime, Punishment and Social Control in Pre-Modern Europe

(3 credits) 3 hours lecture

This course explores the ongoing attempts by dominant institutions in pre-modern Europe to exert control over the behaviours, thoughts and acts of their subjects, and interrogates how individuals and collectives responded. Topics might include the relationship between justice and law, crime, punishment and enforcement, social deviancy, marginalization, heresy and witchcraft, suffering, and violence.



### HIST 3306 – Making the Mosaic: Race and Ethnicity in Canada

(3 credits – TG) 3 hours lecture

This course examines the experience and meanings of race, ethnicity, and immigration in Canadian history. Themes may include Aboriginal/European relations, the settlement of the west, law and race, discrimination, urban history, multiculturalism, and the politics of immigration.

*Recommended Preparation: History 1131 and/or 1133.*



### HIST 3318 – Deviance and Conformity: the History of the Canadian Institutional State

(3 credits – TG) 3 hours lecture

This course examines the extension and consolidation of state authority through the intellectual, social, and cultural history of various institutions in Canada. Topics might include asylums, medicine, prisons, reserves, and education. Special attention is paid to how concepts like health, ethnicity, class, learning, and sanity were constructed to serve the interests of the state.

*Recommended Preparation: At least one of History 1131, 1133, 2205, 2207, or 2232.*



### HIST 3319 – Conflict and Violence in Canadian History

(3 credits – TG) 3 hours lecture

This course examines conflicts and violent events in Canadian history and how they have shaped Canadian society. It takes a casestudy approach to the problem, and themes may include relations between labour and capital, French/English relations, nativism and immigration, racial/ethnic/gendered violence in society, Native/ newcomer relations, and the impact of war on society.

*Recommended Preparation: History 1131 and/or 1133.*



### HIST 3329 – The Witch trials of Early Modern Europe

(3 credits – TG) 3 hours lecture

Between 1450 and 1700 Europe experienced many trials and executions on the charge of diabolical witchcraft. This course focuses on the origins, intellectual foundations, historical development, and eventual decline of the trials. The course also examines the overlap between issues of religion, law, gender, the history of science, and social relations in early modern Europe.

*Recommended Preparation: History 1103 or 2229.*



### HIST 3333 – The Renaissance

(3 credits – TG) 3 hours lecture

This course explores the intellectual and cultural developments known as “the Renaissance” within the social, economic and political contexts of Europe in fourteenth and fifteenth-century. Students will study a wide range of contemporary sources to examine the values and beliefs of people who created or reacted to humanism and the reshaping of their societies by the emergence of modern capitalism, the discovery of new worlds, and the advent of a revolutionary information technology: printing. The work of modern historians will be used to illuminate and contextualize the developments in this period, as well as to demonstrate the range of critical perspectives that have been applied to it.



### HIST 3335 – The Reformation

(3 credits – TG) 3 hours lecture

This course examines social, political and religious trends in European history from the mid-fifteenth to early seventeenth century. It focuses in particular on the changes that occurred in European religious life in this period, collectively referred to as the Reformation.



### HIST 3336 – Topics in European History

(3 Credits – TG) 3 hours lecture

This course offers the opportunity to examine selected themes in European history. The specific content of the course will vary by term and instructor. Possible topics include the French Revolution, the culture of coffeehouses, history of alcohol, consumer culture, history of the book, science and society, and Gregorian England.



**HIST 4401 – Special Topics in War and Society**

(3 credits – TG) 3 hours lecture

This course provides students with the opportunity to focus on a particular theme from the field of war and society in a seminar environment. Topics might include the development of military medicine, the Holocaust, technology and warfare in the 20th century, literature and war, or war on the home front.

*Prerequisites:* History 2202 and one of 1100, 1101, 1103, 1111, 1117, 1119, 1131, or 1133.

*Recommended Preparation:* At least one 3000 level History course.

**HIST 4402 – The Age of Enlightenment**

(3 credits – TG) 3 hours Lecture

This course examines the Enlightenment through reading and discussion of primary documents and historians' debates. Emphasis will be placed on interpretations of the Enlightenment and analyzing what impact it made on later generations. Possible topics include Enlightenment or Enlightenments; British Enlightenment; Enlightenment bodies; and religion in the Enlightenment.

*Prerequisites:* History 2202, and 1103 or 2229.

**HIST 4403 – Landmarks in the History of Science**

(3 credits – TG) 3 hours lecture

This course examines major events in the history of science through reading and discussion of primary documents and historians' debates. Emphasis will be placed on appreciating science as a product of the past culture which produced it. Possible topics include the Scientific Revolution; Darwinism; science and society; and the popularization of science.

*Prerequisites:* History 2202, and one of History 1101 or 1103 or 2229.

**HIST 4404 – Topics in Canadian Social History**

(3 credits – TG) 3 hours lecture

This course offers students an opportunity for advanced study in the social history of Canada. Topics may include labour, immigration, religion, family, First Nations, women, health, and social welfare.

*Prerequisites:* History 2202 and one of History 1131, 1133 or 2232.

**HIST 4405 – Special Topics in Public History**

(3 credits – TG) 3 hours lecture

This course provides students with an introduction to the practice of history in a variety of venues such as museums and historic sites. The course will expose students to the skills, methods and techniques utilized by public history practitioners. Topics may include archives, electronic media, curatorial authority, controversies, First Nations peoples, tourism, and cultural heritage.

*Prerequisites:* History 2202 and one of History 1101, 1103, 1111, 1117, 1119, 1131, or 1133.

**HIST 4411 – The American Civil War and Reconstruction**

(3 credits – TG) 3 hours lecture

This course is an exploration of the rise of sectional conflict, the Civil War, Reconstruction, and the ways in which Americans have remembered these events. Topics include slavery, political conflict, strategy and tactics, the home front, race, Reconstruction and reunion, and the role of the media in shaping popular conceptions of history.

*Prerequisites:* History 1117 and 2202.

**HIST 4451 – The History of British North America**

(3 credits) 3 hours lecture

This seminar examines the British North American colonies and territories from the eighteenth through to the nineteenth century. Emphasis is placed on social and economic developments and on the growth of the colonial state. Topics may include the fur trade, colonialism, and migration, as well as such themes as race, sexuality, gender, and family.

*Prerequisites:* History 1131 and 2202.

**HIST 4455 – Canada in the Era of the Cold War**

(3 credits – TG) 3 hours lecture

This advanced seminar course focuses on the social, political, and cultural history of Canada from 1945 to 1991. Themes include Canadian defence, nuclear weapons, foreign policy, espionage, domestic and international politics, the development of social programs, and Canadian culture.

*Prerequisites:* History 2202 and one of History 1131, 1133, or 2232.

**HIST 4461 – Limits of Representation: Holocaust and Memory**

(3 credits – TG) 3 hours lecture

The Holocaust changed the historical, political and cultural landscape, and this course will help students understand how society remembers and historicizes this event. In this senior seminar course, students engage with primary documents such as published and unpublished survivor testimony, historical and contemporary novels and films and other representations of this traumatic event.

*Prerequisites:* History 2202 and 3361.

**HIST 4486 – The Industrial Revolution**

(3 credits – TG) 3 hours lecture

This course examines the origins, spread and consequences of the Industrial Revolution in Europe between 1750 and 1900. The course is intended to provoke informed reflection on the important changes produced by the transition to the industrial age, with particular emphasis on developments in England where the Industrial Revolution first began.

*Prerequisites:* History 2202 and one of History 1103, 2241 or 2243.

**HIST 4731 – Topics in American History**

(3 credits) 3 hours lecture

This course offers students an opportunity for advanced study in American history. Topics may include technology, social history, institutions, labour, politics, a particular time period such as the colonial era, or regional focus such as the American South or West.

*Prerequisites:* History 2202 and one of History 1117 or 1119.

**HIST 5110 – Honours Project I**

(3 credits) 3 hours lecture

Required for all students in the Honours stream, History 5110 is an advanced seminar course that provides students with the practical skills and knowledge necessary to develop their Honours project (History 5120), a substantial piece of independent research.

*Prerequisite:* History 2202.

**Note:** This course is restricted to students who have completed 30 courses towards the B.A. and who are officially accepted and enrolled in the History Honours Program. This course is offered only in the Fall semester.

**HIST 5120 – Honours Project II**

(3 credits) 3 hours lecture

Required for students in the Honours stream, History 5120 is an independent study course in which students research, write and present an Honours project, a substantial piece of original research. The project will be conducted under the direction of a faculty supervisor.

*Prerequisite:* History 5110.

**Note:** This course is restricted to students in the final year of their program who are officially accepted and enrolled in the History Honours Program. This course is only offered in the Winter semester.

**HIST 3199, 4199 – Directed Readings**

See **Directed Readings** which are listed alphabetically in this section of the calendar.

### **HUMN 2219 – Ancient Greece (800 BCE – 323 BCE) (formerly HUMN 3309)**

(3 credits – TG) 3 hours lecture

This course provides a comprehensive introduction to the history and culture of Ancient Greece (circa 800 BCE – 323 BCE). The course employs an interdisciplinary approach, examining the mythology, religion, history, politics, philosophy, science, art and literature of this ancient culture that has often been seen as the cradle of Western civilization.

*Recommended Preparation: History 1101.*

**Note:** Humanities 2219 = Athabasca University HUMN 309. Credit will be allowed for only one of Humanities 2219 and HUMN A309.

### **HUMN 2221 – Science and Religion in Early Modern Europe (formerly HUMN 3321)**

(3 credits – TG) 3 hours lecture

This course explores the tremendous changes that occurred in science and religion between 1450 and 1700. In particular, it looks at the reasons that religion and natural science split apart into separate institutions during the Renaissance and the Scientific Revolution. Topics such as authority and belief, the earthly and heavenly realms, the extent of human knowledge, and the relation between humans and nature will be discussed.

*Recommended Preparation: One or more of Humanities 1105, 1109, 1111, History 1101, 1103, 3333, 3357, Philosophy 1101, 2215, 2263, 2267, Religious Studies 1101, 2207.*

### **HUMN 2297 – Issues in Science and Religion (formerly HUMN 3397)**

(3 credits – TG) 3 hours lecture

This course examines issues of mutual concern for science and religion such as evolution and creation, value and meaning of humanity, exploitation and/or stewardship of life, of the world.

### **HUMN 3199, 4199 – Directed Readings**

See **Directed Readings** which are listed alphabetically in this section of the calendar.

## **INDIGENOUS STUDIES (INST)**

### **INST 1101 – Introduction to Indigenous Studies: the Canadian Context**

(3 credits – TG) 3 hours lecture

This course provides an introduction to the interdisciplinary field of Indigenous Studies. Specifically, the course surveys the diverse histories and traditional and contemporary cultures of the various groups in what is now Canada. Taught from an Aboriginal perspective, the course explores a wide range of topics, with an emphasis on colonization and decolonization.

### **INST 1111 – Introduction to Indigenous Studies: International Perspectives**

(3 credits – TG) 3 hours lecture

Taught from an Aboriginal perspective, this course explores a range of topics, with an emphasis on colonization and decolonization in a comparative international context. The Indigenous peoples focused on will vary from semester to semester and may include groups from areas such as Australia, New Zealand, South America and the United States.

*Recommended Preparation: Indigenous Studies 1101.*



### **INST 2730 – Topics in Indigenous Studies**

(3 credits) 3 hours lecture

This course offers the opportunity to examine specific topics in Indigenous Studies in both Canadian and International contexts. The specific content of the course will vary by term and instructor. Possible topics include education, contact narratives, land rights, politics, Metis/Mestizo history and culture, and Indigenous women's studies.

*Recommended Preparation: Indigenous Studies 1101 and/or 1111.*



## **INSURANCE (INSR)**

### **INSR 2140 – Principles and Practice of Insurance**

(3 credits) 3 hours lecture

The basic concepts and language of insurance are discussed including: the legal context of insurance; the insurance contract and document process; risk; ratemaking and underwriting; the participants in the industry and their relationship to each other; claims process and adjusters; and reinsurance.

### **INSR 2141 – Insurance on Property**

(3 credits) 3 hours lecture

This course provides an introduction to property insurance; basic fire insurance, extended coverage endorsement; Insurance Act Provisions: discussion of perils, and clauses and limitations relating to the most common personal lines policies.

*Prerequisite: Insurance 2140.*

### **INSR 2143 – Automobile Insurance**

(3 credits) 3 hours lecture

This course provides an introduction to and development of automobile insurance including: legislation related to automobile insurance, policies and regulations with a concentration on personal coverages; claims; industry programs for insurance availability; insurance rating; and specifics of policy coverage in each province.

### **INSR 2144 – Loss Adjusting**

(3 credits) 3 hours lecture

This course provides basic knowledge of insurance and professional conduct within the claims domain: management of relationships relative to the claims handling process; the fundamentals of investigation, evaluation, negotiation and settlement within the claims process.

*Prerequisite: Insurance 2140.*

### **INSR 2145 – Insurance Agency**

(3 credits) 3 hours lecture

An overview of the insurance business from an agency perspective including: recognition of the needs of personal lines clients and small commercial risks; the progress of a risk assessment from initial client contact through the evaluation and application process, to binding and policy documents; review of major product lines and common policy transactions.

*Prerequisite: Insurance 2140.*

### **INSR 3247 – Underwriting Essentials**

(3 credits) 3 hours lecture

This course provides an overview of how an underwriter accepts or rejects for the insurer within parameters set by the insurer and imposed by external environmental conditions and includes the study of the characteristics required by an underwriter in the analysis of individual property, liability, and automobile risks.

*Prerequisite: Insurance 2140.*

## INTERDISCIPLINARY STUDIES (INTS)

### INTS 1240 – Fundamentals of Interpersonal Communication (formerly HLTH 2240, SLWK 1111 and INTS 2240)

(3 credits – TG) 3 hours lecture

This course provides an introduction and overview to aspects of interpersonal communication. Utilizing a mix of theory and application, the course provides students with opportunities to gain an understanding of the elements of interpersonal communication and demonstrate a foundational level of knowledge and skill of the application of interpersonal communication for use in a variety of settings.



### INTS 3331 – International Community Development (formerly SLWK 3331)

(3 credits – TG) Internet Delivery

This interdisciplinary course will provide students with an overview of International Community Development issues such as poverty, health care, education, human rights, foreign aid and controversy. Students will be encouraged to examine topics such as sustainable development, child soldiers, and the world AIDS crisis, from the unique perspective of their individual field of study.



## INTERIOR DESIGN (INDS)

### INDS 2010 – Directed Field Studies I

(15 credits)

This course will foster an understanding of the multi-faceted practice of interior design. Through paid work experiences in businesses associated with the design and construction of interior environments, students will apply academic skills and theory acquired in Semesters 1 - 4. The required on-line learning modules provide academic background in sustainable design.

*Prerequisite: Interior Studies 3327 and all required 4th semester courses.*

### INDS 2211 – Design I

(3 credits) 2 hours lecture, 3 hours studio

This course explores the role of design as a human activity and the relationship of design to human behaviour and well-being. Students will develop awareness of human history in the context of design and invention, an understanding of design as effective problem analysis and exploration, and a context and vocabulary for design critique.

### INDS 2213 – Design Communication I

(2 credits) 1 hour lecture, 2 hours studio

Design Communication I introduces drawing as a means of communication. Focus is on the development of freehand drawing skills with various media, including but not limited to, graphite, conte, charcoal, pen and brush with ink. Students will gain sensitivity and expertise with line, play of light, colour, proportion and perspective drawing.

*Prerequisite: Admission to the Bachelor of Applied Interior Design program.*

### INDS 2221 – Design II

(4 credits – TG) 2 hours lecture, 6 hours studio

This course is a continuation of Interior Design 2211, and examines design through the application of the elements and principles of visual design in two dimensional and three-dimensional problems. Project and assignment solutions will be derived through application of problem-solving processes.

*Prerequisite: Interior Design 2211 or consent of the department.*

### INDS 2223 – Design Communication II

(2 credits – TG) 1 hour lecture, 3 hours studio

Skills introduced in Design Communication I will be further developed, practised and refined, with particular emphasis on freehand and technical perspective drawing of interior spaces and principle of layout and composition.

*Prerequisite: Interior Design 2213 or consent of the department.*

### INDS 2225 – Construction I

(4 credits – TG) 2 hours lecture, 6 hours studio

This course introduces the student to theoretical and practical exercises related to technical problems in architectural and design drawing. Students will establish confidence and familiarity with conventions, methods and applications of orthographic drawing.

*Prerequisites: Successful completion of all first-semester Bachelor of Applied Interior Design program core requirements or consent of the department.*

### INDS 2229 – Lighting

(1 credit) 1 hour lecture

This course provides a foundation of light theory for the students, as well as techniques to research and specify light sources and fixtures. Students explore and develop an understanding of the impact of light on environmental issues and on the health and safety of individuals.

*Prerequisites: Successful completion of all second-semester Bachelor of Applied Interior Design program core requirements or consent of the department.*

### INDS 2231 – Colour and Light

(2 credits) 2 hours lecture

This course provides an introduction to the theories of colour and light. It will also look at the relationship of colour and to the materials used in design. Through discussions, exercises and field trips, students will develop awareness of the importance of colour and light in the successful resolution of functional problems of interior spaces.

*Prerequisite: Admission to the Bachelor of Applied Interior Design program.*

### INDS 2233 – Materials

(1 credit) 1 hour lecture

This course investigates the properties of basic construction and finishing materials used in the interior environment. Students will learn how to select appropriate materials to satisfy given criteria by implementing a prescribed problem solving process.

*Prerequisites: Successful completion of all first-semester Bachelor of Applied Interior Design program core requirements or consent of the department.*

### INDS 2235 – Universal Design

(1 credit) 1 hour lecture

Students will develop an understanding of universal design and will be exposed to the physiological, psychological, and social impact that universal design has on diverse populations.

*Prerequisites: Successful completion of all first-semester Bachelor of Applied Interior Design program core requirements or consent of the department.*

### INDS 3010 – Directed Field Studies II

(15 credits)

This second semester of paid work experience will provide students with practical experience in areas which pertain to their specific interests and skills. Although employment will be coordinated through the Career Services office, students will be encouraged to find their own employment opportunities.

### INDS 3301 – Design III

(4 credits – TG) 2 hours lecture, 6 hours studio

This course builds on core skills and understandings developed during the foundation Interior Design courses. Students are provided with opportunities to learn the theory of residential design and to apply that theory, using a prescribed problem process, to the resolution of both theoretical and practical projects. These projects consider the needs of diverse populations and range from the simple to the complex.

*Prerequisites: Successful completion of all second-semester Bachelor of Applied Interior Design program core requirements or consent of the department.*

### INDS 3305 – Construction II

(4 credits) 2 hours lecture, 6 hours studio

This course is a continuation of Interior Design 2225. This course emphasizes skill development in the design and construction of architectural woodwork and the preparation of related construction drawings.

*Prerequisites: Successful completion of all second-semester Bachelor of Applied Interior Design program core requirements or consent of the department.*



**MATH 1160 – Higher Arithmetic (formerly MATH 2160)**

(3 credits – TG) 3 hours lecture

This course explores elementary number theory, numeration systems, operations on integers and rational number and elementary combinatorics using both inductive and deductive methods. Emphasis will be put on the development of clarity and understanding of mathematical processes and ideas, the application of these ideas to problem solving and the communication of these ideas to other people.

*Prerequisite:* Mathematics 30-Pure or the permission of the department.

**MATH 1200 – Calculus for Scientists I (formerly MATH 2249)**

(3 credits – TG) 4 hours lecture, 1 hour tutorial

This course provides an introduction to calculus with some exposure to applications in the sciences. Topics covered will include algebraic operations, functions and graphs, transcendental functions, limits, derivatives, integrals and the fundamental theorem of calculus. Studying calculus will expose students to a variety of important mathematical ideas and help students develop their calculation, critical thinking and problem solving skills.

*Prerequisite:* A grade of 60% or higher in Pure Mathematics 30 or in Mathematics 0130, or a grade of C- or higher in any of Mathematics 1283 or 1285 or equivalent.

**MATH 1202 – Calculus for Scientists II (formerly MATH 2253)**

(3 credits – TG) 3 hours lecture, 1 hour tutorial

This course is an introduction to integral calculus and its applications. Methods of integration are studied and applied to the calculation of volumes, surface areas, arc lengths and work. Inverse trigonometric and hyperbolic functions, L'Hospital's Rule, first and second-order linear differential equations are also studied.

*Prerequisite:* Mathematics 1200 with a grade of C- or higher.

**MATH 1203 – Linear Algebra for Scientists and Engineers (formerly MATH 2221)**

(3 credits – TG) 3 hours lecture, 1 hour tutorial

This course is an introduction to linear algebra for science students. Topics covered are vector and matrix algebra, systems of linear equations, determinants, linear transformations, polar coordinates and complex numbers. Applications in the physical sciences are studied with the help of eigenvalues and eigenvectors.

*Prerequisite:* Pure Math 30 with a 60% or higher.

**MATH 1205 – The Beauty of Mathematics**

(3 credits – TG) 3 hours lecture

This course introduces the student to the skills of problem solving and critical thinking. Students are also exposed to some of the history, philosophy, ideas, and people in mathematics. An emphasis is placed on applications of mathematics to everyday life.

**MATH 1211 – Concepts of Mathematical Statistics**

(3 credits – TG) 4 hours lecture, 1 hour lab

This course involves descriptive statistics and a brief introduction to probability theory. A systematic treatment of inferential statistics is undertaken in this course. Topics include the inferences of one population and two population means and proportions, regression and correlation, and chi-square test.

*Prerequisite:* Pure Mathematics 30 or equivalent with a grade of 60% or higher; or Mathematics 0130, 1283 or 1285 with a grade of C or higher or consent of department.



**Note:** Only one of the Mathematics 1211, Mathematics 1224, Mathematics 2233 and Mathematics 2333 can be used for graduation purpose.

**MATH 1217 – Calculus for Engineers and Scientists I**

(3 credits – TG) 3 hours lecture, 1.5 hours tutorial

Functions, limits, continuity, derivatives, mean value theorem, integrals, fundamental theorem of calculus, applications in the physical sciences

*Prerequisite:* Pure Mathematics 30 with a grade of 65% or higher or Mathematics 0130 or equivalent with a grade of C or higher. Mathematics 31 or equivalent with a grade of 65% or higher or Mathematics 0131 with a grade of C or higher.

**Note:** Credit for more than one of Mathematics 1217, 2249, 2251 and 2285 will not be allowed.

**MATH 1219 – Multivariable Calculus for Engineers**

(3 credits – TG) 3 hours lecture, 1.5 hours tutorial

Techniques of integration, double and triple integrals, partial derivatives, applications.

*Prerequisite:* Mathematics 1217 with a grade of C- or higher.

**Note:** Credit for both Mathematics 1219 and 2253 will not be allowed.

**MATH 1224 – Introduction to Statistics**

(3 credits – TG) 4 hours lecture, 1 hour lab

This course involves descriptive statistics and some basic theory of probability including Bayes' Rule, expectation, probability distribution (binomial, Poisson, normal) and sampling distributions. Confidence interval and hypothesis testing are introduced.

*Prerequisite:* Pure Mathematics 30 or equivalent with a grade of 60% or higher; or Mathematics 0130, 1283 or 1285 with a grade of C or higher or consent of department.



**Note:** Only one of the Mathematics 1211, Mathematics 1224, Mathematics 2233 and Mathematics 2333 can be used for graduation purpose.

**MATH 1225 – Statistical Inference**

(3 credits – TG) 5 hours lecture

This course involves inferences concerning means, proportion and variance. Analysis of variance (one and two ways), regression and correlation analysis are also discussed as well as nonparametric statistics. Application of these statistics to problems in business, biology and social sciences is studied.

*Prerequisite:* Mathematics 1224 or consent of department.

**MATH 1271 – Discrete Mathematics**

(formerly MATH 2271)

(3 credits – TG) 3 hours lecture, 1 hour tutorial

This course is an introduction to symbolic logic, techniques of proof, sets, equivalence relations. There is also an exploration of mathematical induction, recursion, counting principles, graphs, and trees.

*Prerequisite:* Mathematics 1203 with a grade of C- or higher.

**MATH 1285 – Precalculus III**

(3 credits – TG) 5 hours lecture

A course which covers precalculus material such as trigonometric, exponential and logarithmic functions, inverse trigonometric functions, analytic geometry, sequences and series, the binomial theorem, mathematical induction.

*Prerequisite:* Pure Mathematics 30 or equivalent, or Mathematics 1283.

**MATH 1505 – Puzzling Adventures in Mathematics (formerly MATH 2505)**

(3 credits – TG) 3 hours lecture, 1 hour tutorial

This course is a problem-solving approach to discrete mathematics covering secret codes, public-key codes, error-correcting codes, applications of graph theory, and parallel algorithms. The material in the course is introduced and examined through the use of mathematical puzzles.

**MATH 2101 – Abstract Algebra (formerly MATH 3315)**

(3 credits – TG) 3 hours lecture, 1 hour tutorial

This course is an introduction to abstract algebra with applications in cryptography. Topics studied include groups and rings, polynomial arithmetic and the division algorithm, and congruencies.

*Prerequisite:* Mathematics 1203 with a grade of C- or higher.

**NURS 5114 – Transition to Independent Practice**

(10 credits) 370 hours clinical experience

This precepted experience provides opportunity for students to demonstrate a full scope of professional nursing practice. Students will care for selected persons (individual, family, community, population) in a variety of nursing practice settings, using health promotion, primary health care and population health strategies. Students will exemplify evidence based, ethical, safe and effective nursing care, and demonstrate critical thinking, caring inquiry, reflection, autonomy and collaborative practice in preparation for graduation. It is expected that the student will integrate all previous theoretical and practical knowledge.

*Prerequisites:* Nursing 4111, Nursing 4112, Nursing 4XXX

**PHILOSOPHY (PHIL)****PHIL 1101 – Philosophy: Knowledge and Existence (formerly PHIL 2201)**

(3 credits – TG) 3 hours lecture, 1 hour tutorial

This course provides an introduction to philosophy through the discussion of selected topics such as: skepticism, perception, personal identity, free will and determinism and God.

**PHIL 1149 – Philosophy: Values and Ethics (formerly PHIL 2249)**

(3 credits – TG) 3 hours lecture, 1 hour tutorial

This course provides an introduction to philosophy through a first enquiry into the nature and justification of moral standards.

**PHIL 1175 – Reason and Argument (formerly PHIL 2275)**

(3 credits – TG) 3 hours lecture, 1 hour tutorial

This course offers an introduction to deductive and inductive techniques used in appraising arguments. The course may contain some elementary formal logic, but its main focus will be on analyzing arguments as they occur in everyday life and ordinary language.

**PHIL 1179 – Introduction to Symbolic Logic (formerly PHIL 2279)**

(3 credits – TG) 3 hours lecture, 1 hour tutorial

This course introduces sentential and first-order logic from both deductive and semantic points of view. Some elementary metatheorems are also discussed.

**PHIL 2204 – Medieval Philosophy**

(3 credits) 3 hours lecture

The Medieval Period covers philosophical developments from the Roman Empire to the Renaissance. This course will investigate a subset of topics from this period selected from such things as moral and political philosophy, logic and metaphysics, epistemology, and philosophical theology. Included may be representative works from Latin, Arabic and Hebraic thinkers.

**PHIL 2211 – The Classical Period (formerly PHIL 3301)**

(3 credits – TG) 3 hours lecture

An introduction to philosophy through the study of a period in its history. A selection of philosophers from the Pre-Socratics, through Plato and Aristotle, to the Hellenistic and Roman philosophers will be discussed.

*Recommended Preparation:* Philosophy 1101 or 1149.

**PHIL 2215 – The Early Modern Period (formerly PHIL 3305)**

(3 credits – TG) 3 hours lecture

This course is an introduction to philosophy through the study of a period in its history. A selection of philosophers from Descartes through Kant will be discussed.

*Recommended Preparation:* Philosophy 1101 or 1149.

**PHIL 2216 – Nineteenth Century Philosophy**

(3 credits) 3 hours lecture

This course serves as an introduction to nineteenth-century philosophy, including figures like Schiller, Fichte, Hegel, Darwin, Kierkegaard, Marx, Peirce, Nietzsche, Freud, and Bergson. Students will explore debates about the nature of life, history, rationality, freedom, and religion, becoming familiar with a range of philosophical approaches.

**PHIL 2219 – Philosophy of Law (formerly PHIL 3319)**

(3 credits – TG) 3 hours lecture

An investigation of philosophical accounts of the nature of law and legal systems. Acquaints the students with central positions in jurisprudence, such as the nature of law, the relationship of law to morality, punishment, rights, and justice.

*Recommended Preparation:* Philosophy 1149.

**PHIL 2221 – Metaphysics (formerly PHIL 3321)**

(3 credits – TG) 3 hours lecture

An examination of such topics as categories, existence, persons, space, time, necessity.

*Recommended Preparation:* Philosophy 1101.

**PHIL 2223 – Bio Ethics (formerly PHIL 3313)**

(3 credits – TG) 3 hours lecture

A critical and analytical examination of ethical and legal problems arising in and about health care. Issues to be considered may include: euthanasia, abortion, the conditions for the withdrawal of treatment, the physician-patient relationship, research on human subjects, and genetic engineering. The practical applications of ethical and legal theory are emphasized.

**PHIL 2229 – Business Ethics (formerly PHIL 3329)**

(3 credits – TG) 3 hours lecture

A critical and analytical examination of some central moral problems that arise in and for business. Emphasis throughout the course will be placed not only on the details of the particular problems studied but also on the conceptual and other tools needed to understand and resolve or solve such problems. Topics to be discussed will include: the moral responsibilities and rights of corporations and their officers, codes of business ethics, and conflicts of responsibilities and rights.

**PHIL 2237 – Feminist Philosophy (formerly PHIL 3337)**

(3 credits – TG) 3 hours lecture

Issues in feminist philosophy and methodology. Topics may include feminist theories of knowledge and science, ethics, metaphysics, political theory and feminist methodology.

*Recommended Preparation:* Philosophy 1101 or 1149.

**PHIL 2241 – Existentialism**

(3 credits – TG) 3 hours lecture

Existentialist thought is a historical movement in philosophy. It is also a methodology of philosophy that explores and demonstrates the significance of human existence itself. This course serves as an introduction to existentialist methods, debates, and concepts, as well as to significant existentialist thinkers.

**PHIL 2253 – Social and Political Philosophy (formerly PHIL 3353)**

(3 credits – TG) 3 hours lecture

In this course some of the fundamental issues in social and political thought are studied. Issues to be studied may include rights, justice, authority, equality, freedom, democracy, property, liberalism, the family and communitarianism.



**PHIL 2263 – Theory of Knowledge  
(formerly PHIL 3363)**

(3 credits – TG) 3 hours lecture

A study of some of the central problems in epistemology, including the following: knowledge and belief, empirical (perceptual and inductive) knowledge, a priori knowledge, appearance and reality, truth, and skepticism.

*Recommended Preparation: Philosophy 1101.*



**PHIL 2267 – Philosophy of Science  
(formerly PHIL 3367)**

(3 credits – TG) 3 hours lecture

For students in any discipline who would like to understand some of the fundamental principles of scientific enquiry and the place of scientific discoveries in human knowledge. Topics will include: scientific explanation, theory, prediction, confirmation, and, when feasible, other material relating to the interests of the students in the course.

*Recommended Preparation: Philosophy 1101, 1175 or 1179.*



**PHIL 2281 – Philosophy of Mind  
(formerly PHIL 3381)**

(3 credits – TG) 3 hours lecture

A study of topics such as: thought, emotions, action and the will, mind-body identity, personal identity, and theories about the nature of mind.

*Recommended Preparation: Philosophy 1101.*



**PHIL 2291 – Philosophy and the Environment  
(formerly PHIL 3391)**

(3 credits – TG) 3 hours lecture

Traditional and contemporary philosophical theories and methods will be brought to bear on issues raised by the relationship between human beings and their environment. Moral and other philosophical aspects of some major issues, such as pollution, population growth, and use of natural resources, will be considered.



**PHIL 3307 – Analytic Philosophy  
(formerly PHIL 2217)**

(3 credits – TG) 3 hours lecture

This course consists of a study of the motivations and positions of Analytical Philosophy, a movement that formed the basis of twentieth century English-language Philosophy. The course will examine some of the central concepts of Analytic Philosophy and their historical roots.

*Prerequisite: Any course in Philosophy.*



**PHIL 3333 – Philosophy of Art  
(formerly PHIL 2233)**

(3 credits – TG) 3 hours lecture

This course consists of an examination of the criteria and concepts employed in aesthetic evaluation. Aesthetics deals primarily with the concepts of art and beauty and with our evaluative judgments about them.

*Prerequisite: Any course in Philosophy.*



**PHIL 3345 – Topics in Moral Theory  
(formerly PHIL 2245)**

(3 credits – TG) 3 hours lecture

This course consists of an investigation of selected central theories in moral philosophy. In any given term, the course may focus on general theories or concepts, for example contemporary metaethics, utilitarianism, or theories of rights. Sometimes it may focus on a particular set of problems, such as moral personhood, freewill, or moral responsibility.

*Prerequisite: Any course in Philosophy.*



**PHIL 3350 – Topics in Continental Philosophy**

(3 credits – TG) 3 hours lecture

This course examines key figures, methods and debates within continental philosophy. While its focus may vary, the course serves as an introduction to themes such as desire and embodiment, anxiety and despair, freedom and choice, transcendence and immanence, social oppression and resistance, cultural and religious difference.

*Prerequisite: One of Philosophy 1101, 1149, 1175, 1179, 2241, 2211, 2215, 2219, 2221, 2223, 2229, 2237, 2253, 2263, 2267, 2281, 2291, 3307, 3333, 3345.*



**PHIL 3368 – Philosophy of History**

(3 credits) 3 hours lecture

This course examines topics such as the relationship between fact and value in understanding history, the relevance of history to our understanding of human nature, the meaning of world history as a whole, theories of historical explanation and competing answers to the question "What is history?"

*Prerequisite: One of Philosophy 1101, 1149, 1175, 1179, 2211, 2215, 2219, 2221, 2223, 2229, 2237, 2241, 2253, 2263, 2267, 2281, 2291, 3307, 3333, 3345.*

**PHIL 4730 – Advanced Philosophical Topics**

(3 credits) 3 hours lecture

While the study of philosophy involves engaging with canonical texts and thinkers, it extends to questions that expand the scope of research, illuminate problems, and compel methodological experiments. This seminar, designed for undergraduates with a background in philosophy, will enable students to bring disciplinary methods and debates to bear upon pressing contemporary issues in the discipline.

*Prerequisite: At least one of Philosophy 3307, 3333, 3345, 3350, 3368, or consent of the department.*



**PHIL 3199, 4199 – Directed readings**

See **Directed Readings** which are listed alphabetically in this section of the calendar.

**PHYSICAL EDUCATION (PHED)**

**PHED 1001 – Human Anatomy  
(formerly PHED 1224)**

(3 credits – TG) 3 hours lecture, 3 hours lab

This course provides a systematic survey of the structure of the human body. Topics include: cells and tissues of the body; the anatomy of the skeletal, articular, muscular, digestive, respiratory, urinary, reproductive, circulatory, nervous, integumentary and endocrine systems. Labs are designed to provide practical demonstrations that parallel the material discussed in the lectures.



Note: To obtain transfer credit, Physical Education 1001 must be completed with a grade of C- or higher before enrolling in Physical Education 3001.

**PHED 1003 – Historical and Philosophical  
Foundations in Sport and Culture  
(formerly PHED 2243)**

(3 credits – TG) 3 hours lecture

This course provides an examination of the cultural meanings of sport, leisure, and physical education; and the place of the body in our culture both historically and in the present.



**PHED 1005 – Leadership and Communication in Physical  
Education (formerly PHED 2211)**

(3 credits – TG) 3 hours lecture

This course presents the theory and application of leadership and interpersonal communication skills as they apply to large and small groups in the field of physical activity and sport.

### **PHED 3003 – Prevention and Care of Athletic Injuries (formerly PHED 3371)**

(3 credits – TG) 3 hours lecture, 2 hours lab

This course provides a study of the responsibilities of physical educators toward the basic principles of athletic therapy and their role in the prevention and treatment (first aid) of athletic injuries.

*Prerequisite: Physical Education 1001 with a minimum grade of C-.*

### **PHED 3150 – Practicum II in Sport, Recreation, and Physical Activity**

9 credits (450 hours of practicum)

This practicum experience provides students with a further opportunity to apply the Sport and Recreation Business and Entrepreneurship theories and skills studied during the previous semesters and to continue to build upon their experience from PHED 1050. It is expected that students will diversify their experience relative to the past experience. Students will be required to submit a practicum plan to the Sport and Recreation Business and Entrepreneurship practicum coordinator prior to embarking on the practicum placement. Goals and strategies will be reviewed by a Faculty Advisor prior to the work-term. Students will be accepted into the practicum upon completion of the course pre-requisites and/or consent of the department chair.

*Prerequisite: Physical Education 1050.*

### **PHED 3301 – Musculoskeletal Assessment – Spinal**

(3 credits – TG) 2 hours lecture, 2 hour tutorial

This course involves the study of athletic injuries that fall into the category of complex injuries, repetitive trauma; injuries common to athletics will be approached from the perspective of differential diagnosis. Assessment techniques utilized by Certified Athletic Therapists will be taught. Practical experience will emphasize the assessment of injured athletes as well as the utilization of appropriate intervention skills. Specific joints to be covered are: Cervical, Thoracic, Lumbar, Pelvis and Hip.

*Prerequisite: Admission to the Advanced Certificate in Athletic Therapy.*

### **PHED 3303 – Musculoskeletal Assessment – Peripheral**

(3 credits – TG) 2 hours lecture, 2 hour tutorial

This course involves the study of athletic injuries that fall into the category of complex injuries, repetitive trauma; injuries common to athletics will be approached from the perspective of differential diagnosis. Assessment techniques utilized by Certified Athletic Therapists will be taught. Practical experience will emphasize the assessment of injured athletes as well as the utilization of appropriate intervention skills. This course will deal with the following joints: finger, wrist, hand, forearm, elbow, shoulder, knee, lower leg and foot.

*Prerequisite: Admission to the Advanced Certificate in Athletic Therapy.*

### **PHED 3304 – Advanced Strength Training (formerly PHED 1245)**

(3 credits – TG) 3 hours lecture

This is an advanced course in the theory and practice of strength training. Emphasis will be on the utilization of free weight equipment for participants requiring additional or advanced strength training.

*Prerequisite: Physical Education 2304.*

### **PHED 3305 – Therapeutic Modalities in Athletic Therapy**

(3 credits – TG) 2 hours lecture, 2 hour tutorial

This course will provide theoretical and practical in-depth knowledge of the safe and effective use of clinical modalities. Some of the topics include a review of the injury process, the transmission of energy, use of thermal agents, use of electrical agents and use of mechanical agents. These modalities are those typically used by Certified Athletic Therapists in Canada.

*Prerequisite: Admission to the Advanced Certificate in Athletic Therapy.*

### **PHED 3307 – Rehabilitation Techniques in Athletic Therapy**

(3 credits – TG) 2 hours lecture, 2 hour tutorial

This course will provide theoretical and practical in-depth knowledge of the safe and effective use of rehabilitation to enhance the recovery of injury. The techniques are those typically used by Certified Athletic Therapists in Canada.

*Prerequisite: Admission to the Advanced Certificate in Athletic Therapy.*

### **PHED 3311 – Advanced Rehabilitation Techniques in Athletic Therapy**

(3 credits – TG) 2 hours lecture, 2 hour tutorial

This course will build on the concepts learned in Physical Education 3301, 3303, 3305 and 3307. This course will integrate the assessment and rehabilitation of the body as a whole, viewing assessment and rehabilitation as a kinetic chain. Rehabilitation will be studied from the acute stage through to the chronic stages of an injury. This course will address the typical situations a Certified Athletic Therapist in Canada is confronted within a clinical setting.

*Prerequisites: Physical Education 3301, 3303, and 3307.*

### **PHED 3313 – Issues in Sports Medicine**

(3 credits – TG) 3 hours lecture for 16 weeks or 6 hours lecture for 7 weeks

This course will include the study and investigation of topics of sports medicine that have a direct affect on Certified Athletic Therapists in Canada. Some of the topics include the role of the sports medicine physician, the role of pathology in sports medicine, diagnostic tools available, the role of athletic therapists and the role of other paramedical professionals in the care of athletes. Other topics will arise within the context of the course work.

### **PHED 3315 – Practical Clinical Management and Administration in Athletic Therapy**

(3 credits – TG) 3 hours lecture for 13 weeks or 6 hours lecture for 7 weeks

This course will cover the theoretical and practical skills needed to operate an athletic therapy clinic or practice privately, with an athletic team or in conjunction with other paramedical professionals. Topics such as business plan writing, budgetary issues, marketing issues, personnel hiring and evaluation, physical planning of a clinic and operating, licensing, and codes will be covered.

### **PHED 3350 – Field Practicum I**

(3 credits – TG) 2 hours **lecture**, 175 hours practicum

This is a formal work experience with an approved agency. Participants will be involved in integration seminars, and will be required to participate in the specified hours of practicum and complete the assignments as required.

*Co-requisites: Physical Education 3301 and 3303.*

### **PHED 3352 – Field Practicum II**

(3 credits – TG) 2 hours **lecture**, 175 hours practicum

This is a formal work experience with an approved agency. Participants will be involved in integration seminars, and will be required to participate in the specified hours of practicum and complete the assignments as required. Typical assignments are log book recordings of activities and case study analysis of situations specific to fieldwork of a trainer or Certified Athletic Therapist in Canada. This course will allow students to continue with an agency for seasonal sports that coincide with the academic year such as hockey, basketball, volleyball or badminton. This course will also allow the student to join another agency for sports that only last one semester. An example of such a sport is indoor soccer.

*Prerequisites: Physical Education 3301, 3303 and 3350.*

**Note:** This course will be delivered in a block placement format. This course is limited to students enrolled in the Advanced Certificate in Athletic Therapy who have successfully completed or are concurrently enrolled in the core course requirements.



### PHYS 3103 – Introduction to Biophysics

(3 credits) 3 hours lecture; 1.5 hour tutorial

The aim of this course is to apply concepts and laws of physics to the study and understanding of living systems. As shown in the course outline, the topics that will be covered are: biomechanics of bone and muscle, hemodynamics, diffusion and osmosis, physics of respiration and cough, heat regulation mechanisms, electro-reception and conduction of impulses along the nervous system, magnetic sense, and the physics of vision and hearing.

*Prerequisites:* Mathematics 1200, Physics 1202 or 1212 and Biology 1202.

**Note:** Credit for both Biology 3103 and Physics 3103 will not be allowed.

### PHYS 3401 – Solid State

(3 credits) 3 hours lecture, 4 hours lab

This course is a study of the models and concepts underlying the field of inorganic chemistry, and the physics of chemical species in the solid state. Topics covered will include coordination complexes. The laboratory component involves synthesis and analysis of inorganic compounds, investigation of semiconductor materials, and research on nanotechnology. Credit for both Chemistry 3401 and Physics 3401 will not be permitted.

*Prerequisites:* Chemistry 1201, Chemistry 1202 and Physics 1202, all with a grade of C- or higher.

**NOTE:** Credit for both Chemistry 3401 and Physics 3401 will not be allowed.

### PHYS 3601 – Thermodynamics

(3 credits) 3 hours lecture, 3 hours lab

This is an introduction to thermodynamics from a modern macroscopic perspective. Lecture topics will include the laws of thermodynamics, Maxwell relations, internal energy, enthalpy, entropy, Helmholtz and Gibbs free energies, chemical potential and equilibrium, as well as a detailed study of the Kinetic Theory of Gases for mono- and polyatomic gases, both ideal and real. The laboratory component will support the lecture material through theoretical modeling and basic thermodynamic and kinetic experiments.

*Prerequisites:* Chemistry 1201, Chemistry 1202, Physics 1202 or 1212 and Mathematics 1202, all with a grade of C- or higher or department consent.

**Note:** Credit for both Chemistry 3601 and Physics 3601 will not be allowed.

### PHYS 3602 – Elementary Quantum Mechanics

(3 credits) 3 hours lecture, 3 hours lab

This is an introductory course in quantum mechanics. The basic theory and formalisms of quantum mechanics will be developed, followed by its application to a variety of model systems from atomic and molecular physics and chemistry; including a discussion of electron spin with reference to both single- and multielectron atoms. The lab will consist of classic experiments in quantum mechanics and spectroscopy.

*Prerequisites:* Chemistry 1201, Chemistry 1202, Mathematics 1202, Mathematics 1203, and Physics 2201 with grades of C- or higher, or department consent.

*Recommended Preparation:* Mathematics 2207.

**Note:** Credit for both Chemistry 3602 and Physics 3602 will not be allowed.

### PHYS 3199, 4199 – Directed Readings

See **Directed Readings** which are listed alphabetically in this section of the calendar.

## POLICY STUDIES (POST)

### POST 2201 – Introduction to Public Policy (formerly APST 3301)

(3 credits – TG) 3 hours lecture

This course is designed to advance the degree student's knowledge of public (government) policy development, initiation, and implementation. This course introduces students to various theories, models and approaches utilized by scholars and professional evaluators in the field of policy studies. This course also prepares students for the intellectual demands and skill-based practicalities needed in their future careers in the policy field.

*Prerequisites:* Political Science 1101 and 2231, or permission from the department.

### POST 2209 – Methodology and Statistics (formerly APST 2209)

(3 credits – TG) 4 hours lecture

Credible and competent policy decisions – regardless of whether they originate in the private, public, or not-for-profit sectors of an economy – are based on statistical and strategic thinking. In this course statistical thinking abilities (identifying appropriate statistical techniques, computing required statistics, and interpreting the results) are balanced with well-developed strategic thinking skills (game theory and rational choice). Within this general framework, students will study the theoretical foundations of methodology and statistics and learn the applied techniques, though the use of Microsoft Excel and other computer software, employed by policymakers in all sectors of the economy.

### POST 3030 – Internship

(15 Credits)

This course will foster an understanding of the culture and professional practices within administrative fields, and enhance understanding of public policy development. Students will be involved in a paid work experience in a government agency, a company, a research institute, or a non-governmental organization. The internship provides an opportunity to refine and hone the academic knowledge and analytical skills acquired in previous Policy Studies courses and apply them to an actual workplace/policy environment.

*Prerequisites:* Completion of a minimum of 20 required courses contained in the Policy Studies degree program, including Policy Studies 2201, 2209, 3303, 3305, and Economics 2213, 2244, Political Science 2231, 2259, 2287 and English 2263 with a minimum grade of C or higher. Attendance at all Career Services professional development workshops required to prepare students for their Internship.

### POST 3303 – Federalism (formerly APST 3303)

(3 credits – TG) 3 hours lecture

This course is designed for the Policy Studies degree student, but is of interest to anyone who wishes to advance their understanding of key constitutional matters, government-level decision making, and policy development. This course will focus primarily on the Canadian federation. However, it will also explore other federal systems in a comparative setting, particularly the United States and Mexico, our continental partners in trade. With this course, students will acquire advanced knowledge of an essential aspect of Canadian constitutional, economic, and political life.

*Prerequisites:* Economics 1103, Political Science 1101 and 2231.

### POST 3305 – Interest Groups and Group Behaviour (formerly APST 3305)

(3 credits – TG) 3 hours lecture

This course is a third year core requirement for students in the Policy Studies degree program. The course develops practical understanding and a working knowledge of the role of interest groups and their influence in policy formation, policy implementation and policy administration in a complex federal system with overlapping jurisdictions.

*Prerequisites:* Policy Studies 2201 and 3303.

### POST 4421 – International Economic Policy (formerly APST 4421)

(3 credits – TG) 3 hours lecture, 1 hour tutorial

This is a senior course normally taken in the sixth semester of the Policy Studies degree program. Students will acquire basic competency in accessing, processing, and interpreting data relevant to international economics issues. The focus is on the theory and policy of international trade, monetary, and financial issues. Topics include restrictive trade practices and tariff policy, exchange rate regimes and their effects on prices and output, the political economy relating to the laws, the structure and actors influencing Canadian trade and monetary policy on the international flows of production, and capital/financial investment. Upon completion, students will have algebraic, graphical and data manipulation skills to evaluate, analyze and compose thoughtful written proposals on issues related to international economic policy.

*Prerequisites:* Policy Studies 2201, and 2209, Economics 2213, and Political Science 2287.



### **POST 4431 – Managing and Implementing Public Policy (formerly APST 4431)**

(3 credits – TG) 3 hours lecture

This course is a senior-year core requirement for students in the Bachelor of Policy Studies. The course develops practical understanding and a working knowledge of the instruments and techniques of policy implementation. Topics include, understanding public policy formation, defining government's role, choosing policy instruments for policy outcomes, designing an implementation process and managing the implementation process.

*Prerequisites: Policy Studies 2201, 2209 and 3303.*

### **POST 4443 – Survey of Public and Private Law Principles (formerly APST 4443)**

(3 credits – TG) 3 hours lecture

This is a senior survey designed to familiarize Bachelor of Policy Studies students with the principles of Canadian law in general and the particular distinctions between public and private forms of law.

*Prerequisites: Policy Studies 2201, 3303 and Political Science 1101 and 2231.*

### **POST 5010 – Selected Topics in Policy Studies (formerly APST 4401)**

(3 credits) 3 hours lecture

This capstone course is designed for the student enrolled in the final academic year of the Policy Studies degree program. The course relates theoretical frameworks to real-world policy issues which are both current and topical. It will address different topics in a seminar-style format, with discussion being led by faculty with particular expertise in the policy areas under examination.

*Prerequisites: Policy Studies 2201, 2209, 3303, and 3305.*

### **POST 5020 – Integrative Professional Practice (formerly APST 4433)**

(3 credits) 3 hours lecture

This capstone course is a senior-year core requirement for students in the Policy Studies degree program. The course develops a practical understanding and a working knowledge of the organisational relationships and professional conduct in institutions and agencies that formulate and implement public policy. The emphasis is on strengthening competency and familiarity with accepted professional conduct, ethical and legal environments and intra-group and inter-institutional techniques for effective problem solving and communication. Topics include personal responsibilities, civil rights and labour law, Conflict of Interest Guidelines, collaborative partnerships, motivation and performance, and public communication.

*Prerequisites: Policy Studies 2201 and 4431.*

### **POST 5120 – Honours Thesis**

(3 credits)

In this course, students complete an honours thesis between 40 and 60 pages. The thesis is original research under the direction of an academic supervisor and will culminate in a formal paper. The submission of the written thesis is to be followed by an oral defence. The thesis is to be completed in the winter semester of the student's final year.

*Co-requisite: Policy Studies 5020.*

**Note:** Open only to students admitted to and enrolled in the Policy Studies Honours program.

## **POLITICAL SCIENCE (PLSC)**

### **PLSC 1101 – Introduction to Government and Politics (formerly PLSC 2201)**

(3 credits – TG) 3 hours lecture

**This course provides** a systematic introduction to the basic concepts and institutions of the process of politics.



### **PLSC 1123 – Canadian Political Issues (formerly PLSC 2223)**

(3 credits – TG) 3 hours lecture

This course explores selected themes in Canadian politics, such as federalism and regionalism, the Charter of Rights, issues of diversity and citizenship, and how we are governed.



### **PLSC 1183 – Issues and Trends in World Politics (formerly PLSC 2283)**

(3 credits – TG) 3 hours lecture

Major trends and issues in world politics, such as international tensions, migration, ethnic conflicts, human rights and sustainable development.



### **PLSC 1185 – Model United Nations (formerly PLSC 2285)**

(1 credit) 1 hour lecture

This course allows students to participate in an inter-collegiate Model UN. Over the course of a weekend, a simulated Model UN involving students from numerous other colleges and universities will take place. Prior to the conference, students will work in groups (delegations) to research both their country and selected foreign policy issues (Terrorism, drug trade, disarmament, UN Reform, etc.) At the conference, students will present foreign policy speeches, draft resolutions, and negotiate (caucus) with other delegations to try to pass or defeat resolutions.

*Pre or Co-requisite: Political Science 1183.*

**Note:** Students may be responsible for personal travel and subsistence costs associated with enrolment in Political Science 1185. If these costs are a concern to you, check with your instructor prior to registration.

### **PLSC 2210 – History of Political Thought I (formerly PLSC 3310)**

(3 credits – TG) 3 hours lecture

This course focuses on the quest for the Good Regime in the West. The criteria for the Good Regime will be enunciated and applied to the Classical (Platonic, Aristotelian and Roman) and the Medieval (Augustinian and Thomistic) conception of the Good Regime.

*Recommended Preparation: Political Science 1101 or Philosophy 1149*

**Note:** Political Science 2210/2211 = U of C POLI 310.

### **PLSC 2211 – History of Political Thought II (formerly PLSC 3311)**

(3 credits – TG) 3 hours lecture

This course is a continuation of Political Science 2210. It focuses on the Machiavellian, Liberal, Marxian and Utopian conceptions of the Good Regime.

*Recommended Preparation: Political Science 1101 or Philosophy 1149*

**Note:** Political Science 2210/2211 = U of C POLI 310.

### **PLSC 2227 – Women and Politics (formerly PLSC 3327)**

(3 credits – TG) 3 hours lecture

Examination of political participation by women, women's issues and public policy and feminist political theories.



### **PLSC 2229 – Alberta and Provincial Politics (formerly PLSC 3329)**

(3 credits – TG) 3 hours lecture

Source of conflict and consensus; policy making; inter-governmental affairs; and the management of the Provincial Political Economy.

*Prerequisite: Any junior (1100-level) Political Science course.*



### **PLSC 2231 – The Canadian State (formerly PLSC 3321)**

(3 credits – TG) 3 hours lecture

The formal institutions of the Canadian state, including Parliament, the executive, federalism, the Constitution, and the courts. Emphasis on the way that political processes are shaped by these and other institutions.

*Prerequisite: Political Science 1101 or 1123.*



### **PLSC 2237 – Perspectives on Political Economy (formerly PLSC 3335)**

(3 credits – TG) 3 hours lecture

This course is an introduction to Political Economy concepts and perspectives. These are then applied to the analysis of interconnected political and economic issues, both historic and current. It will utilize a case approach with a Canadian emphasis.

*Prerequisites: Economics 1101 or 1103, and Political Science 1101 or 1123.*

### **PLSC 2243 – Law, Politics and the Judicial Process (formerly PLSC 3343)**

(6 credits – TG) 3 hours lecture, 1 hour tutorial, 2 hours lab

The judicial system as a branch of government and as a part of the political process. Focus on the Canadian judiciary within a comparative context.

*Prerequisite: Any one of Political Science 1101, 1123 or Applied Justice Studies 2201, 2209, 2211, 2213 or 2215.*



### **PLSC 2259 – Comparative Government and Politics (formerly PLSC 3359)**

(3 credits – TG) 3 hours lecture

An introduction to the analytical concepts of the comparative approach to political analysis.

*Prerequisite: Political Science 1101.*



### **PLSC 2287 – Introduction to International Relations (formerly PLSC 3381)**

(3 credits – TG) 3 hours lecture

The structures and processes of international relations and foreign policy.

*Prerequisite: Political Science 1101 or 1183.*



### **PLSC 2298 – Politics and the Media (formerly PLSC 3398)**

(3 credits – TG) 3 hours lecture

This course will consider how politics is portrayed in the coverage given it by the mass media, with special emphasis on the cognitive psychology involved in framing issues and the coverage of political events by television and the new media of the Internet. Canadian and American experience will be stressed.



### **PLSC 3351 – American Government and Politics**

(3 credits) 3 hours lecture

This course introduces students to the key institutions and processes of the United States government. Particular emphasis will be placed upon the building of the American state, the constitution, federalism, the branches of government and separation of powers, and the influence of culture and the media on the political process.

*Prerequisite: Political Science 2259.*

### **PLSC 3411 – Modern Political Thought**

(3 credits – TG) 3 hours lecture

PLSC 3411 continues the study of recurrent themes in political thought as were introduced in PLSC 2210 and 2211, particularly on the evolution of modern ideas about human nature, political institutions, political behaviour, and political obligation. Areas covered include the various forms of liberalism, conservatism, postmodernism, communitarianism, feminism, and socialism.

*Recommended Preparation: Political Science 2210 or 2211 or Philosophy 2253*



### **PLSC 3485 – The Politics of the International Economic Order**

(3 credits – TG) 3 hours lecture

Analysis of the political management of international economic relations. Topics include the politics of trade and money relations, energy, multinational corporations and the New International Economic Order.

*Prerequisite: Political Science 2287.*



### **PLSC 3489 – Foreign Policies of the Major Powers**

(3 credits – TG) 3 hours lecture

This course provides an analysis of the foreign policies of selected major powers like the United States, Russia, China, the United Kingdom, and Canada. Topics include: understanding foreign politics, theories of foreign policy, determinance of foreign policy, balances of power and decision-making models.

*Prerequisite: Political Science 2287.*



### **PLSC 3199, 4199 – Directed Readings**

See **Directed Readings** which are listed alphabetically in this section of the calendar.

## **PSYCHOLOGY (PSYC)**

### **PSYC 1103 – Introduction to Psychology I: Natural Science (formerly PSYC 1102)**

(3 credits – TG) 3 hours lecture

This course introduces the history, methods, and current state of knowledge in selected areas of modern psychological research. A range of content areas will be surveyed, including biological psychology, sensation and perception, learning, memory, cognition, and consciousness.

Note: Psychology 1103 and 1104 are required for BA Psychology majors. Non-majors may instead take Psychology 1105 and use it as a prerequisite for most 2000-level Psychology courses. Students who complete 1105 but who subsequently become Psychology Majors will be required to complete Psychology 1103 in addition to 1105. Only one of Psychology 1105 and 1104 can be used to satisfy graduation requirements for the BA (Psychology) degree. Credit will be allowed for only one of Psychology 1102 and Psychology 1103.



### **PSYC 1104 – Introduction to Psychology II: Social Science (formerly PSYC 1101)**

(3 credits – TG) 3 hours lecture

This course provides a survey of the current psychological knowledge in a range of topics that will include developmental psychology, personality, psychological disorders, therapy, stress, social psychology, assessment, motivation and emotion.

*Prerequisite: Psychology 1103.*



Note: Psychology 1103 and 1104 are required for BA Psychology majors. Non-majors may instead take Psychology 1105 and use it as a prerequisite for most 2000-level Psychology courses. Students who complete 1105 but who subsequently become Psychology Majors will be required to complete Psychology 1103 in addition to 1105. Only one of Psychology 1105 and 1104 can be used to satisfy graduation requirements for the BA (Psychology) degree. Credit will be allowed for only one of Psychology 1101 and Psychology 1104.

### **PSYC 1105 – Introduction to Psychology (formerly PSYC 2205)**

(3 credits - TG) 3 hours lecture

This course introduces the history, methods, and current state of knowledge in modern psychological research. A wide range of content areas will be surveyed, including biological psychology, learning, memory, perception, personality, psychological disorders, therapy, stress, social psychology, psychological development in children, and the ethics of research. Additional topics may be included at the discretion of the instructor.

**Note:** Psychology 1105 is intended for non-Psychology majors only and can be used as a prerequisite for most 2000-level Psychology courses. Psychology 1103 and 1104 are required for BA Psychology majors. Students who complete 1105 but who subsequently become Psychology Majors will be required to complete Psychology 1103 in addition to 1105. Only one of Psychology 1105 and 1104 can be used to satisfy graduation requirements for the BA (Psychology) degree.

### **PSYC 1121 – Interpersonal Communications I (formerly PSYC 1221)**

(3 credits – TG) 3 hours lecture

This course provides an opportunity to explore some important aspects of interpersonal communication, to develop a greater understanding of interpersonal effectiveness, and on the basis of this understanding to practice behaviours, that increase interpersonal effectiveness.

### **PSYC 2210 – Statistical Methods for Psychology I**

(3 credits – TG) 2 hours lecture, 1 hour tutorial

This course introduces basic statistical techniques as applied to psychological research. Tabulation, graphic representation, univariate descriptive techniques, correlation and linear regression will be examined. The course will also cover basic inferential statistics, including normal curve and t tests. Students will learn statistical software and will use the software to perform calculations.

*Prerequisite:* Mathematics 30 (pure or applied) or equivalent;

*Prerequisite or Co-requisite:* Psychology 1104 or Psychology 1105.

### **PSYC 2211 – Statistical Methods for Psychology II**

(3 credits – TG) 2 hours lecture, 1 hour tutorial

This course introduces students to more advanced statistical techniques than those covered in Psychology 2210 (Statistical Methods for Psychology I). Statistical processes such as multiple regression, one-way and two-way analysis of variance including post-hoc comparisons, and non-parametric hypothesis tests are included. Students will use statistical software to perform data analyses.

*Prerequisite:* Psychology 2210

**Note:** Credit will be allowed for only one of Psychology 2212 and Psychology 2211.

### **PSYC 2213 – Research Methods I (formerly PSYC 3313)**

(3 credits – TG) 3 hours lecture, 1 hour tutorial

This course is an introduction to basic research methods in psychology. Students will examine both the theory and application of a variety of research techniques including observation, surveys/questionnaires, and experiments. The course provides students with practice in defining and understanding key aspects of these techniques and applying these techniques to address a variety of psychological research questions.

*Prerequisite:* Psychology 2212 or both Psychology 2210 and 2211.

**Note:** Students who were admitted into the BA Psychology program prior to Fall 2011 and who have successfully completed Psychology 2212 are not required to complete Psychology 2211 either as a prerequisite for Psychology 2213 or as a BA Psychology degree requirement but are still required to complete the minimum number of Psychology courses.



### **PSYC 2219 – Psychology of Death and Dying (formerly PSYC 3319)**

(3 credits – TG) 3 hours lecture

The course examines social and psychological aspects of death and dying, such as: historical and cross cultural variability in death attitudes, spirituality, the dying process, ethical issues such as euthanasia and suicide, bereavement, burial practices and death perceptions across the life-span.

*Prerequisite:* Psychology 1104 or Psychology 1105, or consent of the department.

### **PSYC 2223 – Interpersonal Communications II: Teamwork, Diversity, and Conflict Resolution**

(3 credits – TG) 3 hours lecture

Students will explore teamwork, diversity, and conflict resolution as three key aspects of work communication. Students will be assisted in developing conceptual understandings of these topics through illustrative case studies which consider a variety of work situations, through role plays, and through selected readings. Facilitated teamwork in seminars, in projects, and in presentations, as well as journal activities, will assist students in making their learning relevant to their current and anticipated work settings.

*Recommended Preparation:* Psychology 1121.

### **PSYC 2235 – Life-Span Development (formerly PSYC 3325)**

(3 credits – TG) 3 hours lecture

This course provides an overview of the major developmental stages from birth to death. Development will be studied from a variety of theoretical perspectives and the application of theory to practical situations will be examined.

*Prerequisite:* Psychology 1104 or 1105.

### **PSYC 2245 – Social Psychology (formerly PSYC 3345)**

(3 credits – TG) 3 hours lecture

Students will examine social psychological approaches to understanding social influence, social perception and cognition, attitudes and group dynamics.

*Prerequisite:* Psychology 1104 or 1105.

### **PSYC 2265 – Cognitive Psychology (formerly PSYC 3365)**

(3 credits – TG) 3 hours lecture

This course provides a survey of the major areas of research and theory in cognitive psychology. Topics may include the origins of cognitive psychology in traditional learning theories, as well as contemporary views of neurocognition, attention, perception, language, memory, problem solving, creativity and intelligence.

*Prerequisite:* Psychology 1104 or 1105.

### **PSYC 2275 – Brain and Behaviour (formerly PSYC 3375)**

(3 credits – TG) 3 hours lecture

This course encourages students to adopt a biological perspective towards psychological issues. From an overview of brain anatomy and neuron physiology, it will explore topics such as sensory processing, brain damage and recovery hormones and behaviour, learning and memory, emotions and stress.

*Prerequisite:* Psychology 1104 or 1105.





**PSYC 3367 – Human Memory****(3 credits – TG) 3 hours lecture**

This course provides an overview of the history, current theories, and research findings relating to human learning. Processes involved in encoding, storing and retrieving information from memory stores will be studied by examining such topics as implicit and explicit memory, autobiographical memory, and constructive processes.

*Prerequisite:* Psychology 2213 and 2265.

**PSYC 3369 – Sensation and Perception****(3 credits – TG) 3 hours lecture**

The course will provide students with an understanding of how the brain receives and processes information about the world around us. This will include the basic anatomy and physiology of the primary sensory systems, the scientific methods used to measure sensory function, and how information is represented in neural processing. The course will also look at traditional and cutting edge approaches to object perception, theories of depth perception, color perception, pattern recognition, motion, attention and at the processes of bottom-up and top-down processing and how they interact.

*Prerequisite:* Psychology 1104 or Psychology 1105.

**PSYC 4401 – Social Cognition****(3 credits – TG) 3 hours lecture**

This seminar course examines theories and research results pertaining to the structures (self, person, role, and event schemas) and processes (expectations, attributions, and inferences) underlying self and person perception.

*Prerequisite:* Psychology 2245.

**PSYC 4403 – Advanced Topics in Brain and Behaviour****(3 credits – TG) 3 hours lecture**

A basic review of brain anatomy and physiology will be followed by an exploration of topics such as neuroplasticity, neuroendocrinology and psychoneuroimmunology. These topics will be examined in relation to abnormal neural and behavioural function in disorders such as depression, multiple sclerosis and Parkinson's disease.

*Prerequisite:* Psychology 2213 and 3357.

**PSYC 4404 – The Self****(3 credits) 3 hours lecture**

This course presents research results on the self within social-experimental, comparative, developmental, and neuroscience perspectives. The nature and function of the self will be examined. Topics will include: self-knowledge, self-motivation, self-esteem, self-regulation, self-recognition, Theory-of-Mind, measurement issues, and the influence of culture on views of the self.

*Prerequisites:* Psychology 2211 and 4401

**PSYC 4405 – Psychometrics****(3 credits) 2 hours lecture, 1 hour tutorial**

The course examines the theory and practice of psychological testing. Topics include theories underlying psychological testing, test development and design, item analysis, reliability, validity, bias, interpretation of test scores, and common psychological tests. The course also provides students with hands-on experience in the design and evaluation of psychological tests.

*Prerequisite:* Psychology 2213 or consent of the department.

**PSYC 4406 – Introduction to Counselling and Psychotherapy****(3 credits – TG) 3 hours lecture**

This course critically examines the basic principles and therapeutic processes that characterize mainstream counselling/psychotherapy approaches, such as those based on the Psychodynamic, Behavioural and Cognitive-Behavioural, Humanistic, and Contextual/Systemic perspectives.

*Prerequisites:* Psychology 2213, 2285, and one of: Psychology 2275, 3305, 3307, 3327, 3346, 3351, 3353, 3355, 3367, 3369

**PSYC 4412 – Advanced Statistical Methods for Psychology****(3 credits – TG) 2 hours lecture, 2 hours tutorial**

This course reviews material from prior 2200-level statistics courses and introduces more advanced analyses. Students will learn to screen data and to conduct analyses including multi-factor ANOVA, planned comparisons, advanced regression, power and nonparametric tests. Brief conceptual introductions to multivariate techniques (e.g. factor analysis, mediation analysis, MANOVA/MANCOVA) will be provided.

*Prerequisites:* Psychology 2211 or 2212 with a minimum grade of B, and Psychology 2213 with a minimum grade of B.

**PSYC 4413 – Research Methods II (formerly PSYC 3323)****(3 credits – TG) 2 hours lecture, 2 hours tutorial**

This course extends research concepts, practices, and designs introduced in Psychology 2213 and 4412. Students will gain more in-depth hands-on experience with core elements of the research process while critiquing, designing and conducting small research projects. In addition, specialized techniques in social science research will be introduced. This course lays a foundation for honours thesis research.

*Prerequisites:* Psychology 2213 with a minimum grade of B and Psychology 4412.

**PSYC 4451 – Atypical Child Development****(3 credits – TG) 3 hours lecture**

Psychology 4451 provides a critical examination of issues pertaining to developmental psychopathology during childhood and adolescence with an emphasis on the characteristics of the disorders of development, their determinants, outcomes and interventions. Contemporary research and theories as well as current approaches to intervention and prevention will be emphasized.

*Prerequisites:* Psychology 2213, 2285 and 3351.

**PSYC 4455 – Atypical Adolescent Development****(3 credits – TG) 3 hours lecture**

Course seminars will examine the foundations and pathways, normative and psychopathological, of adolescent development. Small-scale hypothesis-driven studies and multilevel research designs are utilized to demonstrate the complexity of the study of adolescent development. Advances in theory and research pertaining to the biological, cognitive, emotional, and social development of adolescents, including emerging adulthood, will be emphasized.

*Prerequisite:* Psychology 3355.

**PSYC 4465 – Advanced Topics In Cognition****(3 credits – TG) 3 hours lecture**

This course examines current topics in cognitive psychology while focusing on theories and research findings. The topics may vary from year to year and may include research methods, perception, attention, memory, knowledge, problem solving, decision making, and cognitive development and aging.

*Prerequisites:* Psychology 2213 and 2265.

**PSYC 4475 – The Development of Brain and Behaviour****(3 credits) 3 hours lecture**

This course will involve an in-depth examination of the development of the brain and how it controls behaviour. This will include discussion of how nutrition, drugs, and stress affect brain development in children and contribute to disorders such as fetal alcohol syndrome, autism and attention deficit hyperactivity syndrome.

*Prerequisites:* Psychology 3357 and 2213.

**PSYC 4476 – Research Methods in Brain and Behaviour****(3 credits) 1 hour lecture, 2 hours lab**

This course will provide practice in developing experimental protocols, data analysis, and presentation of experimental results in the area of biopsychology through both laboratory exercises and lectures.

*Prerequisites:* Psychology 2275 or 3357, and 2213

### **PSYC 4483 – Advanced Topics in Social Psychology**

(3 credits) 3 hours seminar

This course explores select topics in social psychology. Students will focus on these topics in depth by critically evaluating theory and research in the area. Sample topics include group dynamics, leadership, conflict resolution, nonverbal and deceptive communication, interpersonal relationships, altruism and aggression.

*Prerequisites: Psychology 2245 and 2213.*

### **PSYC 4485 – Advanced Topics in the Psychology of Abnormal Behaviour**

(3 credits – TG) 3 hours lecture

This course surveys current controversies in clinical psychology related to legal and ethical issues, research, and the diagnosis and treatment of psychological disorders.

*Prerequisites: Psychology 2213, 2285, and one of: Psychology 2275, 3305, 3307, 3327, 3346, 3351, 3353, 3355, 3367, 3369.*

### **PSYC 4900 – Advanced Topics in Infancy and Childhood: Infant Cognition**

(3 Credits) 3 hours lecture

This course examines the theoretical and empirical nature of cognitive development in infancy. Topics include infant research methods, sensation, perception, intelligence, concepts and categories, memory, and early communicative development.

*Prerequisite: Psychology 3351*

### **PSYC 4901 – Advanced Topics in Infancy and Childhood: Child Cognitive Development**

(3 Credits) 3 hours lecture

This course examines theory and research in cognitive development throughout childhood. Topics include research methods with children, perception, memory, language, problem solving, academic skills, intelligence, and social perception.

*Prerequisite: Psychology 3351*

### **PSYC 5110 – Honours Seminar I**

(3 credits) 3 hours seminar

Psychology 5110 is a weekly seminar course for students in the honours stream. The seminar will provide students with a variety of practical, technical, and intellectual skills that are central to scientific research and to the development of their honours thesis. Emphasis will be placed on students' ability to think critically and independently.

*Prerequisite: Psychology 4413.*

**Note:** This course is restricted to students in the final year of their program who are officially accepted and enrolled in the Psychology Honours Program.

### **PSYC 5120 – Honours Seminar II**

(3 credits) 3 hours seminar

Psychology 5120 is a weekly seminar course for students in the Honours stream. The seminar will provide students with the opportunity to conduct research in their area of interest, gather data, analyze and present findings, and develop a written thesis. Some projects may be non-empirical or theoretical, in which case certain steps (e.g., gathering data) may be modified accordingly. The honours thesis project is conducted under the direct guidance of a faculty supervisor from the Department of Psychology.

*Prerequisites: Psychology 4412 and Psychology 5110.*

**Note:** this course is restricted to students in the final year of their program who are officially accepted and enrolled in the Psychology Honours Program.

### **PSYC 3199, 4199 – Directed readings**

See **Directed Readings** which are listed alphabetically in this section of the calendar.

## **RECREATION STUDIES (RECR)**

### **RECR 1203 – Recreation and Community Development**

(3 credits) 3 hours lecture

This course examines the model of community development and how it is used to empower individuals and communities. The recreation practitioner as a facilitator of community action will be the focus.

### **RECR 1207 – Commercial Recreation**

(3 credits – TG) 3 hours lecture

This course is an investigation of the many providers of commercial recreation services.

### **RECR 1247 – Theory and Practice in Leadership**

(3 credits – TG) 3 hours lecture

This course studies leadership theory and introduces leadership skills that apply the theory in personal, community and work settings. Students are introduced to leadership skills inventories that allow them to analyze and evaluate their leadership skills. Students will reflect on their leadership experiences and develop strategies to plan personal learning opportunities to maximize their leadership skills.

### **RECR 2217 – Recreation and Sport Tourism (formerly RECR 1217)**

(3 credits – TG) 3 hours lecture

This course is an investigation of principles and practices of marketing in sport and recreation studies.

## **RELIGIOUS STUDIES (RELS)**

### **RELS 1101 – World Religions: Western (formerly RELS 2201)**

(3 credits – TG) 4 hours lecture

Introduction to Western religions including; Judaism, Christianity and Islam.



### **RELS 1103 – World Religions: Eastern (formerly RELS 2203)**

(3 credits – TG) 4 hours lecture

Introduction to Eastern religions such as Jainism, Hinduism, Buddhism, Confucianism and Taoism.



### **RELS 1105 – The Nature of Religion (formerly RELS 2205)**

(3 credits – TG) 4 hours lecture

An introduction to the study of religion which relates religious traditions to contemporary thought and culture.



### **RELS 2207 – The Religion of the Hebrew Bible/Old Testament (formerly RELS 3301)**

(3 credits – TG) 3 hours lecture

An introduction to the critical study and reading of the books of the Hebrew Bible/Old Testament in English translation. The course focuses on the religious beliefs and institutions of ancient Israel.

### **RELS 2208 – Religion and Popular Culture**

(3 credits – TG) 3 hours lecture

This course examines religious beliefs, practices, institutions, etc as expressed in works of popular culture. The course may focus on religion in a specific type of media (e.g., film, TV, literature, art) or on a religious theme (e.g., apocalypticism, the environment).

### **SLGY 2265 – Social Stratification and Inequality (formerly SLGY 3365)**

(3 credits – TG) 3 hours lecture

This course introduces theories of stratification and inequality and explores different types of social stratification systems. There is an emphasis on the forces that contribute to the maintenance and disruption of social inequality. The focus is primarily on social inequality in Canada but cross cultural and global inequality will also be considered.

*Prerequisite:* Sociology 1101.



### **SLGY 2271 – Sociology of Families (formerly SLGY 3371)**

(3 credits – TG) 3 hours lecture

This course offers a sociological investigation into families. The focus will be on theories of family and the social history of families. Some specific topics covered include the structure and function of families, family systems, family life stages (dating, marriage, parenting and old age), diverse family forms, and problems in family life such as violence and divorce.

*Prerequisite:* Sociology 1101.



### **SLGY 2273 – Sociology of Aging (formerly SLGY 3373)**

(3 credits – TG) 3 hours lecture

Individuals experience changing roles, activities, and relationships as they age. In addition, population aging, caused by declining birthrates and increasing life expectancies, has profound implications for social structures, norms, and values. This course examines the social aspects of both individual and population aging.

*Prerequisite:* Sociology 1101.



### **SLGY 2275 – Theories of “Race” and Ethnicity (formerly SLGY 3375)**

(3 credits – TG) 3 hours lecture

This course engages in a critical historical/theoretical investigation of the race concept. The focus is on race and ethnicity as experienced in everyday life. There is strong emphasis on reading and evaluating scholarly work on race/ethnicity and, in particular, on racism. While race and ethnic oppression are stressed, forms of resistance to racism and collective solidarity based on anti-racist organizing are also explored.

*Prerequisite:* Sociology 1101.



### **SLGY 2277 – Sociology of Religion (formerly SLGY 3377)**

(3 credits – TG) 3 hours lecture

This course offers an introduction to sociological concepts and theories in the study of religion. Questions about the structure of religious organizations, creation of meaning, secularization and religious diversity will be addressed.

*Prerequisite:* Sociology 1101.



### **SLGY 3233 – Sociology of Sexualities**

(3 credits – TG) 3 hours lecture

This course examines sexualities through a critical sociological lens. The goal is to track how and why the predominant conceptions of sexuality have been constructed, with particular attention to the role of binary sexualities and subsequent concepts of ‘deviation,’ as well as how sexuality is used in and by mechanisms/institutions of power

*Prerequisite:* Any one of Sociology 2229, 2231, 2232, 2233, 2245, 2253, 2265, 2271, 2273, 2275, 2277, or consent of the department.

### **SLGY 3309 – The Sociology of the Body**

(3 credits – TG) 3 hours lecture

This course focuses on matters of the body which affect social life. Through an examination of theoretical articles upon such topics as race, gender, disease, sexuality, smell, and appearance, we will learn about the many ways perceptions of bodies affect our lives and how society in turn defines and influences appearance and behaviour.

*Prerequisite:* Any one of Sociology 2229, 2231, 2232, 2233, 2245, 2253, 2265, 2271, 2273, 2275, 2277, or consent of the department.

### **SLGY 3317 – Young Offenders and the Law (formerly SLGY 2217)**

(3 credits – TG) 3 hours lecture

In most societies, people below a certain age are thought to be less than fully culpable or cognizant of the consequences of their actions. As a result, juvenile justice systems are established to deal with them separately from adults. Using sociological theory, this course will consider Canada’s strategies for addressing young people, illegal activities, and legal consequences.

*Prerequisites:* Sociology 2229 and one of Sociology 2231, 2232, 2233, 2245, 2253, 2265, 2271, 2273, 2275, 2277 or consent of the department.



### **SLGY 3321 – Quantitative Methods and Statistics**

(3 credits – TG) 2 hours lecture, 1 hour tutorial

This course focuses on the development of quantitative analytical skills in sociology. Students will study quantitative methods for gathering, preparing, analyzing, and interpreting social data, and also will be introduced to both descriptive and inferential statistics (including bivariate and simple multi-variate analysis). They will also be required to undertake secondary data analysis.

*Prerequisites:* Sociology 2232 and one of Sociology 2229, 2231, 2233, 2245, 2253, 2265, 2271, 2273, 2275, 2277 or consent of the department.

Note: required course for sociology major and honours students.

### **SLGY 3323 – Qualitative Research Methods**

(3 credits – TG) 2 hours lecture, 1 hour tutorial

This course presents an overview of qualitative methods in sociological research. Students will examine the strengths and weaknesses of qualitative methods such as interviewing techniques, fieldwork, and the case study approach, as well as how their lives - as researchers - intersect with and influence the people and situations they study.

*Prerequisites:* Sociology 2232 and one of Sociology 2229, 2231, 2233, 2245, 2253, 2265, 2271, 2273, 2275, 2277 or consent of the department.

### **SLGY 3331 – Classical Sociological Theory (formerly SLGY 2231)**

(3 credits – TG) 3 hours lecture

This course offers students an overview of the development of sociological theory with emphasis on the period from the nineteenth century to the Second World War. Theorists such as Marx, Durkheim and Weber will be reviewed and analysed.

*Prerequisites:* Sociology 2232 and any one of 2229, 2231, 2233, 2245, 2253, 2265, 2271, 2273, 2275, 2277, or consent of the department.

### **SLGY 3333 – Contemporary Social Theory**

(3 credits – TG) 3 hours lecture

This course explores several major currents of contemporary social thought since the World War Two era. Some of the theoretical perspectives that will be investigated are Western Marxism, Post-Structuralism, Post-Modernism, and theories of Globalisation/Post-Colonialism. These will be explored through their applicability to sociological issues of interest, such as subjectivity, agency/structure, power, and modernity.

*Prerequisites:* Sociology 2231 and one of Sociology 2229, 2232, 2233, 2245, 2253, 2265, 2271, 2273, 2275, 2277 or consent of the department.

**SPAN 2219 – Contemporary Spanish Culture and Society**

(3 credits – TG) 3 hours lecture

This course offers an introduction to contemporary Spanish culture and society, from the economic modernization in the 1960's to modern times. Students will explore topics ranging from race, nationalism and identity, to gender and faith. They will also learn about the importance of place, home life, schooling and the workplace.

**Note:** This course is taught in English; no knowledge of Spanish is required.

**SPAN 2221 – Contemporary Hispanic Cultures and Oral Practice (formerly SPAN 3321)**

(3 credits – TG) 3 hours lecture

This course explores specific features of the various Hispanic cultures in contemporary society. It offers a study of current issues in the Hispanic world as seen through a variety of sources such as short stories, articles, video programs and the web. Students are given opportunities to develop their oral skills by making presentations and participating in guided interactions. They can also further develop their writing skills through directed writing practice on the topics and issues analyzed in class.

*Prerequisite:* Spanish 2211 or consent of the department.

**SPAN 2223 – Introduction to Textual Analysis and Composition (formerly SPAN 3323)**

(3 credits – TG) 3 hours lecture

This course focuses on the development of writing skills through an analysis of cultural readings taken from journalistic, scientific and literary texts as well as from other media. Students will learn composition strategies and how to apply them in their writing. Various styles will be explored in class, including dialogues, summaries, narrations and essays.

*Pre or Co-requisite:* Spanish 2211 or consent of the department.

**SPAN 3305 – High Intermediate Spanish**

(3 credits – TG) 3 hours lecture

This course provides students with the opportunity to attain a high-intermediate level of language proficiency and to gain a more in depth understanding of Hispanic cultures. The main focus is on the exploration and analysis of oral and written contemporary texts from the Spanish-speaking world. A strong emphasis is placed on vocabulary enrichment, grammatical accuracy as well as the improvement of oral and written discourse.

*Prerequisites:* Spanish 2213 and 2223 or consent of the department.

**SPAN 3309 – Critical Thinking in Spanish**

(3 credits – TG) 3 hours lecture

This course is designed to develop students' critical thinking in Spanish. Students learn techniques for analyzing, comparing, summarizing and persuading in the target language. They explore, discuss and reflect on cultural issues in literary texts and other sources dealing with journalistic, social and political current events. A strong emphasis is placed on learners' development of language proficiency in terms of listening, speaking, reading and writing skills.

*Prerequisites:* Spanish 2213 and 2223 or consent of the department.

**SPAN 3312 – Hispanic Cinema**

(3 credits) 3 hours lecture

This course provides an introduction to Hispanic Cinema from Spain, Latin America, and the US. Students will further their development of Spanish language proficiency through the discussion and analysis of Hispanic cultures, historic events and sociopolitical currents as they are represented in film.

*Prerequisites:* Spanish 2213 and 2223 or consent of the department.

**SPAN 3313 – Spanish in Contact with Other Languages**

(3 credits – TG) 3 hour lecture

Taught in Spanish this course discusses the development and expansion of the Spanish language and examines its status and role in comparison to other languages with which it comes into contact. Students will become familiar with concepts such as bilingualism, diglossia, code-switching, language attitude, language planning and language maintenance.

*Prerequisites:* Spanish 3305 and Spanish 3309.

**SPAN 3315 – Introduction to Literature from Spain and Latin America**

(3 credits – TG) 3 hours lecture

This advanced Spanish course will explore a variety of texts from Spain and Latin America such as the picaresque novel, the "modernismo", the boom and post-boom of Latin American literature, and the "Generación X" in Spain. Along with the specific analysis of texts, the historical context of each author and movement will be considered.

*Prerequisites:* Spanish 3305 and Spanish 3309, or consent of the department.

**SPAN 3317 – Spanish Literature from the Golden Age to 19th Century**

(3 credits – TG) 3 hours lecture

This advanced Spanish course explores the significant periods in Spanish Peninsular Literature. From the classics of Cervantes to the highly acclaimed works of Emilia Pardo Bazán, this course emphasizes the evolution of the novel in Spain. Along with the specific analysis of texts, the historical context of each author and movement will be considered.

*Prerequisites:* Spanish 3305, 3309 and 3315 or consent of the department.

**SPAN 3319 – Twentieth-Century Spanish American Testimonial Literature**

(3 credits – TG) 3 hours lecture

This course introduces the main concepts and manifestations of Twentieth-Century Spanish American testimonial narrative. Students will review texts and relate them to their different socio-historical contexts, while examining issues such as truth, fiction and memory, collective and individual voices, and the subaltern subject in testimonial literature. Readings will be complemented with audio-visual materials.

*Prerequisites:* Spanish 3305 and 3309 or consent of the department.

**SPAN 3331 – Business Spanish I**

(3 credits – TG) 3 hours lecture

This course introduces students to the language and context of business Spanish. Spanish Students are exposed to a variety of authentic texts and commercial environments. They also analyze cultural perspectives of the business world in various Spanish-speaking countries.

*Prerequisites:* Spanish 2213 and 2223 or consent of the department

**SPAN 3335 – Translation I**

(3 credits – TG) 3 hours lecture

This course is an introduction to the theory and practice of translation. Short written texts of a general nature from a variety of topics will be analyzed and translated. Students will also work on Spanish syntax, semantics, dialectal differences and cultural and stylistic components. Students will do English to Spanish and Spanish to English translations.

*Prerequisites:* Spanish 3305 and 3309 or consent of the department.





### **SPAN 3341 – Spanish-American Literature from Colonial Times to the 19th Century**

(3 credits – TG) 3 hours lecture

This course presents an overview of the evolution and development of literatures of Spanish America from their origins to the 19th century. It exposes students to in-depth reading of representative texts from different periods and gives evidence of the correlation between literary discourse and historical circumstances.

*Prerequisites:* Spanish 3305 and 3309 or consent of the department.



### **SPAN 4401 – Advanced Spanish**

(3 credits – TG) 3 hours lecture

Grammar will be studied based on the analysis of its use in social and literary texts. Students will develop critical reading and thinking skills, and also work on effective oral and written communication.

*Prerequisites:* Spanish 3305 and 3309, and two of Spanish 3312, 3313, 3315, 3317, 3319, 3331, 3335, 3341, or consent of the department.



### **SPAN 4411 – Twentieth Century Literature from Spanish America**

(3 credits – TG) 3 hours lecture

This course will explore a variety of Spanish American texts by authors such as Quiroga, Borges and Carpentier. Different types of writing, including naturalist, fantastic and magic realism, will be explored. Along with the specific analysis of texts, the sociocultural context of each writer and his/her historical period will be considered.

*Prerequisite:* Spanish 4401 or consent of the department.



### **SPAN 4413 – Teaching Spanish as a Second Language**

(3 credits – TG) 3 hours lecture

This course provides students with a comprehensive overview of second language teaching methodologies as well as their relationships with theories on the nature of language and second language acquisition. Students will engage in a range of theoretical, pedagogical and reflective activities. They will write lesson plans, observe classes and do teaching demonstrations.

*Prerequisite:* Spanish 4401 or consent of the department.



### **SPAN 4415 – Twentieth-Century Literature from Spain**

(3 credits – TG) 3 hours lecture

This advanced Spanish course will explore a variety of texts of twentieth-century literature from Spain. This course explores different literary movements such as the "Generación del 27", "Generación del 50" and "Generación X". Along with the specific analysis of texts, the historical context of each author and movement will be considered.

*Prerequisite:* Spanish 3315 or consent of the department.



### **SPAN 4417 – Contemporary Women's Literature from Spain and Latin America**

(3 credits – TG) 3 hours lecture

This advanced Spanish course explores a variety of texts from Spain and Latin America in order to develop an understanding of contemporary Hispanic literature written by women. This course investigates how language, history, ideology, popular culture, and politics shape the experience of contemporary women's literature in Spain and Latin America.

*Prerequisites:* Spanish 3305, 3309 and 3315, or consent of the department.



### **SPAN 4421 – Spanish Pragmatics and Instruction**

(3 credits – TG) 3 hours lecture

This course is an introduction to Pragmatics and Discourse Analysis as they relate to second language teaching and learning. It explores the nature of oral communication and a functional linguistic view of language. It also focuses on the practicalities of selecting and producing teaching materials to develop pragmatic language ability in beginner and intermediate Spanish second language learners.

*Prerequisite:* Spanish 4413 or consent of the department.



### **SPAN 4431 – Business Spanish II**

(3 credits – TG) 3 hours lecture

This course is a continuation of Business Spanish I. It provides students with a more in-depth foundation in business language, and introduces cultural concepts that will help them function in today's Spanish-speaking business world. Students will critically analyze authentic scenarios and gain an understanding of business cultural practices in Spain and Latin America.

*Prerequisite:* Spanish 3331.

### **SPAN 4435 – Translation II**

(3 credits – TG) 3 hours lecture

This course is a continuation of Spanish 3335 – Translation I. It offers students the opportunity to enhance their translation skills by means of intensive practice in the translation of more complex short texts in various fields. Students will critically examine and compare published translations and will do Spanish to English and English to Spanish translations.

*Prerequisite:* Spanish 3335 or consent of the department.



### **SPAN 3199, 4199 – Directed Readings**

See **Directed Readings** which are listed alphabetically in this section of the calendar.

## **SPEECH (SPCH)**

### **SPCH 1115 – Bridging Communication Tradition**

(3 credits – TG) 3 hours lecture

This course is designed to allow the student to explore and experience the oral tradition of native culture and the speech demands of the 21st century. Specifically it provides the student with practical experience in the arts of speaking and listening, as well as an opportunity to contrast communication characteristics of two cultures.

### **SPCH 1120 – Accent Modifications**

(3 credits) 3 hours lecture

This course is designed for students whose first language is not English and who need the skills to be understood and to communicate effectively. Students will learn individual speech sounds, sound combinations, vocabulary and pronunciation. They will practice delivery techniques to develop a fluent, expressive oral presentation in English. This is a very good preparatory class for Speech 2001.

### **SPCH 2001 – Introduction to Public Speaking (formerly SPCH 1110)**

(3 credits – TG) 3 hours lecture

This course provides an introduction to current theories of communication. An understanding of effective communication and its potential is promoted through participation in a variety of speaking situations. Opportunity is given for group discussion; audience analysis; development of good listening habits and how to research, organize and prepare various types of speeches.



### **SPCH 2003 – Delivery Techniques for Presentation (formerly SPCH 1113)**

(3 credits – TG) 3 hours lecture

This course is designed to develop the vocal techniques of the student and to polish fundamental delivery skills. Specifically it provides the student with the option to move to advanced techniques in verbal and non-verbal delivery. It is relevant for anyone whose career path requires them to communicate with others.



### **SPCH 2005 – Oral Tradition, Narration, and Story-Telling**

(3 credits) 3 hours lecture

Students will develop skills in storytelling by examining the elements of communication essential to the storytelling event. This performance based class will focus on developing the visual and aural elements necessary to share the narrator's words and illustrate the images in the story. Vocal expression, characterization and body language, including gesturing and facial expression, will be studied.

### **SPCH 2007 – Professional Speaking**

(3 credits – TG) 3 hours lecture

This advanced course in Public Speaking will concentrate on further development of the student's presentation skills, enhanced with the use of modern technology as a key support component. Emphasis is on adapting presentation techniques to various situations including, interviews, business proposals, report reading, internet conferencing and group forum.

*Prerequisite: Speech 2001 or equivalent.*



### **SPCH 2009 – Great Speakers, Great Speeches**

(3 credits) 3 hours lecture

Students will discover how, from the inception of democracy to modern times, society has been shaped and influenced by oratory and rhetoric. Drawing on examples such as Aristotle, Marc Antony, Ghandi, Churchill, Nelson Mandela, Mark Twain, Nellie McClung, Margaret Thatcher, Martin Luther King, and William Clinton, this course will investigate and analyse the speaking styles of great speakers of great speeches, and their effects on the values, beliefs and identities of cultures and societies.

### **SPCH 3001 – Persuasive Speaking**

(3 credits) 3 hours lecture

This course is designed for the advanced speaker who wants to develop the art of persuasion further. Students will learn techniques for developing subject matter for different types of persuasive speeches, reasoning, ethics, and the necessary delivery techniques needed to convince, motivate, market, and sell ideas and products with greater success.

*Prerequisite: Speech 2001 or equivalent.*



### **SPCH 1199, 1299 – Directed Readings**

See **Directed Readings** which are listed alphabetically in this section of the calendar.

## **STUDIES IN AGING (SAGE)**

Courses in the interdisciplinary certificate program are offered through distance delivery in the Fall and Winter Semesters.

### **SAGE 2401 – Perspectives in Aging (formerly SAGE 4401)**

(3 credits – TG) Distance and Onsite Delivery

This course provides an understanding of the field of studies in aging. It examines the changing demographics and aging from a Canadian and global perspective. Ageism, theories of aging and research are examined with a view to understanding the current status of our knowledge of aging and societal responses to old age. Course content explores the diversity of individuals and groups within Canada's aging population and analyses current and future challenges for governments, institutions, agencies, and businesses in providing programs, services and products to such a diverse population. This course will be of interest to students from a broad range of programs.



### **SAGE 2403 – Aging-In-Place: Theory and Application**

(3 credits) Distance delivery

This course introduces students to the concept of aging-in-place focusing on the theoretical applications that frame our understanding of home. Basic design principles that affect healthy aging will be studied.

*Prerequisite: Studies in Aging 2401*

### **SAGE 3303 – Health and Aging (formerly SAGE 4403)**

(3 credits – TG) Distance Delivery

Examines effects of aging in the context of normal, healthy, and successful aging processes. Lifestyle factors such as nutrition, sexuality, exercise, leisure and health issues are considered. Integrative aspects of healthy aging such as housing, transportation, economics, family and community supports are examined. Death is discussed as the final outcome of life. Consideration of and planning for one's own aging is encouraged. Health promotion strategies related to these factors are addressed. Personally, this course would be of interest to all individuals, and from a professional perspective, to those students who will be encountering older adult clients in their work environment.



### **SAGE 3407 – Aging and Physical Health (formerly SAGE 4407)**

(3 credits – TG) Distance Delivery

This course examines common physical problems associated with the aging process. Approaches to assisting the older adult through treatment, modification of activities of daily life, and ways to maintain and enhance function are emphasized.



### **SAGE 3413 – Aging Families (formerly SAGE 4413)**

(3 credits – TG) Distance Delivery

This course provides an overview of family relationships in later life and examines frameworks for understanding the family system. Concepts of interviewing, assessing and intervening with older adults in the context of the family are introduced.

